

"code_support" for CLIFFORD, Bigebra, Octonion, GTP, Cliplus, Octonion in Maple 9

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```
> restart:with(code_support);
```

Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 9

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[change_helpfiles, change_name, copy_file, get_TEXT, get_dir, insert_helppages, makeLIST, modifyLIST, replace_in_file, split]

```
>
```

This help page shows various commands and their code of the supplementary package "code_support" that can be used to manipulate help pages for various packages, for example, [CLIFFORD](#).

This package enables one to:

- copy Maple worksheets from one directory to another and make certain string replacements using **change_helpfiles**,
- change worksheet names using **change_name**,
- copy files from one directory to another using **copy_file**,
- read a Maple worksheet as text using **get_TEXT**,
- read and return names of Maple worksheets located in a specified directory using **get_dir**,
- take a list of file names with help topics and insert them automatically into Maple browser and HDB database entries using **insert_helppages**,
- make an automatic list of data entries needed by **insert_helppages** using **makeLIST**,
- modify a list of data entries created by **makeLIST** using **modifyLIST**,
- replace certain strings in Maple worksheets using **replace_in_file**,
- split file names into a sequence of strings using **split**,

- convert directory names listed as symbols to strings using ``convert/symbol_dir_to_string_dir``,
- convert back directory name from a string format to a symbol format using ``convert/string_dir_to_symbol_dir``.

For examples how these commands can be used see [examples of code_support](#).

Cookeville, December 1, 2003.

```
> #####
#####
### It is assumed that directories can be entered either as
strings:
### (a) In Windows:  "C:\\Maple9\\Clifford\\Help_9_New\\"
### (b) In Linux:
"/home/fauser/BIG_ALL/P9/Clifford/Help_9_New/"
###
### or as symbols:
### (c) In Windows:  `D:\\Bigebra/Help_Bigebra/`
### (d) In Linux:    `~/home/fauser/BIG_ALL/Help_Bigebra/`
#####
#####
```

```
> restart:
> code_support:=module()
export
split,copy_file,get_dir,change_name,replace_in_file,change_helpfil
es,get_TEXT,
    makeLIST,modifyLIST,insert_helppages;
local setup;
option package, load=setup:
#####
```

2. Procedure **split** takes character pattern "pat" and splits a string into a sequence of substrings remained after removing "pat" from the string. If the pattern does not match, the string is returned back.

```
> split:=proc(pat, str)
    local a_seq, a1, x, pos, len, n;
#####
options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 1, 2003`;
#####
```

```

a_seq:=NULL;
a1:=str;
len:=length(a1);
pos:=1;
while(SearchText(pat,a1,pos..len) <>0) do
  n:=SearchText(pat,a1,pos..len);
  x:=substring(a1,pos..n-1);
  a_seq:=a_seq,x;
  a1:=substring(a1,n+length(pat)..len);
  len:=length(a1);
od;
a_seq:=a_seq,a1;
end;

```

3. Procedure **copy_file** copies a single file named 'in_file' and located in the directory 'path' as another file called 'out_file' to the same directory.

The path can be specified as a symbol, e.g., as `D:\\Bigebra\\Help_Bigebra/` or as a "string", e.g., "D:\\Bigebra\\Help_Bigebra\\".

```

> copy_file:=proc(path::{string,symbol},in_file::{string,symbol},out
_file::{string,symbol})
  local OUT,line,n_lines,Text,path1,in_file1,out_file1;
  #####
  options `Copyright (c) 2002-2003 by Rafal Ablamowicz and
  Bertfried Fauser. All rights reserved.`;
  description `Last revised: December 1, 2003`;
  #####
  if type(path,symbol) then
    path1:=path;
  else
    path1:=convert(path,string_dir_to_symbol_dir);
  end if;
  #####
  if type(in_file,symbol) then
    in_file1:=in_file;
  else
    in_file1:=convert(in_file,name);
  end if;
  #####
  if type(out_file,symbol) then
    out_file1:=out_file;
  else
    out_file1:=convert(out_file,name);
  end if;
end;

```

```

end if:
#####
  n_lines:=0;
  Text:=[];
  OUT:=fopen(cat(path1,out_file1),WRITE,TEXT);
  while true do
    line:=readline(cat(path1,in_file1));
    if line = 0 then break end if:
    Text:=[op(Text),line];
    writeline(OUT,line);
    n_lines:=n_lines+1;
  end do:
  close(OUT);
  printf("file %s containing %d lines has been copied as file %s in
the directory %s\n",in_file1,n_lines,out_file1,path1);
  return;
end proc:

```

4. Procedure `get_dir` fetches the *.mws files from a directory given as an argument and returns file names in a list of strings. Note that the directory can be specified as a "string", for example, "C:\\Maple9\\P9\\test1\\", or as `symbol`, for example, `C:\\Maple9/P9/test1`.

```

> get_dir:=proc(dir::{string,symbol})
  local wc_line,out_list,dirl;
  #####
  options `Copyright (c) 2002-2003 by Rafal Ablamowicz and
Bertfried Fauser. All rights reserved.`;
  description `Last revised: December 1, 2003`;
  #####
  if type(dir,symbol) then
    dirl:=convert(dir,symbol_dir_to_string_dir):
  else
    dirl:=dir:
  end if;
  #####
  out_list:=ssystem(cat("dir ",dirl));
  if out_list[1] <> 0 then error "Could not read the directory" end
if:
  #####
  wc_line:=proc(line::string)
    local c,nw,out,List,item:
    nw := 0;
    out := true;

```

```

List:=[]:
item:="":
for c in line do
  if c = " " or c = "\t" or c = "\n" then
    out := true;
    if SearchText(`.mws`,item)<>0 then
      List:=[op(List),item];
    end if:
    item:="";
  elif out then
    out := false;
    nw:=nw+1;
    item:=eval(cat(item,c));
  else
    item:=eval(cat(item,c));
  end if:
end do:
if length(item) <> 0 and SearchText(`.mws`,item)<> 0 then
  List:=[op(List),item];
end if:
return List
end proc:
#####
return wc_line(out_list[2])
end proc:

```

5. Procedure **change_name** changes a name of a file "filename" specified as a string by replacing a substring "substout" with a new substring "substrin". It returns the name of the new file as a string. If the string "substout" is not found in the "filename" then it is appended to the name of the file before ".mws" extension. Note that "substout" could be an empty string "".

```

> change_name:=proc(filename::string,substout::string,substrin::string)
  local N,fileext,filenamew,n,nout,nb;
  #####
  options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried
  Fauser. All rights reserved.`;
  description `Last revised: December 1, 2003`;
  #####
  N:=length(filename);          ###length of the whole string
  nout:=length(substout);       ###length of the string to be
  removed
  n:=SearchText(substout,filename);  ###location of the string to

```

```

be removed
#return n,nout,N;
if n+nout-1<N then
  if n=0 then
    fileext:=substring(filename,-4..-1);

filenamew:=cat(substring(filename,1..(N-4)),substrin,fileext);
  else
    nb:=N-(n+nout-1);
    fileext:=substring(filename,-nb..-1);

filenamew:=cat(substring(filename,1..n-1),substrin,substring(fil
ename,n+nout..N-nb),fileext);
  end if;
elif n+nout-1=N then
  filenamew:=cat(substring(filename,1..n-1),substrin);
else
  error "wrong string lengths"
end if;
return filenamew;
end proc:

```

6. Procedure **replace_in_file** replaces strings specified in a list 'pat_list' with strings specified in a list 'rep_list' in a single file 'in_file' and writes a new file file 'out_file'. File name needs to be of type string, e.g., "admatrix.mws" with extensions while lists contain strings, for example, ["November 1","2002"], etc. Procedure **replace** permits lists of replacements to be empty. In that case, it just writes a new file but no replacements are made. Note that "in_file" and "out_file" must contain full paths to the in directory and to the out directory respectively.

```

> replace_in_file:=proc(in_file::{string,name},
                        out_file::{string,name},
                        pat_list::list(string),
                        rep_list::list(string))

  local
  N1,Np,OUT,i,j,pattern,replace_string,pos,str1,str2,line,n_repl,Text,repflag;
#####
options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 1, 2003`;
#####
if nops(pat_list) <> nops(rep_list) then
  error "Need two lists of equal length, or two blank lists if

```

```

no replacements are to be made!"
end if;
#####
if member("",pat_list) then
    error "first list cannot contain an empty string"
end if;
#####
if evalb(nops(pat_list)>0 and pat_list<>rep_list) then
    n_repl:=[seq(0,i=1..nops(pat_list))];
    repflag:=true;
else
    n_repl:=[];
    repflag:=false;
end if;
#####
##Reading file in first
#####
Text:=[];
while true do
    line:=readline(`in_file`);
    if line = 0 then break end if;
    Text:=[op(Text),line];
end do;
#####
##Make replacements if needed:
#####
if repflag then
    for i from 1 to nops(Text)-1 do
        for j from 1 to nops(pat_list) do
            pattern:=pat_list[j];
            replace_string:=rep_list[j];
            if not evalb(pattern=replace_string) then
                Np:=length(pattern);
                if abs(Np - length(replace_string)) > 5 then
                    error "Strings %1 and %2 ought to be of the same
length or within 5 characters", pattern,replace_string
                end if;
                while true do
                    N1:=length(Text[i]);
                    line:=cat(Text[i],Text[i+1]);
                    pos:=SearchText(pattern,line,1..length(line));
                    #
                    if pos = 0 then break end if;

```

```

#
n_repl:=subsop(j=n_repl[j]+1,n_repl);
str1:=line[1..pos-1];
if pos+Np <= length(line) then
    str2:=line[pos+Np..-1];
else
    str2:="";
end if;
line:=cat(str1,replace_string,str2);
Text:=subsop(i=line[1..N1],Text);
Text:=subsop(i+1=line[N1+1..-1],Text);
end do;
end if;
end do;
end do;
end if;
#####
##Write new file with or without replacements:
#####
OUT:=fopen(out_file,WRITE,TEXT);
for i from 1 to nops(Text) do
    writeline(OUT,Text[i]);
end do;
close(OUT);
return n_repl;
end proc:

```

7. Procedure **change_helpfiles** automatically copies all Maple help pages *.mws from "dir_in" specified as string, for example, "C:\\Maple8\\P8\\test1\\", to a different directory "dir_out" also specified as a string, for example, "C:\\Maple9\\P9\\test2\\". It can replace string patterns specified as a list 'pat_list' of strings with strings listed in a list 'rep_list'. Both lists must be of equal length, or they can be empty. If the lists are empty, no replacements are made. This procedure uses optional 5th and 6th argument, each of type "string". When used, the substring specified as the 5th argument in the name of the file currently processed is replaced with string entered as the last 6th argument. This way, replacements can be made at the same time that the file names are changed.

```

> change_helpfiles:=proc(dir_in::{string,name},
                        dir_out::{string,name},
                        pat_list::list({string,name}),
                        rep_list::list({string,name}))
    local
    dir1,dir2,N,dir_list,fileold,filenew,changenameflag,makerepflag,fi
    le:

```

```

#####
options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 1, 2003`;
#####
dir1,dir2:=dir_in,dir_out;
#####
if nops(pat_list)<>nops(rep_list) then
    error "pattern and replacement lists must be of equal length"
end if;
#####
if nops(pat_list)>0 then makerepflag:=true else makerepflag:=false
end if;
#####
changenamelflag:=false:
if nargs=6 then
    if not type(args[5],string) or not type(args[6],string) then
        error "arguments 5 and 6, when used, must be strings,
e.g., %1 and %2", "_M5", "_M6"
    end if;
changenamelflag:=true:
end if;
#####
dir_list:=get_dir(dir1);
#####
for file in dir_list do
fileold:=file:
if changenamelflag then
filenew:=change_name(fileold,args[5],args[6])
        else filenew:=file
end if;
N:=replace_in_file(cat(dir1,fileold),cat(dir2,filenew),pat_list,rep_list):
makerepflag:=evalb(pat_list<>rep_list):
if makerepflag and changenamelflag then
    printf("processing file %s renamed as %s with replacement(s):
%a\n",fileold,filenew,N)
elif makerepflag and not changenamelflag then
    printf("processing file %s without renaming but with
replacement(s): %a\n",fileold,N);
elif not makerepflag and changenamelflag then
    printf("processing file %s renamed as %s without
replacements\n",fileold,filenew)

```

```

else
printf("processing file %s without renaming and without
replacements - just copying\n",fileold,filenew)
end if;
end do;
printf("*****\n");
printf("finished processing %d files\n",nops(dir_list));
printf("*****\n");
NULL
end proc:

```

8. Procedure **get_TEXT** reads a file "FILE" and puts it into a TEXT(line1,line2,...) format needed by INTERFACE_HELP.

```

> get_TEXT:=proc(FILE)
  local textobject,line;
#####
options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 1, 2003`;
#####
  textobject := NULL;
  line := readline(FILE);
  while line <> 0 do
    if length(line) <= 10 then
      line := ``||line||` `:
    fi;
    textobject := textobject, line:
    line := readline(FILE):
  od;
  textobject := TEXT(textobject):
end:

```

9. Procedure **makeLIST** makes a list of data entries needed by **insert_helppages** to insert help pages into the HDB and the browser. In particular, it automatically creates a list of aliases that later can be modified by the procedure **modifyLIST**. It takes four arguments:

modulename - name of the module as a `symbol`

parent - the name of the Parent as a `symbol`

grandparent - the name of the GrandParent as `symbol`

LDIR - it is either a list of strings with topic entries such as, for example, ["&cco","&cco_d"], or a directory where *_M8.mws files are stored

version - it is a string that gives the current version of Maple, e.g., "M8". It is expected that the file

names *._M8.mws will contain the same string. If not, error message is returned and the process is stopped

```
> makeLIST:=proc (modname::{symbol,name},
                  parent::{symbol,name},
                  grandparent::{symbol,name},
                  LDIR:{list(string),name,string},
                  version:string)
    local
    modulename,mainmodulepage,i,N,L,datastring,dataentry,Toplevel,stringlist,mem;

    global typesLIST,convertsLIST;
    #####
    options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried
    Fauser. All rights reserved.`;
    description `Last revised: December 1, 2003`;
    #####
    if not assigned(typesLIST) then error "global variable `typesLIST`
    has not been assigned a list" end if;
    if not assigned(convertsLIST) then error "global variable
    `convertsLIST` has not been assigned a list" end if;
    if nops(typesLIST)>0 then
        if not type(typesLIST,list(string)) then
            error "global list `typesLIST` must be either empty or it
            must contain strings"
        end if
    end if;
    if nops(convertsLIST)>0 then
        if not type(convertsLIST,list(string)) then
            error "global list `convertsLIST` must be either empty or it
            must contain strings"
        end if
    end if;
    #####
    if type(LDIR,{name,string}) then
        stringlist:=get_dir(LDIR);
        #####
        for datastring in stringlist do
            if evalb(SearchText(version,datastring)=0) then
                error "filename %1 in the directory %2 does not match
                Maple version %3 - process is
                aborted!!!",datastring,LDIR,version;
            end if;
        end do;
    end if;
```

```

    end do;
#####

stringlist:=map(change_name,stringlist,cat("_",version,".mws"), "")
;
#####
#####modify by adding "type"
    if nops(typesLIST)>0 then
        for i from 1 to nops(stringlist) do
            mem:=stringlist[i]:
            if member(mem,typesLIST) then

stringlist:=subsop(i=cat("type",",",mem),stringlist);
                end if;
            end do;
        end if;
#####modify by adding "convert"
    if nops(convertsLIST)>0 then
        for i from 1 to nops(stringlist) do
            mem:=stringlist[i]:
            if member(mem,convertsLIST) then

stringlist:=subsop(i=cat("convert",",",mem),stringlist);
                end if;
            end do;
        end if;
#####
else
    stringlist:=LDIR;
end if:
#####
modulename,mainmodulepage:=split(`,`,Parent);
modulename:=modname;
#####
L:=[]:
for datastring in stringlist do
    if convert(datastring,name)=mainmodulepage then
        Toplevel:=grandparent
    else
        Toplevel:=parent
    end if;
    dataentry:=convert(datastring,name);
    L:=[op(L),[cat(modulename,`,`,convert(dataentry,name))],

```

```
Toplevel,
```

```
[cat(convert(modulename,string),",",datastring),datastring]]  
end do;  
return L;  
end proc:
```

10. Procedure **modifyLIST** can be used to replace "aliases" that are automatically generated by the procedure **makeLIST** for each help topic to be inserted into the browser. In the data entry for each help topic, the third entry is a list of aliases ["alias1","alias2",...]. This list is then replaced with the third argument of type 'list(string)' to **modifyLIST** and the procedure returns a new complete list. The original list remains unchanged.

```
> modifyLIST:=proc(Lp::listlist,topic::symbol,newaliases::list(string))  
    local item,flag,i,newentryp,L,newitem;  
    #####  
    options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried  
    Fauser. All rights reserved.`;  
    description `Last revised: December 1, 2003`;  
    #####  
    L:=Lp;  
    flag:=false;  
    for i from 1 to nops(L) while not flag do  
        flag:=evalb(op(1,L[i])=topic);  
    end do;  
    if flag=false then  
        error "topic %1 has not been found in the entered list",topic;  
    end if;  
    newitem:=subsop(3=newaliases,L[i-1]);  
    return subsop(i-1=newitem,L);  
end proc:
```

11. Procedure **insert_help pages** takes a list of file names with help topics and inserts them into Maple browser and HDB Database entries.

- This procedure puts the below listed help pages into a maple.hdb help-page-database. These are the official help pages for the CLIFFORD, Bigebra, Cliplus, GTP, Octonion modules. It uses the following global path names:
- HDB_LIB_PATH : The path to a directory in the Maple search path (not the path of the Maple.hdb database in ../lib This pathname is here taken from libname, and has to be added to libname in any case to be able to use the help pages.

- HELP_FILE_PATH : The location of the help pages.
- BROWSER_PATH: The location in the Maple Help Page Browser at which the Package should be 'mounted'.
- Parent: The Package name or any help topic
- GrandParent: The Clifford package, (location in the Help Browser)

```

> insert_helppages:=proc(LIST)
    local Text,delim,x,lst,name,topic,browser_path,File,MODULE;
    global HDB_LIB_PATH, HELP_FILE_PATH, BROWSER_PATH;
    #####
    options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried
    Fauser. All rights reserved.`;
    description `Last revised: December 1, 2003`;
    #####
    for x in LIST do
    #printf("Inserting topic %s and reading file:",x[1]);
        if (SearchText(`/~`,x[1],1..length(x[1])) <> 0 ) then
            lst:=split(`/~`,x[1]);
            name :=lst[-1..-1];
            topic := ``;
            delim := ``;
            while(lst <> []) do
                topic := cat(topic,cat(delim,lst[1]));
                lst:=lst[2..-1];
                delim:=`,`;
            od;
            browser_path:=cat(BROWSER_PATH,x[1]);
        elif (SearchText(`,`,x[1],1..length(x[1])) <> 0 ) then
            lst:=split(`,`,x[1]);
            name :=lst[-1..-1];
            topic:=x[1];
            browser_path:=BROWSER_PATH;
            delim:=``;
            while(lst <> []) do
                browser_path:=cat(browser_path,cat(delim,lst[1]));
                lst:=lst[2..-1];
                delim:=`/~`;
            od;
        else
            topic:=x[1];
            name :=x[1];

```

```

        browser_path:=cat(BROWSER_PATH,topic);
    fi;
    name:=op(name);
#####
if nargs=1 then
    File:=cat(HELP_FILE_PATH,cat(name, ".mws")):
elif nargs=2 then
    if not type(args[2],string) then
        error "second optional argument must be a string giving
Maple version included in file names, e.g. %1", "M6"
    else
        File:=cat(HELP_FILE_PATH,cat(name, "_", args[2], ".mws")):
    end if;
end if;
#####
##HELP_FILE    = cat(HELP_FILE_PATH,cat(name, ".mws")),
#####
    MODULE[x[1]]:=table( [
        NAME      = name,
        PARENT    = x[2],
        TOPIC     = topic,
        HELP_FILE  = File,
        ALIASES   = x[3],
        ACTIVE    = `true`,
        BROWSER_LOC = browser_path,
        LIB        = HDB_LIB_PATH
    ]);
    ##
    ## get TEXT
    printf("Trying to read file %s...\n",File); ###for testing
    Text:=get_TEXT(File);
    ##
    ## put into DB
#####
    printf("Success... inserting topic %s from the file:",x[1]);
    print(MODULE[x[1]][HELP_FILE]);
    print(INTERFACE_HELP('insert','topic'=topic,'text'=Text,helpfile=H
DB_LIB_PATH,'aliases'=x[3],'active'=false) );
    print(INTERFACE_HELP('insert','topic'=topic,'browser'=browser_path
,helpfile=HDB_LIB_PATH) );
od:
    printf("*****\n");
    printf("Finished inserting %d file topics into the HDB and

```

```

Browser\n",nops (LIST) );
printf ("*****\n");
NULL

end:

```

1. Procedure **setup** for the module **code_support** defines two conversion functions that convert directory names from "string" form to `name` (or `symbol`) form, and vice versa.

```

> setup:=proc ()
  global
  `convert/string_dir_to_symbol_dir`, `convert/symbol_dir_to_string_dir`;
  #####
  options `Copyright (c) 2002-2003 by Rafal Ablamowicz and Bertfried
  Fauser. All rights reserved.`;
  description `Last revised: December 1, 2003`;
  #####
  `convert/symbol_dir_to_string_dir`:=proc (dir::{symbol,string})
  local T,i,dir1,linuxflag;
  if type(dir,string) then return dir end if;
  linuxflag:=evalb(SearchText(`\`,dir)=0);
  if linuxflag then return convert(dir,string) end if;
  T:=remove(member,[split("/",convert(dir,string))],{" "});
  dir1:=cat(T[1],"\`"):
  if nops(T) >1 then
    for i from 2 to nops(T) do dir1:=cat(dir1,T[i],"\`") end
  do:
  end if;
  return dir1;
  end proc:
  #####
  `convert/string_dir_to_symbol_dir`:=proc (dir::{symbol,string})
  local T,i,dir1,linuxflag;
  if type(dir,symbol) then return dir end if;
  linuxflag:=evalb(SearchText(`\`,dir)=0);
  if linuxflag then return convert(dir,symbol) end if;
  T:=remove(member,[split("\`,convert(dir,string))],{" "});
  dir1:=cat(T[1],"\`,T[2],"\`":
  if nops(T)>2 then
    for i from 3 to nops(T) do dir1:=cat(dir1,T[i],"/") end do:
  end if;
  return convert(dir1,name);

```

```
end proc:
#####
print(``);
print(`Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple
9`);
print(`Copyright (c) 2002-2004 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`);
print(`Last revised: December 1, 2003`);
print(``);
#####
end proc:
```

```
end module:
savelib(code_support);
> restart:with(code_support);
```

Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 9
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[*change_helpfiles, change_name, copy_file, get_TEXT, get_dir, insert_helppages, makeLIST,*
modifyLIST, replace_in_file, split]

[>

 **See Also:** [code_support, examples](#)

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Last modified: December 1, 2003, RA/BF.

Function: `code_support-NAME` where NAME is one of the following: `change_helpfiles`, `change_name`, `copy_file`, `get_TEXT`, `get_dir`, `insert_helppages`, `makeLIST`, `modifyLIST`, `replace_in_file`, `split`

Calling Sequence:

See examples below

Parameters:

See examples below

Description:

- [code_support](#) is a package that provides various functions to copy, rename, modify, save, etc. Maple help worksheets.
- Examples below can be of course re-executed on one's own machine provided that directories and files used in these examples exist on a local system.

Examples:

```
> restart:with(code_support);

      Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 9
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      Last revised: December 1, 2003

[change_helpfiles, change_name, copy_file, get_TEXT, get_dir, insert_helppages, makeLIST,
 modifyLIST, replace_in_file, split]
> DIR1:=`D:\Bigebra/Help_Bigebra/`; ### Directory specified as a
symbol in Windows
DIR2:="C:\Maple9\Clifford\Help_9_New\"; ###Directory
specified as a string in Windows
DIR3:=`/home/Bigebra/Help_Bigebra/`; ### Directory specified as a
symbol in Linux
DIR4:="/home/Bigebra/Help_Bigebra/"; ###Directory specified as a
string in Linux

      DIR1 := D:\Bigebra/Help_Bigebra/
      DIR2 := "C:\Maple9\Clifford\Help_9_New\"
      DIR3 := /home/Bigebra/Help_Bigebra/
      DIR4 := "/home/Bigebra/Help_Bigebra/"
>
```

Example 1: Procedure **split** removes a string specified as the first argument from another string specified as the second argument:

```
> split("a", "adfmatrix.mws");  
      "", "dfm", "trix.mws"  
> split("b", "adfmatrix.mws");  
      "adfmatrix.mws"
```

Example 2: Procedure `convert/symbol_dir_to_string_dir` converts a directory name listed as a symbol to a strings while `convert/string_dir_to_symbol_dir` converts back directory name from a string format to a symbol format.

```
> convert(DIR1, symbol_dir_to_string_dir);  
convert(DIR2, symbol_dir_to_string_dir);  
convert(DIR3, symbol_dir_to_string_dir);  
convert(DIR4, symbol_dir_to_string_dir);  
      "D:\Bigebra\Help_Bigebra\  
      "C:\Maple9\Clifford\Help_9_New\  
      "/home/Bigebra/Help_Bigebra/"  
      "/home/Bigebra/Help_Bigebra/"  
> convert(DIR1, string_dir_to_symbol_dir);  
convert(DIR2, string_dir_to_symbol_dir);  
convert(DIR3, string_dir_to_symbol_dir);  
convert(DIR4, string_dir_to_symbol_dir);  
      D:\Bigebra/Help_Bigebra/  
      C:\Maple9\Clifford/Help_9_New/  
      /home/Bigebra/Help_Bigebra/  
      /home/Bigebra/Help_Bigebra/
```

Example 3: Procedure **copy_file** copies and renames Maple worksheets in one directory. For example, file `all_sigs_M8.mws` will be copied and saved as a new file `all_sigs_M8_copy1.mws` in the directory `C:\Maple8\P8\test1\`. The directory name can also be specified as a string `"C:\Maple8\P8\test1\"`.

```
> TEST1 := `C:\Maple9\P9\test1\`;  
TEST2 := "C:\Maple9\P9\test1\";  
filein := `all_sigs_M9.mws`;  
fileout := `all_sigs_M9_copy1.mws`;  
      TEST1 := C:\Maple9\P9\test1/  
      TEST2 := "C:\Maple9\P9\test1\  
      filein := all_sigs_M9.mws
```

```
fileout := all_sigs_M9_copy1.mws
```

```
> copy_file(TEST1, filein, fileout);  
copy_file(TEST2, filein, fileout);
```

```
file all_sigs_M9.mws containing 117 lines has been copied as file all_sigs_M9_copy  
1.mws in the directory C:\Maple9\P9/test1/  
file all_sigs_M9.mws containing 117 lines has been copied as file all_sigs_M9_copy  
1.mws in the directory C:\Maple9\P9/test1/
```

```
>
```

Example 4: Procedure `get_dir` returns a list of strings which are names of files located in the specified directory.

```
> dir1 := "C:\\Maple9\\P9\\test1\\";  
dir2 := `C:\\Maple9/P9/test1/`;
```

```
dir1 := "C:\Maple9\P9\test1\"
```

```
dir2 := C:\Maple9/P9/test1/
```

```
> S := get_dir(dir1);  
S := get_dir(dir2);
```

```
S := ["&c_M9.mws", "adfmatrix_M9.mws", "all_sigs_M9.mws", "all_sigs_M9_copy1.mws"]
```

```
S := ["&c_M9.mws", "adfmatrix_M9.mws", "all_sigs_M9.mws", "all_sigs_M9_copy1.mws"]
```

```
>
```

Example 5: Procedure `change_name` changes names of Maple worksheets specified as strings. Various cases are shown below.

```
> X := "adfmatrix_M8.mws";
```

```
X := "adfmatrix_M8.mws"
```

```
> X1 := change_name(X, "_M8", "_M9");
```

```
X1 := "adfmatrix_M9.mws"
```

```
> X2 := change_name(X, "_M8", "");
```

```
X2 := "adfmatrix.mws"
```

```
> X3 := change_name(X1, "_M9", "_M10");
```

```
X3 := "adfmatrix_M10.mws"
```

```
> change_name(X, "_M8.mws", "");
```

```
"adfmatrix"
```

```
> `S` := S;
```

```
S := ["&c_M9.mws", "adfmatrix_M9.mws", "all_sigs_M9.mws", "all_sigs_M9_copy1.mws"]
```

```
> map(change_name, S, "_M8", "_M9");
```

```
["&c_M9_M9.mws", "adfmatrix_M9_M9.mws", "all_sigs_M9_M9.mws",
```

```
"all_sigs_M9_copy1_M9.mws"]
```

```
> map(change_name, S, "_M8", "");
```

```
["&c_M9.mws", "adfmatrix_M9.mws", "all_sigs_M9.mws", "all_sigs_M9_copy1.mws"]
```

```
>
```

Example 6: Procedure `replace_in_file` reads a Maple worksheet from directory DIR1 and then saves it in a new directory DIR2 under the same name after replacements have been made in the text of the file. The replacements are specified as two lists of strings: the first list contains strings to be replaced while the second list contains their string replacements. It returns a list that shows the number of replacements for each entry in the first list. If no replacements have been made, 0's are returned.

```
> DIR1:="C:\\Maple8\\P8\\test1\\";
DIR2:="C:\\Maple9\\P9\\test2\\";
      DIR1 := "C:\Maple8\P8\test1\"
      DIR2 := "C:\Maple9\P9\test2\"
> infile:="&c_M8.mws";
      infile := "&c_M8.mws"
> cat(DIR1,infile);
      "C:\Maple8\P8\test1\&c_M8.mws"
> get_dir(DIR1);
      [&c_M8.mws", "adfmatrix_M8.mws", "all_sigs_M8.mws", "all_sigs_M8_copy1.mws"]
> replace_in_file(cat(DIR1,"&c_M8.mws"),cat(DIR2,"&c_M9.mws"),
  ["Cliff8", "Clifford[" , "`" , "November
  16", "2002", "Cli9plus", "Cliplus[" ,
  ["Clifford", "Clifford:-", "`", "December
  1", "2003", "Cliplus", "Cliplus:-"]);
      [0, 0, 0, 0, 1, 0, 0]
> replace_in_file(cat(DIR1,"&c_M8.mws"),cat(DIR2,"&c_M9.mws"), ["Nove
  mber 3", "2003"], ["December 1", "2003"]);
      [1, 0]
>
```

Example 7: Procedure `change_helpfiles` automatically copies all Maple worksheets from one directory to another after making appropriate replacements as in `replace_in_file` except that `replace_in_file` makes such changes only in one file. It provides feedback to the user by listing all files that have been copied and the number of required replacements. It can also change file names when saving new files.

```
> TEST1:="C:\\Maple9\\P9\\test1\\";
TEST2:="C:\\Maple9\\P9\\test2\\";
TEST11:=`C:\\Maple9/P9/test1/`;
TEST22:=`C:\\Maple9/P9/test2/`;
      TEST1 := "C:\Maple9\P9\test1\"
      TEST2 := "C:\Maple9\P9\test2\"
      TEST11 := C:\Maple9/P9/test1/
      TEST22 := C:\Maple9/P9/test2/
> change_helpfiles(TEST1,TEST2, ["November 3"], ["November 5"]);
```

#copying with replacements

```
processing file &c_M9.mws without renaming but with replacement(s): [1]
processing file adfmatrix_M9.mws without renaming but with replacement(s): [1]
processing file all_sigs_M9.mws without renaming but with replacement(s): [1]
processing file all_sigs_M9_copy1.mws without renaming but with replacement(s): [1]
]
*****
finished processing 4 files
*****
```

```
> change_helpfiles(TEST1,TEST2,["November 3"],["November 5"],"_M8","_M88"); #copying with name changes
```

```
processing file &c_M9.mws renamed as &c_M9_M88.mws with replacement(s): [1]
processing file adfmatrix_M9.mws renamed as adfmatrix_M9_M88.mws with replacement(s): [1]
processing file all_sigs_M9.mws renamed as all_sigs_M9_M88.mws with replacement(s): [1]
processing file all_sigs_M9_copy1.mws renamed as all_sigs_M9_copy1_M88.mws with replacement(s): [1]
*****
finished processing 4 files
*****
```

```
> change_helpfiles(TEST1,TEST2,["November 3"],["November 5"]); #copying without name changes
```

```
processing file &c_M9.mws without renaming but with replacement(s): [1]
processing file adfmatrix_M9.mws without renaming but with replacement(s): [1]
processing file all_sigs_M9.mws without renaming but with replacement(s): [1]
processing file all_sigs_M9_copy1.mws without renaming but with replacement(s): [1]
]
*****
finished processing 4 files
*****
```

```
> change_helpfiles(TEST1,TEST2,["November 3"],["November 3"]); #copying without name changes or replacements
```

```
processing file &c_M9.mws without renaming and without replacements - just copying
processing file adfmatrix_M9.mws without renaming and without replacements - just copying
processing file all_sigs_M9.mws without renaming and without replacements - just copying
processing file all_sigs_M9_copy1.mws without renaming and without replacements - just copying
*****
finished processing 4 files
*****
```

The following error message shows that the list of strings to be replaced cannot contain empty strings:

```
> change_helpfiles(TEST1,TEST2,[""],[""]); ###<<<Intended error message
```

```
Error, (in code_support:-replace_in_file) first list cannot contain an empty string
```

```
> change_helpfiles(TEST1,TEST2,["November 5",""],["December 1",""]); ###<<<Intended error message
```

```
Error, (in code_support:-replace_in_file) first list cannot contain an empty string
```

Example 8: Procedure `change_helpfiles` can be used just to copy files from an older, say version 8 of a package for Maple 8, to another directory where help pages will be stored for a new version, say version 9 for Maple 9. Replacements in the files and changes in file names can also be made. For example, we can change file names from *_M8.mws to *_M9.mws and then change dates occurring in the files, from say November 16, 2002, to December 1, 2003. As an example, we will copy all help pages for CLIFFORD from version 8 to version 9.

NOTE: The new files will still need to be read into Maple 9 in order to convert them to possibly a new format of Maple 9.

```
>
> TEST1:="C:\\Maple8\\P8\\Cliff8\\Help\\";
TEST2:="C:\\Maple9\\P9\\Cliff9\\Help\\";
change_helpfiles(TEST1,TEST2,["January 5","2003"],["December
1","2003"],"_M8","_M9");

TEST1 := "C:\Maple8\P8\Cliff8\Help\"
TEST2 := "C:\Maple9\P9\Cliff9\Help\"
processing file &c_M8.mws renamed as &c_M9.mws with replacement(s): [1, 0]
processing file adfmatrix_M8.mws renamed as adfmatrix_M9.mws with replacement(s):
[1, 0]
processing file all_sigs_M8.mws renamed as all_sigs_M9.mws with replacement(s): [1
, 0]
processing file antisymmatrix_M8.mws renamed as antisymmatrix_M9.mws with replacem
ent(s): [0, 0]
processing file beta_minus_M8.mws renamed as beta_minus_M9.mws with replacement(s)
: [1, 0]
processing file beta_plus_M8.mws renamed as beta_plus_M9.mws with replacement(s):
[1, 0]
processing file Bsignature_M8.mws renamed as Bsignature_M9.mws with replacement(s)
: [1, 0]
processing file buildm_M8.mws renamed as buildm_M9.mws with replacement(s): [1, 0]
processing file bygrade_M8.mws renamed as bygrade_M9.mws with replacement(s): [1,
0]
processing file cbasis_M8.mws renamed as cbasis_M9.mws with replacement(s): [1, 0]
processing file cdfmatrix_M8.mws renamed as cdfmatrix_M9.mws with replacement(s):
[1, 0]
processing file cexpQ_M8.mws renamed as cexpQ_M9.mws with replacement(s): [1, 0]
processing file cexp_M8.mws renamed as cexp_M9.mws with replacement(s): [1, 0]
processing file cinv_M8.mws renamed as cinv_M9.mws with replacement(s): [1, 0]
processing file clibasmon_M8.mws renamed as clibasmon_M9.mws with replacement(s):
[1, 0]
processing file clibilinear_M8.mws renamed as clibilinear_M9.mws with replacement(
s): [1, 0]
processing file clicollect_M8.mws renamed as clicollect_M9.mws with replacement(s)
: [1, 0]
processing file clidata_M8.mws renamed as clidata_M9.mws with replacement(s): [1,
0]
processing file CLIFFORD_ENV_M8.mws renamed as CLIFFORD_ENV_M9.mws with replacemen
t(s): [1, 0]
processing file clilinear_M8.mws renamed as clilinear_M9.mws with replacement(s):
[1, 0]
processing file climatrix_M8.mws renamed as climatrix_M9.mws with replacement(s):
[1, 0]
processing file climinpoly_M8.mws renamed as climinpoly_M9.mws with replacement(s)
```

: [1, 0]
processing file climon_M8.mws renamed as climon_M9.mws with replacement(s): [1, 0]
processing file cliparse_M8.mws renamed as cliparse_M9.mws with replacement(s): [1, 0]
processing file clipolynom_M8.mws renamed as clipolynom_M9.mws with replacement(s): [1, 0]
processing file cliprod_M8.mws renamed as cliprod_M9.mws with replacement(s): [1, 0]
processing file cliremove_M8.mws renamed as cliremove_M9.mws with replacement(s): [1, 0]
processing file cliscalar_M8.mws renamed as cliscalar_M9.mws with replacement(s): [1, 0]
processing file clisolve_M8.mws renamed as clisolve_M9.mws with replacement(s): [1, 0]
processing file clisort_M8.mws renamed as clisort_M9.mws with replacement(s): [1, 0]
processing file cliterms_M8.mws renamed as cliterms_M9.mws with replacement(s): [1, 0]
processing file cmulgen_M8.mws renamed as cmulgen_M9.mws with replacement(s): [1, 0]
processing file cmulNUM_M8.mws renamed as cmulNUM_M9.mws with replacement(s): [1, 0]
processing file cmulQ_M8.mws renamed as cmulQ_M9.mws with replacement(s): [1, 0]
processing file cmulRS_M8.mws renamed as cmulRS_M9.mws with replacement(s): [1, 0]
processing file cmul_M8.mws renamed as cmul_M9.mws with replacement(s): [1, 0]
processing file cmul_user_defined_M8.mws renamed as cmul_user_defined_M9.mws with replacement(s): [1, 0]
processing file cocycle_M8.mws renamed as cocycle_M9.mws with replacement(s): [1, 0]
processing file commutinglements_M8.mws renamed as commutinglements_M9.mws with replacement(s): [1, 0]
processing file conjugation_M8.mws renamed as conjugation_M9.mws with replacement(s): [1, 0]
processing file c_conjug_M8.mws renamed as c_conjug_M9.mws with replacement(s): [1, 0]
processing file ddfmatrix_M8.mws renamed as ddfmatrix_M9.mws with replacement(s): [1, 0]
processing file dfmatrix_M8.mws renamed as dfmatrix_M9.mws with replacement(s): [1, 0]
processing file diagmatrix_M8.mws renamed as diagmatrix_M9.mws with replacement(s): [1, 0]
processing file diagonalize_M8.mws renamed as diagonalize_M9.mws with replacement(s): [1, 0]
processing file displayid_M8.mws renamed as displayid_M9.mws with replacement(s): [1, 0]
processing file evenelement_M8.mws renamed as evenelement_M9.mws with replacement(s): [1, 0]
processing file extract_M8.mws renamed as extract_M9.mws with replacement(s): [1, 0]
processing file factoridempotent_M8.mws renamed as factoridempotent_M9.mws with replacement(s): [1, 0]
processing file fieldelement_M8.mws renamed as fieldelement_M9.mws with replacement(s): [1, 0]
processing file find1str_M8.mws renamed as find1str_M9.mws with replacement(s): [1, 0]
processing file findbasis_M8.mws renamed as findbasis_M9.mws with replacement(s): [1, 0]
processing file gencomplex_M8.mws renamed as gencomplex_M9.mws with replacement(s): [1, 0]

processing file genquatbasis_M8.mws renamed as genquatbasis_M9.mws with replacement(s): [1, 0]
processing file genquaternion_M8.mws renamed as genquaternion_M9.mws with replacement(s): [1, 0]
processing file gradeinv_M8.mws renamed as gradeinv_M9.mws with replacement(s): [1, 0]
processing file idempotent_M8.mws renamed as idempotent_M9.mws with replacement(s): [1, 0]
processing file intro_M8.mws renamed as intro_M9.mws with replacement(s): [1, 0]
processing file isproduct_M8.mws renamed as isproduct_M9.mws with replacement(s): [1, 0]
processing file isVahlenmatrix_M8.mws renamed as isVahlenmatrix_M9.mws with replacement(s): [1, 0]
processing file Kfield_M8.mws renamed as Kfield_M9.mws with replacement(s): [1, 0]
processing file LCQ_M8.mws renamed as LCQ_M9.mws with replacement(s): [1, 0]
processing file LC_M8.mws renamed as LC_M9.mws with replacement(s): [1, 0]
processing file makealiases_M8.mws renamed as makealiases_M9.mws with replacement(s): [1, 0]
processing file makeclibasmon_M8.mws renamed as makeclibasmon_M9.mws with replacement(s): [1, 0]
processing file matKrepr_M8.mws renamed as matKrepr_M9.mws with replacement(s): [1, 0]
processing file maxgrade_M8.mws renamed as maxgrade_M9.mws with replacement(s): [1, 0]
processing file maxindex_M8.mws renamed as maxindex_M9.mws with replacement(s): [1, 0]
processing file mdfmatrix_M8.mws renamed as mdfmatrix_M9.mws with replacement(s): [1, 0]
processing file minimalideal_M8.mws renamed as minimalideal_M9.mws with replacement(s): [1, 0]
processing file mlist_M8.mws renamed as mlist_M9.mws with replacement(s): [1, 0]
processing file nilpotent_M8.mws renamed as nilpotent_M9.mws with replacement(s): [1, 0]
processing file oddelement_M8.mws renamed as oddelement_M9.mws with replacement(s): [1, 0]
processing file ord_M8.mws renamed as ord_M9.mws with replacement(s): [1, 0]
processing file permsign_M8.mws renamed as permsign_M9.mws with replacement(s): [1, 0]
processing file primitiveidemp_M8.mws renamed as primitiveidemp_M9.mws with replacement(s): [1, 0]
processing file pseudodet_M8.mws renamed as pseudodet_M9.mws with replacement(s): [1, 0]
processing file purequatbasis_M8.mws renamed as purequatbasis_M9.mws with replacement(s): [1, 0]
processing file qdisplay_M8.mws renamed as qdisplay_M9.mws with replacement(s): [1, 0]
processing file qinv_M8.mws renamed as qinv_M9.mws with replacement(s): [1, 0]
processing file qmul_M8.mws renamed as qmul_M9.mws with replacement(s): [1, 0]
processing file qnorm_M8.mws renamed as qnorm_M9.mws with replacement(s): [1, 0]
processing file quaternion_M8.mws renamed as quaternion_M9.mws with replacement(s): [1, 0]
processing file q_conjug_M8.mws renamed as q_conjug_M9.mws with replacement(s): [1, 0]
processing file RCQ_M8.mws renamed as RCQ_M9.mws with replacement(s): [1, 0]
processing file RC_M8.mws renamed as RC_M9.mws with replacement(s): [1, 0]
processing file rd_clibasmon_M8.mws renamed as rd_clibasmon_M9.mws with replacement(s): [1, 0]
processing file rd_climon_M8.mws renamed as rd_climon_M9.mws with replacement(s): [1, 0]

```

processing file rd_clipolynom_M8.mws renamed as rd_clipolynom_M9.mws with replacement(s): [1, 0]
processing file reorder_M8.mws renamed as reorder_M9.mws with replacement(s): [1, 0]
processing file reversion_M8.mws renamed as reversion_M9.mws with replacement(s): [1, 0]
processing file RHnumber_M8.mws renamed as RHnumber_M9.mws with replacement(s): [1, 0]
processing file rmulm_M8.mws renamed as rmulm_M9.mws with replacement(s): [1, 0]
processing file rot3d_M8.mws renamed as rot3d_M9.mws with replacement(s): [1, 0]
processing file scalarpart_M8.mws renamed as scalarpart_M9.mws with replacement(s): [1, 0]
processing file setup_M8.mws renamed as setup_M9.mws with replacement(s): [1, 0]
processing file sexp_M8.mws renamed as sexp_M9.mws with replacement(s): [1, 0]
processing file specify_constants_M8.mws renamed as specify_constants_M9.mws with replacement(s): [1, 0]
processing file spinorKbasis_M8.mws renamed as spinorKbasis_M9.mws with replacement(s): [1, 0]
processing file spinorKrepr_M8.mws renamed as spinorKrepr_M9.mws with replacement(s): [1, 0]
processing file squaremodf_M8.mws renamed as squaremodf_M9.mws with replacement(s): [1, 0]
processing file str_to_int_M8.mws renamed as str_to_int_M9.mws with replacement(s): [1, 0]
processing file subs_clipolynom_M8.mws renamed as subs_clipolynom_M9.mws with replacement(s): [1, 0]
processing file symmatrix_M8.mws renamed as symmatrix_M9.mws with replacement(s): [1, 0]
processing file tensorprod_M8.mws renamed as tensorprod_M9.mws with replacement(s): [1, 0]
processing file useproduct_M8.mws renamed as useproduct_M9.mws with replacement(s): [1, 0]
processing file vectorpart_M8.mws renamed as vectorpart_M9.mws with replacement(s): [1, 0]
processing file version_M8.mws renamed as version_M9.mws with replacement(s): [1, 0]
processing file wedge_M8.mws renamed as wedge_M9.mws with replacement(s): [1, 0]
processing file wexp_M8.mws renamed as wexp_M9.mws with replacement(s): [1, 0]
*****
finished processing 110 files
*****

```

Likewise, we can copy the help pages of the remaining packages: Bigebra, Cliplus, GTP, Octonion, and code_support too.

```

> TEST1:="C:\\Maple8\\P8\\Bigebra8\\Help\\";
TEST2:="C:\\Maple9\\P9\\Bigebra9\\Help\\";
change_helpfiles(TEST1,TEST2,["January 5","2003"],["December 1","2003"],"_M8","_M9");

          TEST1 := "C:\Maple8\P8\Bigebra8\Help\"
          TEST2 := "C:\Maple9\P9\Bigebra9\Help\"
processing file &cco_M8.mws renamed as &cco_M9.mws with replacement(s): [1, 0]
processing file &gco_d_M8.mws renamed as &gco_d_M9.mws with replacement(s): [1, 0]
processing file &gco_M8.mws renamed as &gco_M9.mws with replacement(s): [1, 0]
processing file &gco_pl_M8.mws renamed as &gco_pl_M9.mws with replacement(s): [1, 0]
processing file &map_M8.mws renamed as &map_M9.mws with replacement(s): [1, 0]
processing file &t_M8.mws renamed as &t_M9.mws with replacement(s): [1, 0]

```

```
processing file &v_M8.mws renamed as &v_M9.mws with replacement(s): [1, 0]
processing file bracket_M8.mws renamed as bracket_M9.mws with replacement(s): [1,
0]
processing file contract_M8.mws renamed as contract_M9.mws with replacement(s): [1
, 0]
processing file define_M8.mws renamed as define_M9.mws with replacement(s): [1, 0]
processing file drop_t_M8.mws renamed as drop_t_M9.mws with replacement(s): [1, 0]
processing file EV_M8.mws renamed as EV_M9.mws with replacement(s): [1, 0]
processing file gantipode_M8.mws renamed as gantipode_M9.mws with replacement(s):
[1, 0]
processing file gco_unit_M8.mws renamed as gco_unit_M9.mws with replacement(s): [1
, 0]
processing file gswitch_M8.mws renamed as gswitch_M9.mws with replacement(s): [1,
0]
processing file help_M8.mws renamed as help_M9.mws with replacement(s): [2, 0]
processing file init_M8.mws renamed as init_M9.mws with replacement(s): [1, 0]
processing file linop2_M8.mws renamed as linop2_M9.mws with replacement(s): [1, 0]
processing file linop_M8.mws renamed as linop_M9.mws with replacement(s): [1, 0]
processing file lists2mat2_M8.mws renamed as lists2mat2_M9.mws with replacement(s)
: [1, 0]
processing file lists2mat_M8.mws renamed as lists2mat_M9.mws with replacement(s):
[1, 0]
processing file make_BI_Id_M8.mws renamed as make_BI_Id_M9.mws with replacement(s)
: [1, 0]
processing file mapop2_M8.mws renamed as mapop2_M9.mws with replacement(s): [1, 0]
processing file mapop_M8.mws renamed as mapop_M9.mws with replacement(s): [1, 0]
processing file meet_M8.mws renamed as meet_M9.mws with replacement(s): [1, 0]
processing file op2mat2_M8.mws renamed as op2mat2_M9.mws with replacement(s): [1,
0]
processing file op2mat_M8.mws renamed as op2mat_M9.mws with replacement(s): [1, 0]
processing file pairing_M8.mws renamed as pairing_M9.mws with replacement(s): [1,
0]
processing file peek_M8.mws renamed as peek_M9.mws with replacement(s): [1, 0]
processing file poke_M8.mws renamed as poke_M9.mws with replacement(s): [0, 0]
processing file remove_eq_M8.mws renamed as remove_eq_M9.mws with replacement(s):
[1, 0]
processing file switch_M8.mws renamed as switch_M9.mws with replacement(s): [1, 0]
processing file tcollect_M8.mws renamed as tcollect_M9.mws with replacement(s): [1
, 0]
processing file tensorbasmonom_M8.mws renamed as tensorbasmonom_M9.mws with replac
ement(s): [1, 0]
processing file tensormonom_M8.mws renamed as tensormonom_M9.mws with replacement(
s): [1, 0]
processing file tensorpolynom_M8.mws renamed as tensorpolynom_M9.mws with replacem
ent(s): [1, 0]
processing file tsolve1_M8.mws renamed as tsolve1_M9.mws with replacement(s): [1,
0]
processing file VERSION_M8.mws renamed as VERSION_M9.mws with replacement(s): [1,
0]
```

```
*****
```

```
finished processing 38 files
```

```
*****
```

```
>
```

```
> TEST1:="C:\\Maple8\\P8\\Cli8plus\\Help\\";
TEST2:="C:\\Maple9\\P9\\Cli9plus\\Help\\";
change_helpfiles(TEST1,TEST2, ["November 16", "January 5", "2003"],
["December 1", "December
```

```
1", "2003"], "_M8", "_M9");
```

```
TEST1 := "C:\Maple8\P8\Cli8plus\Help\"
```

```
TEST2 := "C:\Maple9\P9\Cli9plus\Help\"
```

```
processing file &dw_M8.mws renamed as &dw_M9.mws with replacement(s): [0, 0, 0]
processing file clibasis_M8.mws renamed as clibasis_M9.mws with replacement(s): [0, 1, 0]
processing file clieval_M8.mws renamed as clieval_M9.mws with replacement(s): [0, 1, 0]
processing file cliexpand_M8.mws renamed as cliexpand_M9.mws with replacement(s): [0, 1, 0]
processing file climul_M8.mws renamed as climul_M9.mws with replacement(s): [0, 1, 0]
processing file clirev_M8.mws renamed as clirev_M9.mws with replacement(s): [0, 1, 0]
processing file dottedcbasis_M8.mws renamed as dottedcbasis_M9.mws with replacement(s): [0, 1, 0]
processing file dwedge_M8.mws renamed as dwedge_M9.mws with replacement(s): [0, 0, 0]
processing file dwedge_to_wedge_M8.mws renamed as dwedge_to_wedge_M9.mws with replacement(s): [0, 1, 0]
processing file LCbig_M8.mws renamed as LCbig_M9.mws with replacement(s): [0, 1, 0]
processing file makeclialias_M8.mws renamed as makeclialias_M9.mws with replacement(s): [0, 1, 0]
processing file RCbig_M8.mws renamed as RCbig_M9.mws with replacement(s): [0, 1, 0]
processing file setup_M8.mws renamed as setup_M9.mws with replacement(s): [0, 1, 0]
processing file wedge_to_dwedge_M8.mws renamed as wedge_to_dwedge_M9.mws with replacement(s): [0, 1, 0]
*****
finished processing 14 files
*****
```

```
>
```

```
> TEST1 := "C:\\Maple8\\P8\\GTP8\\Help\\";
TEST2 := "C:\\Maple9\\P9\\GTP9\\Help\\";
change_helpfiles(TEST1, TEST2, ["January 5", "2003"], ["December 1", "2003"], "_M8", "_M9");
```

```
TEST1 := "C:\Maple8\P8\GTP8\Help\"
```

```
TEST2 := "C:\Maple9\P9\GTP9\Help\"
```

```
processing file &t_M8.mws renamed as &t_M9.mws with replacement(s): [1, 0]
processing file cmulB_M8.mws renamed as cmulB_M9.mws with replacement(s): [1, 0]
processing file gbasis_M8.mws renamed as gbasis_M9.mws with replacement(s): [1, 0]
processing file gcollect_M8.mws renamed as gcollect_M9.mws with replacement(s): [1, 0]
processing file gprod_M8.mws renamed as gprod_M9.mws with replacement(s): [1, 0]
processing file gradedeven_M8.mws renamed as gradedeven_M9.mws with replacement(s): [1, 0]
processing file gradedmonom_M8.mws renamed as gradedmonom_M9.mws with replacement(s): [1, 0]
processing file gradedodd_M8.mws renamed as gradedodd_M9.mws with replacement(s): [1, 0]
processing file gradedpolynom_M8.mws renamed as gradedpolynom_M9.mws with replacement(s): [1, 0]
```

```
processing file gradedprod_M8.mws renamed as gradedprod_M9.mws with replacement(s)
: [1, 0]
processing file grade_M8.mws renamed as grade_M9.mws with replacement(s): [1, 0]
processing file tensorrank_M8.mws renamed as tensorrank_M9.mws with replacement(s)
: [1, 0]
*****
finished processing 12 files
*****
```

```
[ >
```

```
> restart:with(code_support) :
```

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Last revised: December 1, 2003

```
> TEST1:="C:\\Maple8\\P8\\Octonion8\\Help\\";  
TEST2:="C:\\Maple9\\P9\\Octonion9\\Help\\";  
change_helpfiles(TEST1,TEST2,["January 5","2003"],["December  
1","2003"], "_M8", "_M9");
```

```
TEST1 := "C:\Maple8\P8\Octonion8\Help\"
```

```
TEST2 := "C:\Maple9\P9\Octonion9\Help\"
```

```
processing file associator_M8.mws renamed as associator_M9.mws with replacement(s)
: [1, 0]
processing file commutator_M8.mws renamed as commutator_M9.mws with replacement(s)
: [1, 0]
processing file def_omultable_M8.mws renamed as def_omultable_M9.mws with replacem
ent(s): [1, 0]
processing file Fano_triples_M8.mws renamed as Fano_triples_M9.mws with replacemen
t(s): [1, 0]
processing file octonion_M8.mws renamed as octonion_M9.mws with replacement(s): [1
, 0]
processing file oinv_M8.mws renamed as oinv_M9.mws with replacement(s): [1, 0]
processing file omultable_M8.mws renamed as omultable_M9.mws with replacement(s):
[1, 0]
processing file omul_M8.mws renamed as omul_M9.mws with replacement(s): [1, 0]
processing file onorm_M8.mws renamed as onorm_M9.mws with replacement(s): [1, 0]
processing file overversion_M8.mws renamed as overversion_M9.mws with replacement(s): [1
, 0]
processing file o_conjug_M8.mws renamed as o_conjug_M9.mws with replacement(s): [1
, 0]
processing file Phi_M8.mws renamed as Phi_M9.mws with replacement(s): [1, 0]
processing file purevectorpart_M8.mws renamed as purevectorpart_M9.mws with replac
ement(s): [1, 0]
processing file realpart_M8.mws renamed as realpart_M9.mws with replacement(s): [1
, 0]
processing file setup_M8.mws renamed as setup_M9.mws with replacement(s): [1, 0]
*****
finished processing 15 files
*****
```

```
[ >
```

```
> TEST1:="C:\\Maple8\\P8\\Code_support8\\Help\\";
```

```

TEST2:="C:\\Maple9\\P9\\Code_support9\\Help\\";
change_helpfiles(TEST1,TEST2,["January 5","2003"],["December
1","2003"],"_M8","_M9");

```

```

TEST1 := "C:\Maple8\P8\Code_support8\Help\"

```

```

TEST2 := "C:\Maple9\P9\Code_support9\Help\"

```

```

processing file code_support_M8.mws renamed as code_support_M9.mws with replacemen
t(s): [14, 0]
processing file examples_M8.mws renamed as examples_M9.mws with replacement(s): [9
, 0]
processing file INSERT_HELPPAGES_M8.mws renamed as INSERT_HELPPAGES_M9.mws with re
placement(s): [1, 0]
*****
finished processing 3 files
*****

```

```
>
```

Example 9: Procedure `get_TEXT` whose output we won't show reads in a Maple worksheet as a text file. This is needed in order to make replacements in the text of the worksheet.

```
> restart:with(code_support):
```

```

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```

```
> TEST1:="C:\\Maple9\\P9\\test1\\";
```

```
TEST11:=`C:\\Maple9/P9/test1/`;
```

```
> L1:=get_dir(TEST1);
```

```
L11:=get_dir(TEST11);
```

```
TEST1 := "C:\Maple9\P9\test1\"
```

```
TEST11 := C:\Maple9/P9/test1/
```

```
L1 := ["&c_M9.mws", "adfmatrix_M9.mws", "all_sigs_M9.mws", "all_sigs_M9_copy1.mws"]
```

```
L11 := ["&c_M9.mws", "adfmatrix_M9.mws", "all_sigs_M9.mws", "all_sigs_M9_copy1.mws"]
```

```
> filename1:=cat(TEST1,L1[1]);
```

```
filename11:=cat(TEST11,L11[1]);
```

```
filename1 := "C:\Maple9\P9\test1\&c_M9.mws"
```

```
filename11 := C:\Maple9/P9/test1/&c_M9.mws
```

```
> get_TEXT(filename1):
```

```
>
```

Example 10: Procedure `makeLIST` reads in file names of Maple worksheets and automatically creates, on the basis of additional input, a list of help topics for `ModuleName`, with `Parent` and `GrandParent` specified ahead of time, from the directory `HELP_FILE_PATH`. There is a need for an additional input for types and converts which are listed differently in the library. This procedure automatically creates lists of aliases for each help topic. This list can be modified later with the

procedure **modifyLIST**.

```
> HDB_LIB_PATH:=convert(libname[1],name);  
HELP_FILE_PATH:=`C:\Maple9/P9/Cliff9/Help/`; ##Directory where  
*_M9.mws help files are located  
BROWSER_PATH:=`Mathematics/Algebra/`;  
ModuleName :=`Clifford`;  
Parent :=`Clifford,intro`;  
GrandParent :=`Clifford,intro`;  
MapleVersion:="M9"; ### substring of file names that gives Maple  
version  
typesLIST:=["antisymmatrix","clibasmon","climatrix","climon","clip  
olynom",  
  
"cliprod","cliscalar","diagmatrix","dfmatrix","evenelement",  
  
"fieldelement","gencomplex","genquatbasis","genquaternion",  
  
"idempotent","nilpotent","oddelement","primitiveidemp","purequatba  
sis",  
        "quaternion","symmatrix","tensorprod"];  
convertsLIST:=["mlist","str_to_int"];  
  
        HDB_LIB_PATH := C:\Maple9\Cliffordlib  
        HELP_FILE_PATH := C:\Maple9/P9/Cliff9/Help/  
        BROWSER_PATH := Mathematics/Algebra/  
        ModuleName := Clifford  
        Parent := Clifford,intro  
        GrandParent := Clifford,intro  
        MapleVersion := "M9"  
typesLIST := ["antisymmatrix", "clibasmon", "climatrix", "climon", "clipolynom", "cliprod",  
        "cliscalar", "diagmatrix", "dfmatrix", "evenelement", "fieldelement", "gencomplex",  
        "genquatbasis", "genquaternion", "idempotent", "nilpotent", "oddelement", "primitiveidemp",  
        "purequatbasis", "quaternion", "symmatrix", "tensorprod"]  
        convertsLIST := ["mlist", "str_to_int"]  
> Lauto:=makeLIST(ModuleName,Parent,GrandParent,HELP_FILE_PATH,Maple  
Version);  
  
Lauto := [[ Clifford,&c, Clifford,intro, ["Clifford,&c", "&c"]],  
        [ Clifford,adfmatrix, Clifford,intro, ["Clifford,adfmatrix", "adfmatrix"]],  
        [ Clifford,all_sigs, Clifford,intro, ["Clifford,all_sigs", "all_sigs"]], [  
        Clifford,type,antisymmatrix, Clifford,intro, ["Clifford,type,antisymmatrix", "type,antisymmatrix"]  
        ], [ Clifford,beta_minus, Clifford,intro, ["Clifford,beta_minus", "beta_minus"]],
```

[*Clifford,beta_plus*, *Clifford,intro*, ["Clifford,beta_plus", "beta_plus"]],
[*Clifford,Bsignature*, *Clifford,intro*, ["Clifford,Bsignature", "Bsignature"]],
[*Clifford,buildm*, *Clifford,intro*, ["Clifford,buildm", "buildm"]],
[*Clifford,bygrade*, *Clifford,intro*, ["Clifford,bygrade", "bygrade"]],
[*Clifford,cbasis*, *Clifford,intro*, ["Clifford,cbasis", "cbasis"]],
[*Clifford,cdfmatrix*, *Clifford,intro*, ["Clifford,cdfmatrix", "cdfmatrix"]],
[*Clifford,cexpQ*, *Clifford,intro*, ["Clifford,cexpQ", "cexpQ"]],
[*Clifford,cexp*, *Clifford,intro*, ["Clifford,cexp", "cexp"]],
[*Clifford,cinv*, *Clifford,intro*, ["Clifford,cinv", "cinv"]],
[*Clifford,type,clibasmon*, *Clifford,intro*, ["Clifford,type,clibasmon", "type,clibasmon"]],
[*Clifford,clibilinear*, *Clifford,intro*, ["Clifford,clibilinear", "clibilinear"]],
[*Clifford,clicollect*, *Clifford,intro*, ["Clifford,clicollect", "clicollect"]],
[*Clifford,clidata*, *Clifford,intro*, ["Clifford,clidata", "clidata"]],
[*Clifford,CLIFFORD_ENV*, *Clifford,intro*, ["Clifford,CLIFFORD_ENV", "CLIFFORD_ENV"]],
[*Clifford,clilinear*, *Clifford,intro*, ["Clifford,clilinear", "clilinear"]],
[*Clifford,type,climatrix*, *Clifford,intro*, ["Clifford,type,climatrix", "type,climatrix"]],
[*Clifford,climinpoly*, *Clifford,intro*, ["Clifford,climinpoly", "climinpoly"]],
[*Clifford,type,climon*, *Clifford,intro*, ["Clifford,type,climon", "type,climon"]],
[*Clifford,cliparse*, *Clifford,intro*, ["Clifford,cliparse", "cliparse"]],
[*Clifford,type,clipolynom*, *Clifford,intro*, ["Clifford,type,clipolynom", "type,clipolynom"]],
[*Clifford,type,cliprod*, *Clifford,intro*, ["Clifford,type,cliprod", "type,cliprod"]],
[*Clifford,cliremove*, *Clifford,intro*, ["Clifford,cliremove", "cliremove"]],
[*Clifford,type,cliscalar*, *Clifford,intro*, ["Clifford,type,cliscalar", "type,cliscalar"]],
[*Clifford,clisolve*, *Clifford,intro*, ["Clifford,clisolve", "clisolve"]],
[*Clifford,clisort*, *Clifford,intro*, ["Clifford,clisort", "clisort"]],
[*Clifford,cliterms*, *Clifford,intro*, ["Clifford,cliterms", "cliterms"]],
[*Clifford,cmulgen*, *Clifford,intro*, ["Clifford,cmulgen", "cmulgen"]],
[*Clifford,cmulNUM*, *Clifford,intro*, ["Clifford,cmulNUM", "cmulNUM"]],
[*Clifford,cmulQ*, *Clifford,intro*, ["Clifford,cmulQ", "cmulQ"]],
[*Clifford,cmulRS*, *Clifford,intro*, ["Clifford,cmulRS", "cmulRS"]],
[*Clifford,cmul*, *Clifford,intro*, ["Clifford,cmul", "cmul"]], [*Clifford,cmul_user_defined*, *Clifford,intro*, ["Clifford,cmul_user_defined", "cmul_user_defined"]],
[*Clifford,cocycle*, *Clifford,intro*, ["Clifford,cocycle", "cocycle"]], [*Clifford,commutingelements*, *Clifford,intro*, ["Clifford,commutingelements", "commutingelements"]],
[*Clifford,conjugation*, *Clifford,intro*, ["Clifford,conjugation", "conjugation"]],

[*Clifford,c_conjug*, *Clifford,intro*, ["Clifford,c_conjug", "c_conjug"]],
[*Clifford,ddfmatrix*, *Clifford,intro*, ["Clifford,ddfmatrix", "ddfmatrix"]],
[*Clifford,type,dfmatrix*, *Clifford,intro*, ["Clifford,type,dfmatrix", "type,dfmatrix"]],
[*Clifford,type,diagmatrix*, *Clifford,intro*, ["Clifford,type,diagmatrix", "type,diagmatrix"]],
[*Clifford,diagonalize*, *Clifford,intro*, ["Clifford,diagonalize", "diagonalize"]],
[*Clifford,displayid*, *Clifford,intro*, ["Clifford,displayid", "displayid"]],
[*Clifford,type,evenelement*, *Clifford,intro*, ["Clifford,type,evenelement", "type,evenelement"]],
[*Clifford,extract*, *Clifford,intro*, ["Clifford,extract", "extract"]],
[*Clifford,factoridempotent*, *Clifford,intro*, ["Clifford,factoridempotent", "factoridempotent"]],
[*Clifford,type,fieldelement*, *Clifford,intro*, ["Clifford,type,fieldelement", "type,fieldelement"]],
[*Clifford,find1str*, *Clifford,intro*, ["Clifford,find1str", "find1str"]],
[*Clifford,findbasis*, *Clifford,intro*, ["Clifford,findbasis", "findbasis"]],
[*Clifford,type,gencomplex*, *Clifford,intro*, ["Clifford,type,gencomplex", "type,gencomplex"]],
[*Clifford,type,genquatbasis*, *Clifford,intro*, ["Clifford,type,genquatbasis", "type,genquatbasis"]],
[*Clifford,type,genquaternion*, *Clifford,intro*, ["Clifford,type,genquaternion", "type,genquaternion"]],
[*Clifford,gradeinv*, *Clifford,intro*, ["Clifford,gradeinv", "gradeinv"]],
[*Clifford,type,idempotent*, *Clifford,intro*, ["Clifford,type,idempotent", "type,idempotent"]],
[*Clifford,intro*, *Clifford,intro*, ["Clifford,intro", "intro"]],
[*Clifford,isproduct*, *Clifford,intro*, ["Clifford,isproduct", "isproduct"]],
[*Clifford,isVahlenmatrix*, *Clifford,intro*, ["Clifford,isVahlenmatrix", "isVahlenmatrix"]],
[*Clifford,Kfield*, *Clifford,intro*, ["Clifford,Kfield", "Kfield"]],
[*Clifford,LCQ*, *Clifford,intro*, ["Clifford,LCQ", "LCQ"]],
[*Clifford,LC*, *Clifford,intro*, ["Clifford,LC", "LC"]],
[*Clifford,makealiases*, *Clifford,intro*, ["Clifford,makealiases", "makealiases"]],
[*Clifford,makeclibasmon*, *Clifford,intro*, ["Clifford,makeclibasmon", "makeclibasmon"]],
[*Clifford,matKrepr*, *Clifford,intro*, ["Clifford,matKrepr", "matKrepr"]],
[*Clifford,maxgrade*, *Clifford,intro*, ["Clifford,maxgrade", "maxgrade"]],
[*Clifford,maxindex*, *Clifford,intro*, ["Clifford,maxindex", "maxindex"]],
[*Clifford,mdfmatrix*, *Clifford,intro*, ["Clifford,mdfmatrix", "mdfmatrix"]],
[*Clifford,minimalideal*, *Clifford,intro*, ["Clifford,minimalideal", "minimalideal"]],
[*Clifford,convert,mlist*, *Clifford,intro*, ["Clifford,convert,mlist", "convert,mlist"]],
[*Clifford,type,nilpotent*, *Clifford,intro*, ["Clifford,type,nilpotent", "type,nilpotent"]],
[*Clifford,type,oddelement*, *Clifford,intro*, ["Clifford,type,oddelement", "type,oddelement"]],
[*Clifford,ord*, *Clifford,intro*, ["Clifford,ord", "ord"]],
[*Clifford,permsign*, *Clifford,intro*, ["Clifford,permsign", "permsign"]], [*Clifford,type,primitiveidemp*, *Clifford,intro*,

["Clifford,type,primitiveidemp", "type,primitiveidemp"]],
 [Clifford,pseudodet, Clifford,intro, ["Clifford,pseudodet", "pseudodet"]], [Clifford,type,purequatbasis, Clifford,intro, ["Clifford,type,purequatbasis", "type,purequatbasis"]],
 [Clifford,qdisplay, Clifford,intro, ["Clifford,qdisplay", "qdisplay"]],
 [Clifford,qinv, Clifford,intro, ["Clifford,qinv", "qinv"]],
 [Clifford,qmul, Clifford,intro, ["Clifford,qmul", "qmul"]],
 [Clifford,qnorm, Clifford,intro, ["Clifford,qnorm", "qnorm"]],
 [Clifford,type,quaternion, Clifford,intro, ["Clifford,type,quaternion", "type,quaternion"]],
 [Clifford,q_conjug, Clifford,intro, ["Clifford,q_conjug", "q_conjug"]],
 [Clifford,RCQ, Clifford,intro, ["Clifford,RCQ", "RCQ"]],
 [Clifford,RC, Clifford,intro, ["Clifford,RC", "RC"]],
 [Clifford,rd_clibasmon, Clifford,intro, ["Clifford,rd_clibasmon", "rd_clibasmon"]],
 [Clifford,rd_climon, Clifford,intro, ["Clifford,rd_climon", "rd_climon"]],
 [Clifford,rd_clipolynom, Clifford,intro, ["Clifford,rd_clipolynom", "rd_clipolynom"]],
 [Clifford,reorder, Clifford,intro, ["Clifford,reorder", "reorder"]],
 [Clifford,reversion, Clifford,intro, ["Clifford,reversion", "reversion"]],
 [Clifford,RHnumber, Clifford,intro, ["Clifford,RHnumber", "RHnumber"]],
 [Clifford,rmulm, Clifford,intro, ["Clifford,rmulm", "rmulm"]],
 [Clifford,rot3d, Clifford,intro, ["Clifford,rot3d", "rot3d"]],
 [Clifford,scalarpart, Clifford,intro, ["Clifford,scalarpart", "scalarpart"]],
 [Clifford,setup, Clifford,intro, ["Clifford,setup", "setup"]],
 [Clifford,sexp, Clifford,intro, ["Clifford,sexp", "sexp"]],
 [Clifford,specify_constants, Clifford,intro, ["Clifford,specify_constants", "specify_constants"]],
 [Clifford,spinorKbasis, Clifford,intro, ["Clifford,spinorKbasis", "spinorKbasis"]],
 [Clifford,spinorKrepr, Clifford,intro, ["Clifford,spinorKrepr", "spinorKrepr"]],
 [Clifford,squaremodf, Clifford,intro, ["Clifford,squaremodf", "squaremodf"]],
 [Clifford,convert,str_to_int, Clifford,intro, ["Clifford,convert,str_to_int", "convert,str_to_int"]],
 [Clifford,subs_clipolynom, Clifford,intro, ["Clifford,subs_clipolynom", "subs_clipolynom"]],
 [Clifford,type,symmatrix, Clifford,intro, ["Clifford,type,symmatrix", "type,symmatrix"]],
 [Clifford,type,tensorprod, Clifford,intro, ["Clifford,type,tensorprod", "type,tensorprod"]],
 [Clifford,useproduct, Clifford,intro, ["Clifford,useproduct", "useproduct"]],
 [Clifford,vectorpart, Clifford,intro, ["Clifford,vectorpart", "vectorpart"]],
 [Clifford,version, Clifford,intro, ["Clifford,version", "version"]],
 [Clifford,wedge, Clifford,intro, ["Clifford,wedge", "wedge"]],
 [Clifford,wexp, Clifford,intro, ["Clifford,wexp", "wexp"]]

Example 11: Procedure **modifyLIST** can be used to modify a list of help topic entries that has been created automatically by the procedure **makeLIST**. Desired changes need to be entered as two lists of strings: the first list contains strings that need to be replaced while the second lists contains the replacement strings. The original list remains unchanged. This procedure needs to be used separately for each help topic that we want to modify. For example, in the list *Lauto* we have the following entry:

```
[ Clifford,wedge, Clifford,intro, ["Clifford,wedge", "wedge"] ]
```

which we would like to modify this entry by adding an additional alias ``&w`` to the list of aliases:

```
> Lmodified:=modifyLIST(Lauto,`Clifford,wedge`,["Clifford,wedge", "wedge", "`&w`"]);
```

```
Lmodified := [[ Clifford,&c, Clifford,intro, ["Clifford,&c", "&c"] ],
  [ Clifford,adfmatrix, Clifford,intro, ["Clifford,adfmatrix", "adfmatrix"] ],
  [ Clifford,all_sigs, Clifford,intro, ["Clifford,all_sigs", "all_sigs"] ], [
  Clifford,type,antisymmatrix, Clifford,intro, ["Clifford,type,antisymmatrix", "type,antisymmatrix" ] ],
  [ Clifford,beta_minus, Clifford,intro, ["Clifford,beta_minus", "beta_minus"] ],
  [ Clifford,beta_plus, Clifford,intro, ["Clifford,beta_plus", "beta_plus"] ],
  [ Clifford,Bsignature, Clifford,intro, ["Clifford,Bsignature", "Bsignature"] ],
  [ Clifford,buildm, Clifford,intro, ["Clifford,buildm", "buildm"] ],
  [ Clifford,bygrade, Clifford,intro, ["Clifford,bygrade", "bygrade"] ],
  [ Clifford,cbasis, Clifford,intro, ["Clifford,cbasis", "cbasis"] ],
  [ Clifford,cdfmatrix, Clifford,intro, ["Clifford,cdfmatrix", "cdfmatrix"] ],
  [ Clifford,cexpQ, Clifford,intro, ["Clifford,cexpQ", "cexpQ"] ],
  [ Clifford,cexp, Clifford,intro, ["Clifford,cexp", "cexp"] ],
  [ Clifford,cinv, Clifford,intro, ["Clifford,cinv", "cinv"] ],
  [ Clifford,type,clibasmon, Clifford,intro, ["Clifford,type,clibasmon", "type,clibasmon"] ],
  [ Clifford,clibilinear, Clifford,intro, ["Clifford,clibilinear", "clibilinear"] ],
  [ Clifford,clicollect, Clifford,intro, ["Clifford,clicollect", "clicollect"] ],
  [ Clifford,clidata, Clifford,intro, ["Clifford,clidata", "clidata"] ],
  [ Clifford,CLIFFORD_ENV, Clifford,intro, ["Clifford,CLIFFORD_ENV", "CLIFFORD_ENV"] ],
  [ Clifford,clilinear, Clifford,intro, ["Clifford,clilinear", "clilinear"] ],
  [ Clifford,type,climatrix, Clifford,intro, ["Clifford,type,climatrix", "type,climatrix"] ],
  [ Clifford,climinpoly, Clifford,intro, ["Clifford,climinpoly", "climinpoly"] ],
  [ Clifford,type,climon, Clifford,intro, ["Clifford,type,climon", "type,climon"] ],
  [ Clifford,cliparse, Clifford,intro, ["Clifford,cliparse", "cliparse"] ],
  [ Clifford,type,clipolynom, Clifford,intro, ["Clifford,type,clipolynom", "type,clipolynom"] ],
```

[*Clifford,type,cliprod*, *Clifford,intro*, ["Clifford,type,cliprod", "type,cliprod"]],
[*Clifford,cliremove*, *Clifford,intro*, ["Clifford,cliremove", "cliremove"]],
[*Clifford,type,cliscalar*, *Clifford,intro*, ["Clifford,type,cliscalar", "type,cliscalar"]],
[*Clifford,clisolve*, *Clifford,intro*, ["Clifford,clisolve", "clisolve"]],
[*Clifford,clisort*, *Clifford,intro*, ["Clifford,clisort", "clisort"]],
[*Clifford,cliterms*, *Clifford,intro*, ["Clifford,cliterms", "cliterms"]],
[*Clifford,cmulgen*, *Clifford,intro*, ["Clifford,cmulgen", "cmulgen"]],
[*Clifford,cmulNUM*, *Clifford,intro*, ["Clifford,cmulNUM", "cmulNUM"]],
[*Clifford,cmulQ*, *Clifford,intro*, ["Clifford,cmulQ", "cmulQ"]],
[*Clifford,cmulRS*, *Clifford,intro*, ["Clifford,cmulRS", "cmulRS"]],
[*Clifford,cmul*, *Clifford,intro*, ["Clifford,cmul", "cmul"]], [*Clifford,cmul_user_defined*, *Clifford,intro*, ["Clifford,cmul_user_defined", "cmul_user_defined"]],
[*Clifford,cocycle*, *Clifford,intro*, ["Clifford,cocycle", "cocycle"]], [*Clifford,commutingelements*, *Clifford,intro*, ["Clifford,commutingelements", "commutingelements"]],
[*Clifford,conjugation*, *Clifford,intro*, ["Clifford,conjugation", "conjugation"]],
[*Clifford,c_conjug*, *Clifford,intro*, ["Clifford,c_conjug", "c_conjug"]],
[*Clifford,ddfmatrix*, *Clifford,intro*, ["Clifford,ddfmatrix", "ddfmatrix"]],
[*Clifford,type,dfmatrix*, *Clifford,intro*, ["Clifford,type,dfmatrix", "type,dfmatrix"]],
[*Clifford,type,diagmatrix*, *Clifford,intro*, ["Clifford,type,diagmatrix", "type,diagmatrix"]],
[*Clifford,diagonalize*, *Clifford,intro*, ["Clifford,diagonalize", "diagonalize"]],
[*Clifford,displayid*, *Clifford,intro*, ["Clifford,displayid", "displayid"]],
[*Clifford,type,evenelement*, *Clifford,intro*, ["Clifford,type,evenelement", "type,evenelement"]],
[*Clifford,extract*, *Clifford,intro*, ["Clifford,extract", "extract"]],
[*Clifford,factoridempotent*, *Clifford,intro*, ["Clifford,factoridempotent", "factoridempotent"]],
[*Clifford,type,fieldelement*, *Clifford,intro*, ["Clifford,type,fieldelement", "type,fieldelement"]],
[*Clifford,find1str*, *Clifford,intro*, ["Clifford,find1str", "find1str"]],
[*Clifford,findbasis*, *Clifford,intro*, ["Clifford,findbasis", "findbasis"]],
[*Clifford,type,gencomplex*, *Clifford,intro*, ["Clifford,type,gencomplex", "type,gencomplex"]],
[*Clifford,type,genquatbasis*, *Clifford,intro*, ["Clifford,type,genquatbasis", "type,genquatbasis"]], [*Clifford,type,genquaternion*, *Clifford,intro*, ["Clifford,type,genquaternion", "type,genquaternion"]],
[*Clifford,gradeinv*, *Clifford,intro*, ["Clifford,gradeinv", "gradeinv"]],
[*Clifford,type,idempotent*, *Clifford,intro*, ["Clifford,type,idempotent", "type,idempotent"]],
[*Clifford,intro*, *Clifford,intro*, ["Clifford,intro", "intro"]],
[*Clifford,isproduct*, *Clifford,intro*, ["Clifford,isproduct", "isproduct"]],
[*Clifford,isVahlenmatrix*, *Clifford,intro*, ["Clifford,isVahlenmatrix", "isVahlenmatrix"]],

[*Clifford,Kfield*, *Clifford,intro*, ["Clifford,Kfield", "Kfield"]],
[*Clifford,LCQ*, *Clifford,intro*, ["Clifford,LCQ", "LCQ"]],
[*Clifford,LC*, *Clifford,intro*, ["Clifford,LC", "LC"]],
[*Clifford,makealiases*, *Clifford,intro*, ["Clifford,makealiases", "makealiases"]],
[*Clifford,makeclibasmon*, *Clifford,intro*, ["Clifford,makeclibasmon", "makeclibasmon"]],
[*Clifford,matKrepr*, *Clifford,intro*, ["Clifford,matKrepr", "matKrepr"]],
[*Clifford,maxgrade*, *Clifford,intro*, ["Clifford,maxgrade", "maxgrade"]],
[*Clifford,maxindex*, *Clifford,intro*, ["Clifford,maxindex", "maxindex"]],
[*Clifford,mdfmatrix*, *Clifford,intro*, ["Clifford,mdfmatrix", "mdfmatrix"]],
[*Clifford,minimalideal*, *Clifford,intro*, ["Clifford,minimalideal", "minimalideal"]],
[*Clifford,convert,mlist*, *Clifford,intro*, ["Clifford,convert,mlist", "convert,mlist"]],
[*Clifford,type,nilpotent*, *Clifford,intro*, ["Clifford,type,nilpotent", "type,nilpotent"]],
[*Clifford,type,oddelement*, *Clifford,intro*, ["Clifford,type,oddelement", "type,oddelement"]],
[*Clifford,ord*, *Clifford,intro*, ["Clifford,ord", "ord"]],
[*Clifford,permsign*, *Clifford,intro*, ["Clifford,permsign", "permsign"]], [*Clifford,type,primitiveidemp*, *Clifford,intro*, ["Clifford,type,primitiveidemp", "type,primitiveidemp"]],
[*Clifford,pseudodet*, *Clifford,intro*, ["Clifford,pseudodet", "pseudodet"]], [*Clifford,type,purequatbasis*, *Clifford,intro*, ["Clifford,type,purequatbasis", "type,purequatbasis"]],
[*Clifford,qdisplay*, *Clifford,intro*, ["Clifford,qdisplay", "qdisplay"]],
[*Clifford,qinv*, *Clifford,intro*, ["Clifford,qinv", "qinv"]],
[*Clifford,qmul*, *Clifford,intro*, ["Clifford,qmul", "qmul"]],
[*Clifford,qnorm*, *Clifford,intro*, ["Clifford,qnorm", "qnorm"]],
[*Clifford,type,quaternion*, *Clifford,intro*, ["Clifford,type,quaternion", "type,quaternion"]],
[*Clifford,q_conjug*, *Clifford,intro*, ["Clifford,q_conjug", "q_conjug"]],
[*Clifford,RCQ*, *Clifford,intro*, ["Clifford,RCQ", "RCQ"]],
[*Clifford,RC*, *Clifford,intro*, ["Clifford,RC", "RC"]],
[*Clifford,rd_clibasmon*, *Clifford,intro*, ["Clifford,rd_clibasmon", "rd_clibasmon"]],
[*Clifford,rd_climon*, *Clifford,intro*, ["Clifford,rd_climon", "rd_climon"]],
[*Clifford,rd_clipolynom*, *Clifford,intro*, ["Clifford,rd_clipolynom", "rd_clipolynom"]],
[*Clifford,reorder*, *Clifford,intro*, ["Clifford,reorder", "reorder"]],
[*Clifford,reversion*, *Clifford,intro*, ["Clifford,reversion", "reversion"]],
[*Clifford,RHnumber*, *Clifford,intro*, ["Clifford,RHnumber", "RHnumber"]],
[*Clifford,rmulm*, *Clifford,intro*, ["Clifford,rmulm", "rmulm"]],
[*Clifford,rot3d*, *Clifford,intro*, ["Clifford,rot3d", "rot3d"]],
[*Clifford,scalarpart*, *Clifford,intro*, ["Clifford,scalarpart", "scalarpart"]],

```

[ Clifford,setup, Clifford,intro, ["Clifford,setup", "setup" ]],
[ Clifford,sexp, Clifford,intro, ["Clifford,sexp", "sexp" ]],
[ Clifford,specify_constants, Clifford,intro, ["Clifford,specify_constants", "specify_constants" ]],
[ Clifford,spinorKbasis, Clifford,intro, ["Clifford,spinorKbasis", "spinorKbasis" ]],
[ Clifford,spinorKrepr, Clifford,intro, ["Clifford,spinorKrepr", "spinorKrepr" ]],
[ Clifford,squaremodf, Clifford,intro, ["Clifford,squaremodf", "squaremodf" ]],
[ Clifford,convert,str_to_int, Clifford,intro, ["Clifford,convert,str_to_int", "convert,str_to_int" ]],
[ Clifford,subs_clipolynom, Clifford,intro, ["Clifford,subs_clipolynom", "subs_clipolynom" ]],
[ Clifford,type,symmatrix, Clifford,intro, ["Clifford,type,symmatrix", "type,symmatrix" ]],
[ Clifford,type,tensorprod, Clifford,intro, ["Clifford,type,tensorprod", "type,tensorprod" ]],
[ Clifford,useproduct, Clifford,intro, ["Clifford,useproduct", "useproduct" ]],
[ Clifford,vectorpart, Clifford,intro, ["Clifford,vectorpart", "vectorpart" ]],
[ Clifford,version, Clifford,intro, ["Clifford,version", "version" ]],
[ Clifford,wedge, Clifford,intro, ["Clifford,wedge", "wedge", "`&w`" ]],
[ Clifford,wexp, Clifford,intro, ["Clifford,wexp", "wexp" ]]]

```

Notice that this entry now looks as follows:

```
[ Clifford,wedge, Clifford,intro, ["Clifford,wedge", "wedge", "`&w`" ]]
```

that is, the alias `&w` has been added. To modify another topic, we need to execute this procedure once more. For example, the last topic has this entry:

```
[ Clifford,wexp, Clifford,intro, ["Clifford,wexp", "wexp" ]]
```

If wanted to modify it by removing, for example, the alias "wexp", we would need to do the following:

```

> Lmodified2:=modifyLIST(Lmodified,`Clifford,wexp`,["Clifford,wexp"]
);
Lmodified2 := [[ Clifford,&c, Clifford,intro, ["Clifford,&c", "&c" ]],
[ Clifford,adfmatrix, Clifford,intro, ["Clifford,adfmatrix", "adfmatrix" ]],
[ Clifford,all_sigs, Clifford,intro, ["Clifford,all_sigs", "all_sigs" ]], [
Clifford,type,antisymmatrix, Clifford,intro, ["Clifford,type,antisymmatrix", "type,antisymmatrix" ]
], [ Clifford,beta_minus, Clifford,intro, ["Clifford,beta_minus", "beta_minus" ]],
[ Clifford,beta_plus, Clifford,intro, ["Clifford,beta_plus", "beta_plus" ]],
[ Clifford,Bsignature, Clifford,intro, ["Clifford,Bsignature", "Bsignature" ]],
[ Clifford,buildm, Clifford,intro, ["Clifford,buildm", "buildm" ]],
[ Clifford,bygrade, Clifford,intro, ["Clifford,bygrade", "bygrade" ]],

```

[*Clifford,cbasis*, *Clifford,intro*, ["Clifford,cbasis", "cbasis"]],
[*Clifford,cdfmatrix*, *Clifford,intro*, ["Clifford,cdfmatrix", "cdfmatrix"]],
[*Clifford,cexpQ*, *Clifford,intro*, ["Clifford,cexpQ", "cexpQ"]],
[*Clifford,cexp*, *Clifford,intro*, ["Clifford,cexp", "cexp"]],
[*Clifford,cinv*, *Clifford,intro*, ["Clifford,cinv", "cinv"]],
[*Clifford,type,clibasmon*, *Clifford,intro*, ["Clifford,type,clibasmon", "type,clibasmon"]],
[*Clifford,clibilinear*, *Clifford,intro*, ["Clifford,clibilinear", "clibilinear"]],
[*Clifford,clicollect*, *Clifford,intro*, ["Clifford,clicollect", "clicollect"]],
[*Clifford,clidata*, *Clifford,intro*, ["Clifford,clidata", "clidata"]],
[*Clifford,CLIFFORD_ENV*, *Clifford,intro*, ["Clifford,CLIFFORD_ENV", "CLIFFORD_ENV"]],
[*Clifford,clilinear*, *Clifford,intro*, ["Clifford,clilinear", "clilinear"]],
[*Clifford,type,climatrix*, *Clifford,intro*, ["Clifford,type,climatrix", "type,climatrix"]],
[*Clifford,climinpoly*, *Clifford,intro*, ["Clifford,climinpoly", "climinpoly"]],
[*Clifford,type,climon*, *Clifford,intro*, ["Clifford,type,climon", "type,climon"]],
[*Clifford,cliparse*, *Clifford,intro*, ["Clifford,cliparse", "cliparse"]],
[*Clifford,type,clipolynom*, *Clifford,intro*, ["Clifford,type,clipolynom", "type,clipolynom"]],
[*Clifford,type,cliprod*, *Clifford,intro*, ["Clifford,type,cliprod", "type,cliprod"]],
[*Clifford,cliremove*, *Clifford,intro*, ["Clifford,cliremove", "cliremove"]],
[*Clifford,type,cliscalar*, *Clifford,intro*, ["Clifford,type,cliscalar", "type,cliscalar"]],
[*Clifford,clisolve*, *Clifford,intro*, ["Clifford,clisolve", "clisolve"]],
[*Clifford,clisort*, *Clifford,intro*, ["Clifford,clisort", "clisort"]],
[*Clifford,cliterms*, *Clifford,intro*, ["Clifford,cliterms", "cliterms"]],
[*Clifford,cmulgen*, *Clifford,intro*, ["Clifford,cmulgen", "cmulgen"]],
[*Clifford,cmulNUM*, *Clifford,intro*, ["Clifford,cmulNUM", "cmulNUM"]],
[*Clifford,cmulQ*, *Clifford,intro*, ["Clifford,cmulQ", "cmulQ"]],
[*Clifford,cmulRS*, *Clifford,intro*, ["Clifford,cmulRS", "cmulRS"]],
[*Clifford,cmul*, *Clifford,intro*, ["Clifford,cmul", "cmul"]], [*Clifford,cmul_user_defined*, *Clifford,intro*, ["Clifford,cmul_user_defined", "cmul_user_defined"]],
[*Clifford,cocycle*, *Clifford,intro*, ["Clifford,cocycle", "cocycle"]], [*Clifford,commutingelements*, *Clifford,intro*, ["Clifford,commutingelements", "commutingelements"]],
[*Clifford,conjugation*, *Clifford,intro*, ["Clifford,conjugation", "conjugation"]],
[*Clifford,c_conjug*, *Clifford,intro*, ["Clifford,c_conjug", "c_conjug"]],
[*Clifford,ddfmatrix*, *Clifford,intro*, ["Clifford,ddfmatrix", "ddfmatrix"]],
[*Clifford,type,dfmatrix*, *Clifford,intro*, ["Clifford,type,dfmatrix", "type,dfmatrix"]],
[*Clifford,type,diagmatrix*, *Clifford,intro*, ["Clifford,type,diagmatrix", "type,diagmatrix"]],

[*Clifford,diagonalize, Clifford,intro*, ["Clifford,diagonalize", "diagonalize"]],
 [*Clifford,displayid, Clifford,intro*, ["Clifford,displayid", "displayid"]],
 [*Clifford,type,evenelement, Clifford,intro*, ["Clifford,type,evenelement", "type,evenelement"]],
 [*Clifford,extract, Clifford,intro*, ["Clifford,extract", "extract"]],
 [*Clifford,factoridempotent, Clifford,intro*, ["Clifford,factoridempotent", "factoridempotent"]],
 [*Clifford,type,fieldelement, Clifford,intro*, ["Clifford,type,fieldelement", "type,fieldelement"]],
 [*Clifford,find1str, Clifford,intro*, ["Clifford,find1str", "find1str"]],
 [*Clifford,findbasis, Clifford,intro*, ["Clifford,findbasis", "findbasis"]],
 [*Clifford,type,gencomplex, Clifford,intro*, ["Clifford,type,gencomplex", "type,gencomplex"]],
 [*Clifford,type,genquatbasis, Clifford,intro*, ["Clifford,type,genquatbasis", "type,genquatbasis"]], [
Clifford,type,genquaternion, Clifford,intro, ["Clifford,type,genquaternion", "type,genquaternion"
]], [*Clifford,gradeinv, Clifford,intro*, ["Clifford,gradeinv", "gradeinv"]],
 [*Clifford,type,idempotent, Clifford,intro*, ["Clifford,type,idempotent", "type,idempotent"]],
 [*Clifford,intro, Clifford,intro*, ["Clifford,intro", "intro"]],
 [*Clifford,isproduct, Clifford,intro*, ["Clifford,isproduct", "isproduct"]],
 [*Clifford,isVahlenmatrix, Clifford,intro*, ["Clifford,isVahlenmatrix", "isVahlenmatrix"]],
 [*Clifford,Kfield, Clifford,intro*, ["Clifford,Kfield", "Kfield"]],
 [*Clifford,LCQ, Clifford,intro*, ["Clifford,LCQ", "LCQ"]],
 [*Clifford,LC, Clifford,intro*, ["Clifford,LC", "LC"]],
 [*Clifford,makealiases, Clifford,intro*, ["Clifford,makealiases", "makealiases"]],
 [*Clifford,makeclibasmon, Clifford,intro*, ["Clifford,makeclibasmon", "makeclibasmon"]],
 [*Clifford,matKrepr, Clifford,intro*, ["Clifford,matKrepr", "matKrepr"]],
 [*Clifford,maxgrade, Clifford,intro*, ["Clifford,maxgrade", "maxgrade"]],
 [*Clifford,maxindex, Clifford,intro*, ["Clifford,maxindex", "maxindex"]],
 [*Clifford,mdfmatrix, Clifford,intro*, ["Clifford,mdfmatrix", "mdfmatrix"]],
 [*Clifford,minimalideal, Clifford,intro*, ["Clifford,minimalideal", "minimalideal"]],
 [*Clifford,convert,mlist, Clifford,intro*, ["Clifford,convert,mlist", "convert,mlist"]],
 [*Clifford,type,nilpotent, Clifford,intro*, ["Clifford,type,nilpotent", "type,nilpotent"]],
 [*Clifford,type,oddelement, Clifford,intro*, ["Clifford,type,oddelement", "type,oddelement"]],
 [*Clifford,ord, Clifford,intro*, ["Clifford,ord", "ord"]],
 [*Clifford,permsign, Clifford,intro*, ["Clifford,permsign", "permsign"]], [
Clifford,type,primitiveidemp, Clifford,intro,
 ["Clifford,type,primitiveidemp", "type,primitiveidemp"]],
 [*Clifford,pseudodet, Clifford,intro*, ["Clifford,pseudodet", "pseudodet"]], [
Clifford,type,purequatbasis, Clifford,intro, ["Clifford,type,purequatbasis", "type,purequatbasis"]],
 [*Clifford,qdisplay, Clifford,intro*, ["Clifford,qdisplay", "qdisplay"]],

```

[ Clifford,qinv, Clifford,intro, [ "Clifford,qinv", "qinv" ]],
[ Clifford,qmul, Clifford,intro, [ "Clifford,qmul", "qmul" ]],
[ Clifford,qnorm, Clifford,intro, [ "Clifford,qnorm", "qnorm" ]],
[ Clifford,type,quaternion, Clifford,intro, [ "Clifford,type,quaternion", "type,quaternion" ]],
[ Clifford,q_conjug, Clifford,intro, [ "Clifford,q_conjug", "q_conjug" ]],
[ Clifford,RCQ, Clifford,intro, [ "Clifford,RCQ", "RCQ" ]],
[ Clifford,RC, Clifford,intro, [ "Clifford,RC", "RC" ]],
[ Clifford,rd_clibasmon, Clifford,intro, [ "Clifford,rd_clibasmon", "rd_clibasmon" ]],
[ Clifford,rd_climon, Clifford,intro, [ "Clifford,rd_climon", "rd_climon" ]],
[ Clifford,rd_clipolynom, Clifford,intro, [ "Clifford,rd_clipolynom", "rd_clipolynom" ]],
[ Clifford,reorder, Clifford,intro, [ "Clifford,reorder", "reorder" ]],
[ Clifford,reversion, Clifford,intro, [ "Clifford,reversion", "reversion" ]],
[ Clifford,RHnumber, Clifford,intro, [ "Clifford,RHnumber", "RHnumber" ]],
[ Clifford,rmulm, Clifford,intro, [ "Clifford,rmulm", "rmulm" ]],
[ Clifford,rot3d, Clifford,intro, [ "Clifford,rot3d", "rot3d" ]],
[ Clifford,scalarpart, Clifford,intro, [ "Clifford,scalarpart", "scalarpart" ]],
[ Clifford,setup, Clifford,intro, [ "Clifford,setup", "setup" ]],
[ Clifford,sexp, Clifford,intro, [ "Clifford,sexp", "sexp" ]],
[ Clifford,specify_constants, Clifford,intro, [ "Clifford,specify_constants", "specify_constants" ]],
[ Clifford,spinorKbasis, Clifford,intro, [ "Clifford,spinorKbasis", "spinorKbasis" ]],
[ Clifford,spinorKrepr, Clifford,intro, [ "Clifford,spinorKrepr", "spinorKrepr" ]],
[ Clifford,squaremodf, Clifford,intro, [ "Clifford,squaremodf", "squaremodf" ]],
[ Clifford,convert,str_to_int, Clifford,intro, [ "Clifford,convert,str_to_int", "convert,str_to_int" ]],
[ Clifford,subs_clipolynom, Clifford,intro, [ "Clifford,subs_clipolynom", "subs_clipolynom" ]],
[ Clifford,type,symmatrix, Clifford,intro, [ "Clifford,type,symmatrix", "type,symmatrix" ]],
[ Clifford,type,tensorprod, Clifford,intro, [ "Clifford,type,tensorprod", "type,tensorprod" ]],
[ Clifford,useproduct, Clifford,intro, [ "Clifford,useproduct", "useproduct" ]],
[ Clifford,vectorpart, Clifford,intro, [ "Clifford,vectorpart", "vectorpart" ]],
[ Clifford,version, Clifford,intro, [ "Clifford,version", "version" ]],
[ Clifford,wedge, Clifford,intro, [ "Clifford,wedge", "wedge", "`&w`" ]],
[ Clifford,wexp, Clifford,intro, [ "Clifford,wexp" ]]]

```

Observe that the last entry now reads:

```
[ Clifford,wexp, Clifford,intro, [ "Clifford,wexp" ]]
```

[>

Example 12:

To see examples how **insert_helppages** works, see the help page [INSERT_HELPPAGES](#).

See Also: [code_support](#), [code_support](#), [code_support](#), [INSERT_HELPPAGES](#)

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Last modified: December 1, 2003, RA/BF.

- Function: code_support:-insert_helppages

Calling Sequence:

insert_helppages(L::listlist,Mapleversion::string)

- Description:

- [code_support](#) is a package that provides various functions to copy, rename, modify, save, etc. Maple help worksheets.
- Examples how to use the remaining functions in the package can be found in [code_support,examples](#).
- Procedure **insert_helppages** accomplishes insertion of the help topics into the library archive that has been searched.
- The help topics are given in a list L of type 'listlist' as the first argument to **insert_helppages** while Maple version, for example "M9", is listed as the second argument.

Examples:

```
> restart;with(code_support);

      Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 9
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      Last revised: December 1, 2003

[ change_helpfiles, change_name, copy_file, get_TEXT, get_dir, insert_helppages, makeLIST,
  modifyLIST, replace_in_file, split ]
[ We will save the help topics in the library archive that exists in the directory `C:\Maple8/Cliffordlib`.
> libname;

      "C:\Maple9/Cliffordlib", "C:\Maple9/lib"
>
Inserting help pages for CLIFFORD:
> HDB_LIB_PATH:=convert(libname[1],name);      ##Path to HDB
  library
HELP_FILE_PATH:=`C:\Maple9/P9/Cliff9/Help/`; ##Directory where
*_M9.mws help files are located
BROWSER_PATH:=`Mathematics/Algebra/`;      ###Location in the
browser
ModuleName :=`Clifford`;      ###Name of the
module
```

```

Parent      := `Clifford,intro`;          ###Parent for all
help pages in the module
GrandParent := `Clifford,intro`;        ###Grand parent for
all help pages in the module
MapleVersion:="M9";                      ### substring of
file names that gives Maple version
#####
##list of types defined in the module
#####
typesLIST:=["antisymmatrix","clibasmon","climatrix","climon","clip
olynom",

"cliprod","cliscalar","diagmatrix","dfmatrix","evelement",

"fieldelement","gencomplex","genquatbasis","genquaternion",

"idempotent","nilpotent","oddelement","primitiveidemp","purequatba
sis",

        "quaternion","symmatrix","tensorprod"];
#####
##list of types converts defined in the module
#####
convertsLIST:=["mlist","str_to_int"];

        HDB_LIB_PATH := C:\Maple9\Cliffordlib
        HELP_FILE_PATH := C:\Maple9\P9\Cliff9\Help\
        BROWSER_PATH := Mathematics/Algebra/
        ModuleName := Clifford
        Parent := Clifford,intro
        GrandParent := Clifford,intro
        MapleVersion := "M9"
typesLIST := ["antisymmatrix", "clibasmon", "climatrix", "climon", "clipolynom", "cliprod",
"cliscalar", "diagmatrix", "dfmatrix", "evelement", "fieldelement", "gencomplex",
"genquatbasis", "genquaternion", "idempotent", "nilpotent", "oddelement", "primitiveidemp",
"purequatbasis", "quaternion", "symmatrix", "tensorprod"]
        convertsLIST := ["mlist", "str_to_int"]

```

Step 1: Generating an automatic list from help page files:

```

> Lauto:=makeLIST(ModuleName,Parent,GrandParent,HELP_FILE_PATH,Maple
Version);
Lauto := [[ Clifford,&c, Clifford,intro, ["Clifford,&c", "&c"]],

```

[*Clifford,adfmatrix*, *Clifford,intro*, ["Clifford,adfmatrix", "adfmatrix"]],
[*Clifford,all_sigs*, *Clifford,intro*, ["Clifford,all_sigs", "all_sigs"]], [*Clifford,type,antisymmatrix*, *Clifford,intro*, ["Clifford,type,antisymmatrix", "type,antisymmatrix"]], [*Clifford,beta_minus*, *Clifford,intro*, ["Clifford,beta_minus", "beta_minus"]], [*Clifford,beta_plus*, *Clifford,intro*, ["Clifford,beta_plus", "beta_plus"]], [*Clifford,Bsignature*, *Clifford,intro*, ["Clifford,Bsignature", "Bsignature"]], [*Clifford,buildm*, *Clifford,intro*, ["Clifford,buildm", "buildm"]], [*Clifford,bygrade*, *Clifford,intro*, ["Clifford,bygrade", "bygrade"]], [*Clifford,cbasis*, *Clifford,intro*, ["Clifford,cbasis", "cbasis"]], [*Clifford,cdfmatrix*, *Clifford,intro*, ["Clifford,cdfmatrix", "cdfmatrix"]], [*Clifford,cexpQ*, *Clifford,intro*, ["Clifford,cexpQ", "cexpQ"]], [*Clifford,cexp*, *Clifford,intro*, ["Clifford,cexp", "cexp"]], [*Clifford,cinv*, *Clifford,intro*, ["Clifford,cinv", "cinv"]], [*Clifford,type,clibasmon*, *Clifford,intro*, ["Clifford,type,clibasmon", "type,clibasmon"]], [*Clifford,clibilinear*, *Clifford,intro*, ["Clifford,clibilinear", "clibilinear"]], [*Clifford,clicollect*, *Clifford,intro*, ["Clifford,clicollect", "clicollect"]], [*Clifford,clidata*, *Clifford,intro*, ["Clifford,clidata", "clidata"]], [*Clifford,CLIFFORD_ENV*, *Clifford,intro*, ["Clifford,CLIFFORD_ENV", "CLIFFORD_ENV"]], [*Clifford,clilinear*, *Clifford,intro*, ["Clifford,clilinear", "clilinear"]], [*Clifford,type,climatrix*, *Clifford,intro*, ["Clifford,type,climatrix", "type,climatrix"]], [*Clifford,climinpoly*, *Clifford,intro*, ["Clifford,climinpoly", "climinpoly"]], [*Clifford,type,climon*, *Clifford,intro*, ["Clifford,type,climon", "type,climon"]], [*Clifford,cliparse*, *Clifford,intro*, ["Clifford,cliparse", "cliparse"]], [*Clifford,type,clipolynom*, *Clifford,intro*, ["Clifford,type,clipolynom", "type,clipolynom"]], [*Clifford,type,cliprod*, *Clifford,intro*, ["Clifford,type,cliprod", "type,cliprod"]], [*Clifford,cliremove*, *Clifford,intro*, ["Clifford,cliremove", "cliremove"]], [*Clifford,type,cliscalar*, *Clifford,intro*, ["Clifford,type,cliscalar", "type,cliscalar"]], [*Clifford,clisolve*, *Clifford,intro*, ["Clifford,clisolve", "clisolve"]], [*Clifford,clisort*, *Clifford,intro*, ["Clifford,clisort", "clisort"]], [*Clifford,cliterms*, *Clifford,intro*, ["Clifford,cliterms", "cliterms"]], [*Clifford,cmulgen*, *Clifford,intro*, ["Clifford,cmulgen", "cmulgen"]], [*Clifford,cmulNUM*, *Clifford,intro*, ["Clifford,cmulNUM", "cmulNUM"]], [*Clifford,cmulQ*, *Clifford,intro*, ["Clifford,cmulQ", "cmulQ"]], [*Clifford,cmulRS*, *Clifford,intro*, ["Clifford,cmulRS", "cmulRS"]], [*Clifford,cmul*, *Clifford,intro*, ["Clifford,cmul", "cmul"]], [*Clifford,cmul_user_defined*, *Clifford,intro*, ["Clifford,cmul_user_defined", "cmul_user_defined"]]

], [*Clifford,cocycle*, *Clifford,intro*, ["Clifford,cocycle", "cocycle"]], [*Clifford,commutingelements*, *Clifford,intro*, ["Clifford,commutingelements", "commutingelements"]], [*Clifford,conjugation*, *Clifford,intro*, ["Clifford,conjugation", "conjugation"]], [*Clifford,c_conjug*, *Clifford,intro*, ["Clifford,c_conjug", "c_conjug"]], [*Clifford,ddfmatrix*, *Clifford,intro*, ["Clifford,ddfmatrix", "ddfmatrix"]], [*Clifford,type,dfmatrix*, *Clifford,intro*, ["Clifford,type,dfmatrix", "type,dfmatrix"]], [*Clifford,type,diagmatrix*, *Clifford,intro*, ["Clifford,type,diagmatrix", "type,diagmatrix"]], [*Clifford,diagonalize*, *Clifford,intro*, ["Clifford,diagonalize", "diagonalize"]], [*Clifford,displayid*, *Clifford,intro*, ["Clifford,displayid", "displayid"]], [*Clifford,type,evenelement*, *Clifford,intro*, ["Clifford,type,evenelement", "type,evenelement"]], [*Clifford,extract*, *Clifford,intro*, ["Clifford,extract", "extract"]], [*Clifford,factoridempotent*, *Clifford,intro*, ["Clifford,factoridempotent", "factoridempotent"]], [*Clifford,type,fieldelement*, *Clifford,intro*, ["Clifford,type,fieldelement", "type,fieldelement"]], [*Clifford,find1str*, *Clifford,intro*, ["Clifford,find1str", "find1str"]], [*Clifford,findbasis*, *Clifford,intro*, ["Clifford,findbasis", "findbasis"]], [*Clifford,type,gencomplex*, *Clifford,intro*, ["Clifford,type,gencomplex", "type,gencomplex"]], [*Clifford,type,genquatbasis*, *Clifford,intro*, ["Clifford,type,genquatbasis", "type,genquatbasis"]], [*Clifford,type,genquaternion*, *Clifford,intro*, ["Clifford,type,genquaternion", "type,genquaternion"]], [*Clifford,gradeinv*, *Clifford,intro*, ["Clifford,gradeinv", "gradeinv"]], [*Clifford,type,idempotent*, *Clifford,intro*, ["Clifford,type,idempotent", "type,idempotent"]], [*Clifford,intro*, *Clifford,intro*, ["Clifford,intro", "intro"]], [*Clifford,isproduct*, *Clifford,intro*, ["Clifford,isproduct", "isproduct"]], [*Clifford,isVahlenmatrix*, *Clifford,intro*, ["Clifford,isVahlenmatrix", "isVahlenmatrix"]], [*Clifford,Kfield*, *Clifford,intro*, ["Clifford,Kfield", "Kfield"]], [*Clifford,LCQ*, *Clifford,intro*, ["Clifford,LCQ", "LCQ"]], [*Clifford,LC*, *Clifford,intro*, ["Clifford,LC", "LC"]], [*Clifford,makealiases*, *Clifford,intro*, ["Clifford,makealiases", "makealiases"]], [*Clifford,makeclibasmon*, *Clifford,intro*, ["Clifford,makeclibasmon", "makeclibasmon"]], [*Clifford,matKrepr*, *Clifford,intro*, ["Clifford,matKrepr", "matKrepr"]], [*Clifford,maxgrade*, *Clifford,intro*, ["Clifford,maxgrade", "maxgrade"]], [*Clifford,maxindex*, *Clifford,intro*, ["Clifford,maxindex", "maxindex"]], [*Clifford,mdfmatrix*, *Clifford,intro*, ["Clifford,mdfmatrix", "mdfmatrix"]], [*Clifford,minimalideal*, *Clifford,intro*, ["Clifford,minimalideal", "minimalideal"]], [*Clifford,convert,mlist*, *Clifford,intro*, ["Clifford,convert,mlist", "convert,mlist"]], [*Clifford,type,nilpotent*, *Clifford,intro*, ["Clifford,type,nilpotent", "type,nilpotent"]],

[*Clifford,type,oddelement*, *Clifford,intro*, ["Clifford,type,oddelement", "type,oddelement"]],
[*Clifford,ord*, *Clifford,intro*, ["Clifford,ord", "ord"]],
[*Clifford,permsign*, *Clifford,intro*, ["Clifford,permsign", "permsign"]], [*Clifford,type,primitiveidemp*, *Clifford,intro*,
["Clifford,type,primitiveidemp", "type,primitiveidemp"]],
[*Clifford,pseudodet*, *Clifford,intro*, ["Clifford,pseudodet", "pseudodet"]], [*Clifford,type,purequatbasis*, *Clifford,intro*, ["Clifford,type,purequatbasis", "type,purequatbasis"]],
[*Clifford,qdisplay*, *Clifford,intro*, ["Clifford,qdisplay", "qdisplay"]],
[*Clifford,qinv*, *Clifford,intro*, ["Clifford,qinv", "qinv"]],
[*Clifford,qmul*, *Clifford,intro*, ["Clifford,qmul", "qmul"]],
[*Clifford,qnorm*, *Clifford,intro*, ["Clifford,qnorm", "qnorm"]],
[*Clifford,type,quaternion*, *Clifford,intro*, ["Clifford,type,quaternion", "type,quaternion"]],
[*Clifford,q_conjug*, *Clifford,intro*, ["Clifford,q_conjug", "q_conjug"]],
[*Clifford,RCQ*, *Clifford,intro*, ["Clifford,RCQ", "RCQ"]],
[*Clifford,RC*, *Clifford,intro*, ["Clifford,RC", "RC"]],
[*Clifford,rd_clibasmon*, *Clifford,intro*, ["Clifford,rd_clibasmon", "rd_clibasmon"]],
[*Clifford,rd_climon*, *Clifford,intro*, ["Clifford,rd_climon", "rd_climon"]],
[*Clifford,rd_clipolynom*, *Clifford,intro*, ["Clifford,rd_clipolynom", "rd_clipolynom"]],
[*Clifford,reorder*, *Clifford,intro*, ["Clifford,reorder", "reorder"]],
[*Clifford,reversion*, *Clifford,intro*, ["Clifford,reversion", "reversion"]],
[*Clifford,RHnumber*, *Clifford,intro*, ["Clifford,RHnumber", "RHnumber"]],
[*Clifford,rmulm*, *Clifford,intro*, ["Clifford,rmulm", "rmulm"]],
[*Clifford,rot3d*, *Clifford,intro*, ["Clifford,rot3d", "rot3d"]],
[*Clifford,scalarpart*, *Clifford,intro*, ["Clifford,scalarpart", "scalarpart"]],
[*Clifford,setup*, *Clifford,intro*, ["Clifford,setup", "setup"]],
[*Clifford,sexp*, *Clifford,intro*, ["Clifford,sexp", "sexp"]],
[*Clifford,specify_constants*, *Clifford,intro*, ["Clifford,specify_constants", "specify_constants"]],
[*Clifford,spinorKbasis*, *Clifford,intro*, ["Clifford,spinorKbasis", "spinorKbasis"]],
[*Clifford,spinorKrepr*, *Clifford,intro*, ["Clifford,spinorKrepr", "spinorKrepr"]],
[*Clifford,squaremodf*, *Clifford,intro*, ["Clifford,squaremodf", "squaremodf"]],
[*Clifford,convert,str_to_int*, *Clifford,intro*, ["Clifford,convert,str_to_int", "convert,str_to_int"]],
[*Clifford,subs_clipolynom*, *Clifford,intro*, ["Clifford,subs_clipolynom", "subs_clipolynom"]],
[*Clifford,type,symmatrix*, *Clifford,intro*, ["Clifford,type,symmatrix", "type,symmatrix"]],
[*Clifford,type,tensorprod*, *Clifford,intro*, ["Clifford,type,tensorprod", "type,tensorprod"]],
[*Clifford,useproduct*, *Clifford,intro*, ["Clifford,useproduct", "useproduct"]],
[*Clifford,vectorpart*, *Clifford,intro*, ["Clifford,vectorpart", "vectorpart"]],

```
[ Clifford,version, Clifford,intro, ["Clifford,version", "version"]],
[ Clifford,wedge, Clifford,intro, ["Clifford,wedge", "wedge"]],
[ Clifford,wexp, Clifford,intro, ["Clifford,wexp", "wexp"]]]
```

```
>
```

Step 2: Modifying, if needed, certain entries in Lauto list:

This is a list of entries that need to have modified aliases.

```
> modsLIST:= [
  [ `Clifford,intro`, ["Clifford", "Clifford,intro", "CLIFFORD", "Clifford", "clifford"]],
  [ `Clifford,&c`, ["Clifford,Clifford product", "&c", "&cQ", "&w", "&q", "&cm", "&cQm", "&wm", "&qm", "rm", "&C"]],
  ,
  [ `Clifford,wedge`, ["Clifford,wedge", "wedge", "&w"]],
  [ `Clifford,CLIFFORD_ENV`, ["Clifford,CLIFFORD_ENV", "CLIFFORD_ENV",
    "dim_V", "_prolevel", "_shortcut_in_minimalideal",
    "_shortcut_in_Kfield", "_shortcut_in_spinorKbasis",
    "_shortcut_in_spinorKrepr", "_warnings_flag",
    "_quatbasis", "_scalartypes"]],
]:
> for mem in modsLIST do
  Lauto:=modifyLIST(Lauto,op(mem))
end do:
Lauto;
[[ Clifford,&c, Clifford,intro, ["Clifford,Clifford product", "&c", "&cQ", "&w", "&q", "&cm",
  "&cQm", "&wm", "&qm", "rm", "&C"]],
[ Clifford,adfmatrix, Clifford,intro, ["Clifford,adfmatrix", "adfmatrix"]],
[ Clifford,all_sigs, Clifford,intro, ["Clifford,all_sigs", "all_sigs"]], [
Clifford,type,antisymmatrix, Clifford,intro, ["Clifford,type,antisymmatrix", "type,antisymmatrix"]
], [ Clifford,beta_minus, Clifford,intro, ["Clifford,beta_minus", "beta_minus"]],
[ Clifford,beta_plus, Clifford,intro, ["Clifford,beta_plus", "beta_plus"]],
[ Clifford,Bsignature, Clifford,intro, ["Clifford,Bsignature", "Bsignature"]],
[ Clifford,buildm, Clifford,intro, ["Clifford,buildm", "buildm"]],
[ Clifford,bygrade, Clifford,intro, ["Clifford,bygrade", "bygrade"]],
[ Clifford,cbasis, Clifford,intro, ["Clifford,cbasis", "cbasis"]],
[ Clifford,cdfmatrix, Clifford,intro, ["Clifford,cdfmatrix", "cdfmatrix"]],
```

[*Clifford,cexpQ*, *Clifford,intro*, ["Clifford,cexpQ", "cexpQ"]],
 [*Clifford,cexp*, *Clifford,intro*, ["Clifford,cexp", "cexp"]],
 [*Clifford,cinv*, *Clifford,intro*, ["Clifford,cinv", "cinv"]],
 [*Clifford,type,clibasmon*, *Clifford,intro*, ["Clifford,type,clibasmon", "type,clibasmon"]],
 [*Clifford,clibilinear*, *Clifford,intro*, ["Clifford,clibilinear", "clibilinear"]],
 [*Clifford,clicollect*, *Clifford,intro*, ["Clifford,clicollect", "clicollect"]],
 [*Clifford,clidata*, *Clifford,intro*, ["Clifford,clidata", "clidata"]], [*Clifford,CLIFFORD_ENV*,
Clifford,intro, ["Clifford,CLIFFORD_ENV", "CLIFFORD_ENV", "dim_V", "_prolevel",
 "_shortcut_in_minimalideal", "_shortcut_in_Kfield", "_shortcut_in_spinorKbasis",
 "_shortcut_in_spinorKrepr", "_warnings_flag", "_quatbasis", "_scalartypes"]],
 [*Clifford,clilinear*, *Clifford,intro*, ["Clifford,clilinear", "clilinear"]],
 [*Clifford,type,climatrix*, *Clifford,intro*, ["Clifford,type,climatrix", "type,climatrix"]],
 [*Clifford,climinpoly*, *Clifford,intro*, ["Clifford,climinpoly", "climinpoly"]],
 [*Clifford,type,climon*, *Clifford,intro*, ["Clifford,type,climon", "type,climon"]],
 [*Clifford,cliparse*, *Clifford,intro*, ["Clifford,cliparse", "cliparse"]],
 [*Clifford,type,clipolynom*, *Clifford,intro*, ["Clifford,type,clipolynom", "type,clipolynom"]],
 [*Clifford,type,cliprod*, *Clifford,intro*, ["Clifford,type,cliprod", "type,cliprod"]],
 [*Clifford,cliremove*, *Clifford,intro*, ["Clifford,cliremove", "cliremove"]],
 [*Clifford,type,cliscalar*, *Clifford,intro*, ["Clifford,type,cliscalar", "type,cliscalar"]],
 [*Clifford,clisolve*, *Clifford,intro*, ["Clifford,clisolve", "clisolve"]],
 [*Clifford,clisort*, *Clifford,intro*, ["Clifford,clisort", "clisort"]],
 [*Clifford,cliterms*, *Clifford,intro*, ["Clifford,cliterms", "cliterms"]],
 [*Clifford,cmulgen*, *Clifford,intro*, ["Clifford,cmulgen", "cmulgen"]],
 [*Clifford,cmulNUM*, *Clifford,intro*, ["Clifford,cmulNUM", "cmulNUM"]],
 [*Clifford,cmulQ*, *Clifford,intro*, ["Clifford,cmulQ", "cmulQ"]],
 [*Clifford,cmulRS*, *Clifford,intro*, ["Clifford,cmulRS", "cmulRS"]],
 [*Clifford,cmul*, *Clifford,intro*, ["Clifford,cmul", "cmul"]], [
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], [*Clifford,cocycle*, *Clifford,intro*, ["Clifford,cocycle", "cocycle"]], [
Clifford,commutingelements, *Clifford,intro*,
 ["Clifford,commutingelements", "commutingelements"]],
 [*Clifford,conjugation*, *Clifford,intro*, ["Clifford,conjugation", "conjugation"]],
 [*Clifford,c_conjug*, *Clifford,intro*, ["Clifford,c_conjug", "c_conjug"]],
 [*Clifford,ddfmatrix*, *Clifford,intro*, ["Clifford,ddfmatrix", "ddfmatrix"]],
 [*Clifford,type,dfmatrix*, *Clifford,intro*, ["Clifford,type,dfmatrix", "type,dfmatrix"]],
 [*Clifford,type,diagmatrix*, *Clifford,intro*, ["Clifford,type,diagmatrix", "type,diagmatrix"]],

[*Clifford,diagonalize, Clifford,intro*, ["Clifford,diagonalize", "diagonalize"]],
 [*Clifford,displayid, Clifford,intro*, ["Clifford,displayid", "displayid"]],
 [*Clifford,type,evenelement, Clifford,intro*, ["Clifford,type,evenelement", "type,evenelement"]],
 [*Clifford,extract, Clifford,intro*, ["Clifford,extract", "extract"]],
 [*Clifford,factoridempotent, Clifford,intro*, ["Clifford,factoridempotent", "factoridempotent"]],
 [*Clifford,type,fieldelement, Clifford,intro*, ["Clifford,type,fieldelement", "type,fieldelement"]],
 [*Clifford,find1str, Clifford,intro*, ["Clifford,find1str", "find1str"]],
 [*Clifford,findbasis, Clifford,intro*, ["Clifford,findbasis", "findbasis"]],
 [*Clifford,type,gencomplex, Clifford,intro*, ["Clifford,type,gencomplex", "type,gencomplex"]],
 [*Clifford,type,genquatbasis, Clifford,intro*, ["Clifford,type,genquatbasis", "type,genquatbasis"]], [
Clifford,type,genquaternion, Clifford,intro, ["Clifford,type,genquaternion", "type,genquaternion"
]], [*Clifford,gradeinv, Clifford,intro*, ["Clifford,gradeinv", "gradeinv"]],
 [*Clifford,type,idempotent, Clifford,intro*, ["Clifford,type,idempotent", "type,idempotent"]],
 [*Clifford,intro, Clifford,intro*, ["Clifford", "Clifford,intro", "CLIFFORD", "Clifford", "clifford"]],
 [*Clifford,isproduct, Clifford,intro*, ["Clifford,isproduct", "isproduct"]],
 [*Clifford,isVahlenmatrix, Clifford,intro*, ["Clifford,isVahlenmatrix", "isVahlenmatrix"]],
 [*Clifford,Kfield, Clifford,intro*, ["Clifford,Kfield", "Kfield"]],
 [*Clifford,LCQ, Clifford,intro*, ["Clifford,LCQ", "LCQ"]],
 [*Clifford,LC, Clifford,intro*, ["Clifford,LC", "LC"]],
 [*Clifford,makealiases, Clifford,intro*, ["Clifford,makealiases", "makealiases"]],
 [*Clifford,makeclibasmon, Clifford,intro*, ["Clifford,makeclibasmon", "makeclibasmon"]],
 [*Clifford,matKrepr, Clifford,intro*, ["Clifford,matKrepr", "matKrepr"]],
 [*Clifford,maxgrade, Clifford,intro*, ["Clifford,maxgrade", "maxgrade"]],
 [*Clifford,maxindex, Clifford,intro*, ["Clifford,maxindex", "maxindex"]],
 [*Clifford,mdfmatrix, Clifford,intro*, ["Clifford,mdfmatrix", "mdfmatrix"]],
 [*Clifford,minimalideal, Clifford,intro*, ["Clifford,minimalideal", "minimalideal"]],
 [*Clifford,convert,mlist, Clifford,intro*, ["Clifford,convert,mlist", "convert,mlist"]],
 [*Clifford,type,nilpotent, Clifford,intro*, ["Clifford,type,nilpotent", "type,nilpotent"]],
 [*Clifford,type,oddelement, Clifford,intro*, ["Clifford,type,oddelement", "type,oddelement"]],
 [*Clifford,ord, Clifford,intro*, ["Clifford,ord", "ord"]],
 [*Clifford,permsign, Clifford,intro*, ["Clifford,permsign", "permsign"]], [
Clifford,type,primitiveidemp, Clifford,intro,
 ["Clifford,type,primitiveidemp", "type,primitiveidemp"]],
 [*Clifford,pseudodet, Clifford,intro*, ["Clifford,pseudodet", "pseudodet"]], [
Clifford,type,purequatbasis, Clifford,intro, ["Clifford,type,purequatbasis", "type,purequatbasis"]],
 [*Clifford,qdisplay, Clifford,intro*, ["Clifford,qdisplay", "qdisplay"]],

```

[ Clifford,qinv, Clifford,intro, ["Clifford,qinv", "qinv" ]],
[ Clifford,qmul, Clifford,intro, ["Clifford,qmul", "qmul" ]],
[ Clifford,qnorm, Clifford,intro, ["Clifford,qnorm", "qnorm" ]],
[ Clifford,type,quaternion, Clifford,intro, ["Clifford,type,quaternion", "type,quaternion" ]],
[ Clifford,q_conjug, Clifford,intro, ["Clifford,q_conjug", "q_conjug" ]],
[ Clifford,RCQ, Clifford,intro, ["Clifford,RCQ", "RCQ" ]],
[ Clifford,RC, Clifford,intro, ["Clifford,RC", "RC" ]],
[ Clifford,rd_clibasmon, Clifford,intro, ["Clifford,rd_clibasmon", "rd_clibasmon" ]],
[ Clifford,rd_climon, Clifford,intro, ["Clifford,rd_climon", "rd_climon" ]],
[ Clifford,rd_clipolynom, Clifford,intro, ["Clifford,rd_clipolynom", "rd_clipolynom" ]],
[ Clifford,reorder, Clifford,intro, ["Clifford,reorder", "reorder" ]],
[ Clifford,reversion, Clifford,intro, ["Clifford,reversion", "reversion" ]],
[ Clifford,RHnumber, Clifford,intro, ["Clifford,RHnumber", "RHnumber" ]],
[ Clifford,rmulm, Clifford,intro, ["Clifford,rmulm", "rmulm" ]],
[ Clifford,rot3d, Clifford,intro, ["Clifford,rot3d", "rot3d" ]],
[ Clifford,scalarpart, Clifford,intro, ["Clifford,scalarpart", "scalarpart" ]],
[ Clifford,setup, Clifford,intro, ["Clifford,setup", "setup" ]],
[ Clifford,sexp, Clifford,intro, ["Clifford,sexp", "sexp" ]],
[ Clifford,specify_constants, Clifford,intro, ["Clifford,specify_constants", "specify_constants" ]],
[ Clifford,spinorKbasis, Clifford,intro, ["Clifford,spinorKbasis", "spinorKbasis" ]],
[ Clifford,spinorKrepr, Clifford,intro, ["Clifford,spinorKrepr", "spinorKrepr" ]],
[ Clifford,squaremodf, Clifford,intro, ["Clifford,squaremodf", "squaremodf" ]],
[ Clifford,convert,str_to_int, Clifford,intro, ["Clifford,convert,str_to_int", "convert,str_to_int" ]],
[ Clifford,subs_clipolynom, Clifford,intro, ["Clifford,subs_clipolynom", "subs_clipolynom" ]],
[ Clifford,type,symmatrix, Clifford,intro, ["Clifford,type,symmatrix", "type,symmatrix" ]],
[ Clifford,type,tensorprod, Clifford,intro, ["Clifford,type,tensorprod", "type,tensorprod" ]],
[ Clifford,useproduct, Clifford,intro, ["Clifford,useproduct", "useproduct" ]],
[ Clifford,vectorpart, Clifford,intro, ["Clifford,vectorpart", "vectorpart" ]],
[ Clifford,version, Clifford,intro, ["Clifford,version", "version" ]],
[ Clifford,wedge, Clifford,intro, ["Clifford,wedge", "wedge", "&w" ]],
[ Clifford,wexp, Clifford,intro, ["Clifford,wexp", "wexp" ]]]

```

```
>
```

Step 3: Inserting all help pages into HDB and the browser using the last modified list:

```
> insert_helppages (Lauto, MapleVersion) ;
```

```
Trying to read file C:\Maple9/P9/Cliff9/Help/&c_M9.mws...
```

```
Success... inserting topic Clifford,&c from the file:
```

```
C:\Maple9/P9/Cliff9/Help/&c_M9.mws
```

```
Trying to read file C:\Maple9/P9/Cliff9/Help/adfmatrix_M9.mws...
```

Success... inserting topic Clifford,adfmatrix from the file:
C:\Maple9/P9/Cliff9/Help/adfmatrix_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/all_sigs_M9.mws...
Success... inserting topic Clifford,all_sigs from the file:
C:\Maple9/P9/Cliff9/Help/all_sigs_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/antisymmatrix_M9.mws...
Success... inserting topic Clifford,type,antisymmatrix from the file:
C:\Maple9/P9/Cliff9/Help/antisymmatrix_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/beta_minus_M9.mws...
Success... inserting topic Clifford,beta_minus from the file:
C:\Maple9/P9/Cliff9/Help/beta_minus_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/beta_plus_M9.mws...
Success... inserting topic Clifford,beta_plus from the file:
C:\Maple9/P9/Cliff9/Help/beta_plus_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/Bsignature_M9.mws...
Success... inserting topic Clifford,Bsignature from the file:
C:\Maple9/P9/Cliff9/Help/Bsignature_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/buildm_M9.mws...
Success... inserting topic Clifford,buildm from the file:
C:\Maple9/P9/Cliff9/Help/buildm_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/bygrade_M9.mws...
Success... inserting topic Clifford,bygrade from the file:
C:\Maple9/P9/Cliff9/Help/bygrade_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/cbasis_M9.mws...
Success... inserting topic Clifford,cbasis from the file:
C:\Maple9/P9/Cliff9/Help/cbasis_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/cdfmatrix_M9.mws...
Success... inserting topic Clifford,cdfmatrix from the file:
C:\Maple9/P9/Cliff9/Help/cdfmatrix_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/cexpQ_M9.mws...
Success... inserting topic Clifford,cexpQ from the file:
C:\Maple9/P9/Cliff9/Help/cexpQ_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/cexp_M9.mws...
Success... inserting topic Clifford,cexp from the file:
C:\Maple9/P9/Cliff9/Help/cexp_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/cinv_M9.mws...
Success... inserting topic Clifford,cinv from the file:
C:\Maple9/P9/Cliff9/Help/cinv_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/clibasmon_M9.mws...
Success... inserting topic Clifford,type,clibasmon from the file:
C:\Maple9/P9/Cliff9/Help/clibasmon_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/clibilinear_M9.mws...
Success... inserting topic Clifford,clibilinear from the file:
C:\Maple9/P9/Cliff9/Help/clibilinear_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/clicollect_M9.mws...
Success... inserting topic Clifford,clicollect from the file:
C:\Maple9/P9/Cliff9/Help/clicollect_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/clidata_M9.mws...
Success... inserting topic Clifford,clidata from the file:

C:\Maple9/P9/Cliff9/Help/clidata_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/CLIFFORD_ENV_M9.mws...
Success... inserting topic Clifford,CLIFFORD_ENV from the file:

C:\Maple9/P9/Cliff9/Help/CLIFFORD_ENV_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/clilinear_M9.mws...
Success... inserting topic Clifford,clilinear from the file:

C:\Maple9/P9/Cliff9/Help/clilinear_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/climatrix_M9.mws...
Success... inserting topic Clifford,type,climatrix from the file:

C:\Maple9/P9/Cliff9/Help/climatrix_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/climinpoly_M9.mws...
Success... inserting topic Clifford,climinpoly from the file:

C:\Maple9/P9/Cliff9/Help/climinpoly_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/climon_M9.mws...
Success... inserting topic Clifford,type,climon from the file:

C:\Maple9/P9/Cliff9/Help/climon_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cliparse_M9.mws...
Success... inserting topic Clifford,cliparse from the file:

C:\Maple9/P9/Cliff9/Help/cliparse_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/clipolynom_M9.mws...
Success... inserting topic Clifford,type,clipolynom from the file:

C:\Maple9/P9/Cliff9/Help/clipolynom_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cliprod_M9.mws...
Success... inserting topic Clifford,type,cliprod from the file:

C:\Maple9/P9/Cliff9/Help/cliprod_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cliremove_M9.mws...
Success... inserting topic Clifford,cliremove from the file:

C:\Maple9/P9/Cliff9/Help/cliremove_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cliscalar_M9.mws...
Success... inserting topic Clifford,type,cliscalar from the file:

C:\Maple9/P9/Cliff9/Help/cliscalar_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/clisolve_M9.mws...
Success... inserting topic Clifford,clisolve from the file:

C:\Maple9/P9/Cliff9/Help/clisolve_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/clisort_M9.mws...
Success... inserting topic Clifford,clisort from the file:

C:\Maple9/P9/Cliff9/Help/clisort_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cliterms_M9.mws...
Success... inserting topic Clifford,cliterms from the file:

C:\Maple9/P9/Cliff9/Help/cliterms_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cmulgen_M9.mws...
Success... inserting topic Clifford,cmulgen from the file:

C:\Maple9/P9/Cliff9/Help/cmulgen_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cmulNUM_M9.mws...
Success... inserting topic Clifford,cmulNUM from the file:

C:\Maple9/P9/Cliff9/Help/cmulNUM_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cmulQ_M9.mws...
Success... inserting topic Clifford,cmulQ from the file:

C:\Maple9/P9/Cliff9/Help/cmulQ_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cmuls_M9.mws...
Success... inserting topic Clifford,cmuls from the file:
C:\Maple9/P9/Cliff9/Help/cmuls_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cmuls_M9.mws...
Success... inserting topic Clifford,cmuls from the file:
C:\Maple9/P9/Cliff9/Help/cmuls_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cmuls_user_defined_M9.mws...
Success... inserting topic Clifford,cmuls_user_defined from the file:
C:\Maple9/P9/Cliff9/Help/cmuls_user_defined_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/cocycle_M9.mws...
Success... inserting topic Clifford,cocycle from the file:
C:\Maple9/P9/Cliff9/Help/cocycle_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/commutingelements_M9.mws...
Success... inserting topic Clifford,commutingelements from the file:
C:\Maple9/P9/Cliff9/Help/commutingelements_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/conjugation_M9.mws...
Success... inserting topic Clifford,conjugation from the file:
C:\Maple9/P9/Cliff9/Help/conjugation_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/c_conjug_M9.mws...
Success... inserting topic Clifford,c_conjug from the file:
C:\Maple9/P9/Cliff9/Help/c_conjug_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/ddfmatrix_M9.mws...
Success... inserting topic Clifford,ddfmatrix from the file:
C:\Maple9/P9/Cliff9/Help/ddfmatrix_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/dfmatrix_M9.mws...
Success... inserting topic Clifford,type,dfmatrix from the file:
C:\Maple9/P9/Cliff9/Help/dfmatrix_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/diagmatrix_M9.mws...
Success... inserting topic Clifford,type,diagmatrix from the file:
C:\Maple9/P9/Cliff9/Help/diagmatrix_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/diagonalize_M9.mws...
Success... inserting topic Clifford,diagonalize from the file:
C:\Maple9/P9/Cliff9/Help/diagonalize_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/displayid_M9.mws...
Success... inserting topic Clifford,displayid from the file:
C:\Maple9/P9/Cliff9/Help/displayid_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/evenement_M9.mws...
Success... inserting topic Clifford,type,evenement from the file:
C:\Maple9/P9/Cliff9/Help/evenement_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/extract_M9.mws...
Success... inserting topic Clifford,extract from the file:
C:\Maple9/P9/Cliff9/Help/extract_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/factoridempotent_M9.mws...
Success... inserting topic Clifford,factoridempotent from the file:
C:\Maple9/P9/Cliff9/Help/factoridempotent_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/fieldelement_M9.mws...
Success... inserting topic Clifford,type,fieldelement from the file:
C:\Maple9/P9/Cliff9/Help/fieldelement_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/find1str_M9.mws...

Success... inserting topic Clifford,findlstr from the file:
C:\Maple9/P9/Cliff9/Help/findlstr_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/findbasis_M9.mws...
Success... inserting topic Clifford,findbasis from the file:
C:\Maple9/P9/Cliff9/Help/findbasis_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/gencomplex_M9.mws...
Success... inserting topic Clifford,type,gencomplex from the file:
C:\Maple9/P9/Cliff9/Help/gencomplex_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/genquatbasis_M9.mws...
Success... inserting topic Clifford,type,genquatbasis from the file:
C:\Maple9/P9/Cliff9/Help/genquatbasis_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/genquaternion_M9.mws...
Success... inserting topic Clifford,type,genquaternion from the file:
C:\Maple9/P9/Cliff9/Help/genquaternion_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/gradeinv_M9.mws...
Success... inserting topic Clifford,gradeinv from the file:
C:\Maple9/P9/Cliff9/Help/gradeinv_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/idempotent_M9.mws...
Success... inserting topic Clifford,type,idempotent from the file:
C:\Maple9/P9/Cliff9/Help/idempotent_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/intro_M9.mws...
Success... inserting topic Clifford,intro from the file:
C:\Maple9/P9/Cliff9/Help/intro_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/isproduct_M9.mws...
Success... inserting topic Clifford,isproduct from the file:
C:\Maple9/P9/Cliff9/Help/isproduct_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/isVahlenmatrix_M9.mws...
Success... inserting topic Clifford,isVahlenmatrix from the file:
C:\Maple9/P9/Cliff9/Help/isVahlenmatrix_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/Kfield_M9.mws...
Success... inserting topic Clifford,Kfield from the file:
C:\Maple9/P9/Cliff9/Help/Kfield_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/LCQ_M9.mws...
Success... inserting topic Clifford,LCQ from the file:
C:\Maple9/P9/Cliff9/Help/LCQ_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/LC_M9.mws...
Success... inserting topic Clifford,LC from the file:
C:\Maple9/P9/Cliff9/Help/LC_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/makealiases_M9.mws...
Success... inserting topic Clifford,makealiases from the file:
C:\Maple9/P9/Cliff9/Help/makealiases_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/makeclibasmon_M9.mws...
Success... inserting topic Clifford,makeclibasmon from the file:
C:\Maple9/P9/Cliff9/Help/makeclibasmon_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/matKrepr_M9.mws...
Success... inserting topic Clifford,matKrepr from the file:
C:\Maple9/P9/Cliff9/Help/matKrepr_M9.mws
Trying to read file C:\Maple9/P9/Cliff9/Help/maxgrade_M9.mws...
Success... inserting topic Clifford,maxgrade from the file:

C:\Maple9/P9/Cliff9/Help/maxgrade_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/maxindex_M9.mws...

Success... inserting topic Clifford,maxindex from the file:

C:\Maple9/P9/Cliff9/Help/maxindex_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/mdfmatrix_M9.mws...

Success... inserting topic Clifford,mdfmatrix from the file:

C:\Maple9/P9/Cliff9/Help/mdfmatrix_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/minimalideal_M9.mws...

Success... inserting topic Clifford,minimalideal from the file:

C:\Maple9/P9/Cliff9/Help/minimalideal_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/mlist_M9.mws...

Success... inserting topic Clifford,convert,mlist from the file:

C:\Maple9/P9/Cliff9/Help/mlist_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/nilpotent_M9.mws...

Success... inserting topic Clifford,type,nilpotent from the file:

C:\Maple9/P9/Cliff9/Help/nilpotent_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/oddelement_M9.mws...

Success... inserting topic Clifford,type,oddelement from the file:

C:\Maple9/P9/Cliff9/Help/oddelement_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/ord_M9.mws...

Success... inserting topic Clifford,ord from the file:

C:\Maple9/P9/Cliff9/Help/ord_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/permsign_M9.mws...

Success... inserting topic Clifford,permsign from the file:

C:\Maple9/P9/Cliff9/Help/permsign_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/primitiveidemp_M9.mws...

Success... inserting topic Clifford,type,primitiveidemp from the file:

C:\Maple9/P9/Cliff9/Help/primitiveidemp_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/pseudodet_M9.mws...

Success... inserting topic Clifford,pseudodet from the file:

C:\Maple9/P9/Cliff9/Help/pseudodet_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/purequatbasis_M9.mws...

Success... inserting topic Clifford,type,purequatbasis from the file:

C:\Maple9/P9/Cliff9/Help/purequatbasis_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/qdisplay_M9.mws...

Success... inserting topic Clifford,qdisplay from the file:

C:\Maple9/P9/Cliff9/Help/qdisplay_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/qinv_M9.mws...

Success... inserting topic Clifford,qinv from the file:

C:\Maple9/P9/Cliff9/Help/qinv_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/qmul_M9.mws...

Success... inserting topic Clifford,qmul from the file:

C:\Maple9/P9/Cliff9/Help/qmul_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/qnorm_M9.mws...

Success... inserting topic Clifford,qnorm from the file:

C:\Maple9/P9/Cliff9/Help/qnorm_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/quaternion_M9.mws...

Success... inserting topic Clifford,type,quaternion from the file:

C:\Maple9/P9/Cliff9/Help/quaternion_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/q_conjug_M9.mws...
Success... inserting topic Clifford,q_conjug from the file:
C:\Maple9/P9/Cliff9/Help/q_conjug_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/RCQ_M9.mws...
Success... inserting topic Clifford,RCQ from the file:
C:\Maple9/P9/Cliff9/Help/RCQ_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/RC_M9.mws...
Success... inserting topic Clifford,RC from the file:
C:\Maple9/P9/Cliff9/Help/RC_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/rd_clibasmon_M9.mws...
Success... inserting topic Clifford,rd_clibasmon from the file:
C:\Maple9/P9/Cliff9/Help/rd_clibasmon_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/rd_climon_M9.mws...
Success... inserting topic Clifford,rd_climon from the file:
C:\Maple9/P9/Cliff9/Help/rd_climon_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/rd_clipolynom_M9.mws...
Success... inserting topic Clifford,rd_clipolynom from the file:
C:\Maple9/P9/Cliff9/Help/rd_clipolynom_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/reorder_M9.mws...
Success... inserting topic Clifford,reorder from the file:
C:\Maple9/P9/Cliff9/Help/reorder_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/reversion_M9.mws...
Success... inserting topic Clifford,reversion from the file:
C:\Maple9/P9/Cliff9/Help/reversion_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/RHnumber_M9.mws...
Success... inserting topic Clifford,RHnumber from the file:
C:\Maple9/P9/Cliff9/Help/RHnumber_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/rmulm_M9.mws...
Success... inserting topic Clifford,rmulm from the file:
C:\Maple9/P9/Cliff9/Help/rmulm_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/rot3d_M9.mws...
Success... inserting topic Clifford,rot3d from the file:
C:\Maple9/P9/Cliff9/Help/rot3d_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/scalarpart_M9.mws...
Success... inserting topic Clifford,scalarpart from the file:
C:\Maple9/P9/Cliff9/Help/scalarpart_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/setup_M9.mws...
Success... inserting topic Clifford,setup from the file:
C:\Maple9/P9/Cliff9/Help/setup_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/sexp_M9.mws...
Success... inserting topic Clifford,sexp from the file:
C:\Maple9/P9/Cliff9/Help/sexp_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/specify_constants_M9.mws...
Success... inserting topic Clifford,specify_constants from the file:
C:\Maple9/P9/Cliff9/Help/specify_constants_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/spinorKbasis_M9.mws...
Success... inserting topic Clifford,spinorKbasis from the file:
C:\Maple9/P9/Cliff9/Help/spinorKbasis_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/spinorKrepr_M9.mws...

Success... inserting topic Clifford,spinorKrepr from the file:

C:\Maple9/P9/Cliff9/Help/spinorKrepr_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/squaremodf_M9.mws...

Success... inserting topic Clifford,squaremodf from the file:

C:\Maple9/P9/Cliff9/Help/squaremodf_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/str_to_int_M9.mws...

Success... inserting topic Clifford,convert,str_to_int from the file:

C:\Maple9/P9/Cliff9/Help/str_to_int_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/subs_clipolynom_M9.mws...

Success... inserting topic Clifford,subs_clipolynom from the file:

C:\Maple9/P9/Cliff9/Help/subs_clipolynom_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/symmatrix_M9.mws...

Success... inserting topic Clifford,type,symmatrix from the file:

C:\Maple9/P9/Cliff9/Help/symmatrix_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/tensorprod_M9.mws...

Success... inserting topic Clifford,type,tensorprod from the file:

C:\Maple9/P9/Cliff9/Help/tensorprod_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/useproduct_M9.mws...

Success... inserting topic Clifford,useproduct from the file:

C:\Maple9/P9/Cliff9/Help/useproduct_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/vectorpart_M9.mws...

Success... inserting topic Clifford,vectorpart from the file:

C:\Maple9/P9/Cliff9/Help/vectorpart_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/version_M9.mws...

Success... inserting topic Clifford,version from the file:

C:\Maple9/P9/Cliff9/Help/version_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/wedge_M9.mws...

Success... inserting topic Clifford,wedge from the file:

C:\Maple9/P9/Cliff9/Help/wedge_M9.mws

Trying to read file C:\Maple9/P9/Cliff9/Help/wexp_M9.mws...

Success... inserting topic Clifford,wexp from the file:

C:\Maple9/P9/Cliff9/Help/wexp_M9.mws

Finished inserting 110 file topics into the HDB and Browser

[> ?mdfmatrix

[>

[**Inserting help pages for Bigebra:**

[> **restart:with(code_support);**

Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 9

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Last revised: December 1, 2003

[*change_helpfiles, change_name, copy_file, get_TEXT, get_dir, insert_helppages, makeLIST,*

```

    modifyLIST, replace_in_file, split]
> HDB_LIB_PATH:=convert(libname[1], name);
HELP_FILE_PATH:=`C:\Maple9/P9/Bigebra9/Help/`; ##Directory where
*_M9.mws help files are located
BROWSER_PATH:=`Mathematics/Algebra/`;
ModuleName :=`Bigebra`;
Parent :=`Bigebra,help`;
GrandParent :=`Clifford,intro`;
MapleVersion:="M9";
typesLIST:=["tensorpolynom"];
convertsLIST:=[];

```

```

        HDB_LIB_PATH := C:\Maple9\Cliffordlib
        HELP_FILE_PATH := C:\Maple9/P9/Bigebra9/Help/
        BROWSER_PATH := Mathematics/Algebra/

```

```

Increase verbosity by infolevel[function]=val -- use online help > ?Bigebra[help
]

```

```

        ModuleName := Bigebra
        Parent := Bigebra,help
        GrandParent := Clifford,intro
        MapleVersion := "M9"
        typesLIST := ["tensorpolynom"]
        convertsLIST := [ ]

```

Step 1: Generating an automatic list from help page files:

```

> Lauto:=makeLIST(ModuleName,Parent,GrandParent,HELP_FILE_PATH,Maple
Version);

```

```

Lauto := [[Bigebra,&cco, Bigebra,help, ["Bigebra,&cco", "&cco"]],
[Bigebra,&gco_d, Bigebra,help, ["Bigebra,&gco_d", "&gco_d"]],
[Bigebra,&gco, Bigebra,help, ["Bigebra,&gco", "&gco"]],
[Bigebra,&gco_pl, Bigebra,help, ["Bigebra,&gco_pl", "&gco_pl"]],
[Bigebra,&map, Bigebra,help, ["Bigebra,&map", "&map"]],
[Bigebra,&t, Bigebra,help, ["Bigebra,&t", "&t"]],
[Bigebra,&v, Bigebra,help, ["Bigebra,&v", "&v"]],
[Bigebra,bracket, Bigebra,help, ["Bigebra,bracket", "bracket"]],
[Bigebra,contract, Bigebra,help, ["Bigebra,contract", "contract"]],
[Bigebra,define, Bigebra,help, ["Bigebra,define", "define"]],
[Bigebra,drop_t, Bigebra,help, ["Bigebra,drop_t", "drop_t"]],
[Bigebra,EV, Bigebra,help, ["Bigebra,EV", "EV"]],

```

```

[Bigebra,gantipode, Bigebra,help, ["Bigeбра,gantipode", "gantipode"]],
[Bigebra,gco_unit, Bigebra,help, ["Bigeбра,gco_unit", "gco_unit"]],
[Bigebra,gswitch, Bigebra,help, ["Bigeбра,gswitch", "gswitch"]],
[Bigebra,help, Clifford,intro, ["Bigeбра,help", "help"]],
[Bigebra,init, Bigebra,help, ["Bigeбра,init", "init"]],
[Bigebra,linop2, Bigebra,help, ["Bigeбра,linop2", "linop2"]],
[Bigebra,linop, Bigebra,help, ["Bigeбра,linop", "linop"]],
[Bigebra,lists2mat2, Bigebra,help, ["Bigeбра,lists2mat2", "lists2mat2"]],
[Bigebra,lists2mat, Bigebra,help, ["Bigeбра,lists2mat", "lists2mat"]],
[Bigebra,make_BI_Id, Bigebra,help, ["Bigeбра,make_BI_Id", "make_BI_Id"]],
[Bigebra,mapop2, Bigebra,help, ["Bigeбра,mapop2", "mapop2"]],
[Bigebra,mapop, Bigebra,help, ["Bigeбра,mapop", "mapop"]],
[Bigebra,meet, Bigebra,help, ["Bigeбра,meet", "meet"]],
[Bigebra,op2mat2, Bigebra,help, ["Bigeбра,op2mat2", "op2mat2"]],
[Bigebra,op2mat, Bigebra,help, ["Bigeбра,op2mat", "op2mat"]],
[Bigebra,pairing, Bigebra,help, ["Bigeбра,pairing", "pairing"]],
[Bigebra,peek, Bigebra,help, ["Bigeбра,peek", "peek"]],
[Bigebra,poke, Bigebra,help, ["Bigeбра,poke", "poke"]],
[Bigebra,remove_eq, Bigebra,help, ["Bigeбра,remove_eq", "remove_eq"]],
[Bigebra,switch, Bigebra,help, ["Bigeбра,switch", "switch"]],
[Bigebra,tcollect, Bigebra,help, ["Bigeбра,tcollect", "tcollect"]],
[Bigebra,tensorbasmonom, Bigebra,help, ["Bigeбра,tensorbasmonom", "tensorbasmonom"]],
[Bigebra,tensormonom, Bigebra,help, ["Bigeбра,tensormonom", "tensormonom"]], [
Bigeбра,type,tensorpolynom, Bigebra,help,
["Bigeбра,type,tensorpolynom", "type,tensorpolynom"]],
[Bigebra,tsolve1, Bigebra,help, ["Bigeбра,tsolve1", "tsolve1"]],
[Bigebra,VERSION, Bigebra,help, ["Bigeбра,VERSION", "VERSION"]]

```

>

Step 2: Modifying, if needed, certain entries in Lauto list:

```

> modsLIST:= [
  [`Bigeбра,&cco`, ["Bigeбра,Clifford co-product", "&cco"]],
  [`Bigeбра,&gco_d`, ["Bigeбра,Grassmann dotted
co-product", "&gco_d"]],
  [`Bigeбра,&gco`, ["Bigeбра,Grassmann co-product", "&gco"]],
  [`Bigeбра,&gco_d`, ["Bigeбра,Grassmann dotted
co-product", "&gco_d"]],
  [`Bigeбра,&gco`, ["Bigeбра,Grassmann co-product", "&gco"]],

```

```

[`Bigebra,&gco_pl`, ["Bigebra,Grassmann-Pluecker co-product",
"Bigebra,Grassmann-Pluecker co-product",&gco_pl]],
[`Bigebra,&v`, ["Bigebra,meet", "Bigebra,join", "&v", "meet", "join"]],

[`Bigebra,bracket`, ["Bigebra,Peano bracket", "Bigebra,volume
form", "Bigebra,bracket", "bracket"]],
[`Bigebra,EV`, ["Bigebra,eval", "Bigebra,EV", "EV"]],
[`Bigebra,gantipode`, ["Bigebra,gantipode", "gantipode", "antipode"]]
,
[`Bigebra,help`, ["Bigebra", "Bigebra,intro", "Bigebra,start", "Bigebr
a,help"]],
[`Bigebra,linop2`, ["Bigebra,linop2", "linop2", "linop", "Bigebra,linop
p"]],
[`Bigebra,linop`, ["Bigebra,linop", "linop2", "linop", "Bigebra,linop2
"]],
[`Bigebra,lists2mat2`, ["Bigebra,lists2mat2", "lists2mat2"]],
[`Bigebra,lists2mat`, ["Bigebra,lists2mat", "lists2mat"]],
[`Bigebra,mapop2`, ["Bigebra,mapop2", "mapop2", "Bigebra,mapop", "mapo
p"]],
[`Bigebra,mapop`, ["Bigebra,mapop", "mapop", "Bigebra,mapop2", "mapop2
"]],
[`Bigebra,meet`, ["Bigebra,meet", "Bigebra,join", "&v", "meet", "join"]
],
[`Bigebra,op2mat`, ["Bigebra,op2mat", "op2mat"]],
[`Bigebra,op2mat2`, ["Bigebra,op2mat2", "op2mat2"]],
[`Bigebra,pairing`, ["Bigebra,dual
product", "Bigebra,pairing", "pairing"]],
[`Bigebra,switch`, ["crossing", "Bigebra,switch", "switch"]],
[`Bigebra,type,tensorpolynom`,

["Bigebra,type,tensorpolynom", "Bigebra,type,tensorbasmonom", "Bigebr
a,type,tensormonom"]]
]:
> for mem in modsLIST do
    Lauto:=modifyLIST(Lauto,op(mem))
end do:
Lauto;
[[Bigebra,&cco, Bigebra,help, ["Bigebra,Clifford co-product", "&cco"]],
[Bigebra,&gco_d, Bigebra,help, ["Bigebra,Grassmann dotted co-product", "&gco_d"]],
[Bigebra,&gco, Bigebra,help, ["Bigebra,Grassmann co-product", "&gco"]], [Bigebra,&gco_pl,
Bigebra,help, [

```

"Bigebra,Grassmann-Pluecker co-product", "Bigebra,Grassmann-Pluecker co-product", "&gco_pl"
]], [*Bigebra,&map, Bigebra,help*, ["Bigebra,&map", "&map"]],
 [*Bigebra,&t, Bigebra,help*, ["Bigebra,&t", "&t"]],
 [*Bigebra,&v, Bigebra,help*, ["Bigebra,meet", "Bigebra,join", "&v", "meet", "join"]], [*Bigebra,bracket, Bigebra,help*,
 ["Bigebra,Peano bracket", "Bigebra,volume form", "Bigebra,bracket", "bracket"]],
 [*Bigebra,contract, Bigebra,help*, ["Bigebra,contract", "contract"]],
 [*Bigebra,define, Bigebra,help*, ["Bigebra,define", "define"]],
 [*Bigebra,drop_t, Bigebra,help*, ["Bigebra,drop_t", "drop_t"]],
 [*Bigebra,EV, Bigebra,help*, ["Bigebra,eval", "Bigebra,EV", "EV"]],
 [*Bigebra,gantipode, Bigebra,help*, ["Bigebra,gantipode", "gantipode", "antipode"]],
 [*Bigebra,gco_unit, Bigebra,help*, ["Bigebra,gco_unit", "gco_unit"]],
 [*Bigebra,gswitch, Bigebra,help*, ["Bigebra,gswitch", "gswitch"]],
 [*Bigebra,help, Clifford,intro*, ["Bigebra", "Bigebra,intro", "Bigebra,start", "Bigebra,help"]],
 [*Bigebra,init, Bigebra,help*, ["Bigebra,init", "init"]],
 [*Bigebra,linop2, Bigebra,help*, ["Bigebra,linop2", "linop2", "linop", "Bigebra,linop"]],
 [*Bigebra,linop, Bigebra,help*, ["Bigebra,linop", "linop2", "linop", "Bigebra,linop2"]],
 [*Bigebra,lists2mat2, Bigebra,help*, ["Bigebra,lists2mat2", "lists2mat2"]],
 [*Bigebra,lists2mat, Bigebra,help*, ["Bigebra,lists2mat", "lists2mat"]],
 [*Bigebra,make_BI_Id, Bigebra,help*, ["Bigebra,make_BI_Id", "make_BI_Id"]],
 [*Bigebra,mapop2, Bigebra,help*, ["Bigebra,mapop2", "mapop2", "Bigebra,mapop", "mapop"]],
 [*Bigebra,mapop, Bigebra,help*, ["Bigebra,mapop", "mapop", "Bigebra,mapop2", "mapop2"]],
 [*Bigebra,meet, Bigebra,help*, ["Bigebra,meet", "Bigebra,join", "&v", "meet", "join"]],
 [*Bigebra,op2mat2, Bigebra,help*, ["Bigebra,op2mat2", "op2mat2"]],
 [*Bigebra,op2mat, Bigebra,help*, ["Bigebra,op2mat", "op2mat"]],
 [*Bigebra,pairing, Bigebra,help*, ["Bigebra,dual product", "Bigebra,pairing", "pairing"]],
 [*Bigebra,peek, Bigebra,help*, ["Bigebra,peek", "peek"]],
 [*Bigebra,poke, Bigebra,help*, ["Bigebra,poke", "poke"]],
 [*Bigebra,remove_eq, Bigebra,help*, ["Bigebra,remove_eq", "remove_eq"]],
 [*Bigebra,switch, Bigebra,help*, ["crossing", "Bigebra,switch", "switch"]],
 [*Bigebra,tcollect, Bigebra,help*, ["Bigebra,tcollect", "tcollect"]],
 [*Bigebra,tensorbasmonom, Bigebra,help*, ["Bigebra,tensorbasmonom", "tensorbasmonom"]],
 [*Bigebra,tensormonom, Bigebra,help*, ["Bigebra,tensormonom", "tensormonom"]], [*Bigebra,type,tensorpolynom, Bigebra,help*,
 ["Bigebra,type,tensorpolynom", "Bigebra,type,tensorbasmonom", "Bigebra,type,tensormonom"]],
 [*Bigebra,tsolve1, Bigebra,help*, ["Bigebra,tsolve1", "tsolve1"]],

```
[ [Bigebra,VERSION, Bigebra,help, ["Bigebra,VERSION", "VERSION"]]]
```

```
[ >
```

```
[ Step 3: Inserting all help pages into HDB and the browser using the last modified list:
```

```
> insert_helppages(Lauto,MapleVersion);
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/&cco_M9.mws...  
Success... inserting topic Bigebra,&cco from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/&cco_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/&gco_d_M9.mws...  
Success... inserting topic Bigebra,&gco_d from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/&gco_d_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/&gco_M9.mws...  
Success... inserting topic Bigebra,&gco from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/&gco_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/&gco_pl_M9.mws...  
Success... inserting topic Bigebra,&gco_pl from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/&gco_pl_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/&map_M9.mws...  
Success... inserting topic Bigebra,&map from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/&map_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/&t_M9.mws...  
Success... inserting topic Bigebra,&t from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/&t_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/&v_M9.mws...  
Success... inserting topic Bigebra,&v from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/&v_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/bracket_M9.mws...  
Success... inserting topic Bigebra,bracket from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/bracket_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/contract_M9.mws...  
Success... inserting topic Bigebra,contract from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/contract_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/define_M9.mws...  
Success... inserting topic Bigebra,define from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/define_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/drop_t_M9.mws...  
Success... inserting topic Bigebra,drop_t from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/drop_t_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/EV_M9.mws...  
Success... inserting topic Bigebra,EV from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/EV_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/gantipode_M9.mws...  
Success... inserting topic Bigebra,gantipode from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/gantipode_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/gco_unit_M9.mws...  
Success... inserting topic Bigebra,gco_unit from the file:
```

```
C:\Maple9/P9/Bigebra9/Help/gco_unit_M9.mws
```

```
Trying to read file C:\Maple9/P9/Bigebra9/Help/gswitch_M9.mws...  
Success... inserting topic Bigebra,gswitch from the file:
```

C:\Maple9/P9/Bigebra9/Help/gswitch_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/help_M9.mws...
Success... inserting topic Bigebra,help from the file:

C:\Maple9/P9/Bigebra9/Help/help_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/init_M9.mws...
Success... inserting topic Bigebra,init from the file:

C:\Maple9/P9/Bigebra9/Help/init_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/linop2_M9.mws...
Success... inserting topic Bigebra,linop2 from the file:

C:\Maple9/P9/Bigebra9/Help/linop2_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/linop_M9.mws...
Success... inserting topic Bigebra,linop from the file:

C:\Maple9/P9/Bigebra9/Help/linop_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/lists2mat2_M9.mws...
Success... inserting topic Bigebra,lists2mat2 from the file:

C:\Maple9/P9/Bigebra9/Help/lists2mat2_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/lists2mat_M9.mws...
Success... inserting topic Bigebra,lists2mat from the file:

C:\Maple9/P9/Bigebra9/Help/lists2mat_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/make_BI_Id_M9.mws...
Success... inserting topic Bigebra,make_BI_Id from the file:

C:\Maple9/P9/Bigebra9/Help/make_BI_Id_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/mapop2_M9.mws...
Success... inserting topic Bigebra,mapop2 from the file:

C:\Maple9/P9/Bigebra9/Help/mapop2_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/mapop_M9.mws...
Success... inserting topic Bigebra,mapop from the file:

C:\Maple9/P9/Bigebra9/Help/mapop_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/meet_M9.mws...
Success... inserting topic Bigebra,meet from the file:

C:\Maple9/P9/Bigebra9/Help/meet_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/op2mat2_M9.mws...
Success... inserting topic Bigebra,op2mat2 from the file:

C:\Maple9/P9/Bigebra9/Help/op2mat2_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/op2mat_M9.mws...
Success... inserting topic Bigebra,op2mat from the file:

C:\Maple9/P9/Bigebra9/Help/op2mat_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/pairing_M9.mws...
Success... inserting topic Bigebra,pairing from the file:

C:\Maple9/P9/Bigebra9/Help/pairing_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/peek_M9.mws...
Success... inserting topic Bigebra,peek from the file:

C:\Maple9/P9/Bigebra9/Help/peek_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/poke_M9.mws...
Success... inserting topic Bigebra,poke from the file:

C:\Maple9/P9/Bigebra9/Help/poke_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/remove_eq_M9.mws...
Success... inserting topic Bigebra,remove_eq from the file:

C:\Maple9/P9/Bigebra9/Help/remove_eq_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/switch_M9.mws...

Success... inserting topic Bigebra,switch from the file:

C:\Maple9/P9/Bigebra9/Help/switch_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/tcollect_M9.mws...

Success... inserting topic Bigebra,tcollect from the file:

C:\Maple9/P9/Bigebra9/Help/tcollect_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/tensorbasmonom_M9.mws...

Success... inserting topic Bigebra,tensorbasmonom from the file:

C:\Maple9/P9/Bigebra9/Help/tensorbasmonom_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/tensormonom_M9.mws...

Success... inserting topic Bigebra,tensormonom from the file:

C:\Maple9/P9/Bigebra9/Help/tensormonom_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/tensorpolynom_M9.mws...

Success... inserting topic Bigebra,type,tensorpolynom from the file:

C:\Maple9/P9/Bigebra9/Help/tensorpolynom_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/tsolve1_M9.mws...

Success... inserting topic Bigebra,tsolve1 from the file:

C:\Maple9/P9/Bigebra9/Help/tsolve1_M9.mws

Trying to read file C:\Maple9/P9/Bigebra9/Help/VERSION_M9.mws...

Success... inserting topic Bigebra,VERSION from the file:

C:\Maple9/P9/Bigebra9/Help/VERSION_M9.mws

Finished inserting 38 file topics into the HDB and Browser

> **#!?tensorpolynom**

>

Inserting help pages for Cliplus:

> **restart:with(code_support);**

Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 9

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[*change_helpfiles, change_name, copy_file, get_TEXT, get_dir, insert_helppages, makeLIST, modifyLIST, replace_in_file, split*]

```
> HDB_LIB_PATH:=convert(libname[1],name);  
HELP_FILE_PATH:=`C:\Maple9/P9/Cli9plus/Help/`;  
BROWSER_PATH:=`Mathematics/Algebra/`;  
ModuleName :=`Cliplus`;  
Parent :=`Cliplus,setup`;  
GrandParent :=`Clifford,intro`;  
MapleVersion:="M9";  
typesLIST:=[];
```

```
convertsLIST:=["wedge_to_dwedge","dwedge_to_wedge"];
```

```
HDB_LIB_PATH:=C:\Maple9\Cliffordlib
```

```
HELP_FILE_PATH:=C:\Maple9\P9\Cli9plus/Help/
```

```
BROWSER_PATH:=Mathematics/Algebra/
```

Cliplus has been loaded. Definitions for type/climon and type/clipolynom now include &C and &C[K]. Type ?cliprod for help.

```
ModuleName := Cliplus
```

```
Parent := Cliplus,setup
```

```
GrandParent := Clifford,intro
```

```
MapleVersion := "M9"
```

```
typesLIST := [ ]
```

```
convertsLIST := ["wedge_to_dwedge", "dwedge_to_wedge"]
```

Step 1: Generating an automatic list from help page files:

```
> Lauto:=makeLIST (ModuleName, Parent, GrandParent, HELP_FILE_PATH, Maple  
Version);
```

```
Lauto := [[ Cliplus,&dw, Cliplus,setup, ["Cliplus,&dw", "&dw"]],  
[ Cliplus,clibasis, Cliplus,setup, ["Cliplus,clibasis", "clibasis"]],  
[ Cliplus,clieval, Cliplus,setup, ["Cliplus,clieval", "clieval"]],  
[ Cliplus,cliexpand, Cliplus,setup, ["Cliplus,cliexpand", "cliexpand"]],  
[ Cliplus,climul, Cliplus,setup, ["Cliplus,climul", "climul"]],  
[ Cliplus,clirev, Cliplus,setup, ["Cliplus,clirev", "clirev"]],  
[ Cliplus,dottedcbasis, Cliplus,setup, ["Cliplus,dottedcbasis", "dottedcbasis"]],  
[ Cliplus,dwedge, Cliplus,setup, ["Cliplus,dwedge", "dwedge"]], [  
Cliplus,convert,dwedge_to_wedge, Cliplus,setup,  
["Cliplus,convert,dwedge_to_wedge", "convert,dwedge_to_wedge"]],  
[ Cliplus,LCbig, Cliplus,setup, ["Cliplus,LCbig", "LCbig"]],  
[ Cliplus,makeclialises, Cliplus,setup, ["Cliplus,makeclialises", "makeclialises"]],  
[ Cliplus,RCbig, Cliplus,setup, ["Cliplus,RCbig", "RCbig"]],  
[ Cliplus,setup, Clifford,intro, ["Cliplus,setup", "setup"]], [ Cliplus,convert,wedge_to_dwedge,  
Cliplus,setup, ["Cliplus,convert,wedge_to_dwedge", "convert,wedge_to_dwedge"]]]
```

```
>
```

Step 2: Modifying, if needed, certain entries in Lauto list:

```
> modsLIST:= [  
[ `Cliplus,&dw`, ["Cliplus,dwedge", "dwedge", "&dw", "Cliplus,&dw"]]  
]:
```

```
> for mem in modsLIST do  
Lauto:=modifyLIST (Lauto, op (mem) )
```

end do:

Lauto;

```
[[ Cliplus,&dw, Cliplus,setup, ["Cliplus,dwedge", "dwedge", "&dw", "Cliplus,&dw"]],  
  [Cliplus,clibasis, Cliplus,setup, ["Cliplus,clibasis", "clibasis"]],  
  [Cliplus,clieval, Cliplus,setup, ["Cliplus,clieval", "clieval"]],  
  [Cliplus,cliexpand, Cliplus,setup, ["Cliplus,cliexpand", "cliexpand"]],  
  [Cliplus,climul, Cliplus,setup, ["Cliplus,climul", "climul"]],  
  [Cliplus,clirev, Cliplus,setup, ["Cliplus,clirev", "clirev"]],  
  [Cliplus,dottedcbasis, Cliplus,setup, ["Cliplus,dottedcbasis", "dottedcbasis"]],  
  [Cliplus,dwedge, Cliplus,setup, ["Cliplus,dwedge", "dwedge"]], [  
  Cliplus,convert,dwedge_to_wedge, Cliplus,setup,  
  ["Cliplus,convert,dwedge_to_wedge", "convert,dwedge_to_wedge"]],  
  [Cliplus,LCbig, Cliplus,setup, ["Cliplus,LCbig", "LCbig"]],  
  [Cliplus,makeclaliases, Cliplus,setup, ["Cliplus,makeclaliases", "makeclaliases"]],  
  [Cliplus,RCbig, Cliplus,setup, ["Cliplus,RCbig", "RCbig"]],  
  [Cliplus,setup, Clifford,intro, ["Cliplus,setup", "setup"]], [Cliplus,convert,wedge_to_dwedge,  
  Cliplus,setup, ["Cliplus,convert,wedge_to_dwedge", "convert,wedge_to_dwedge"]] ]
```

>

Step 3: Inserting all help pages into HDB and the browser using the last modified list:

> **insert_helppages(Lauto, MapleVersion);**

Trying to read file C:\Maple9\P9\Cli9plus/Help/&dw_M9.mws...

Success... inserting topic *Cliplus,&dw* from the file:

C:\Maple9\P9\Cli9plus/Help/&dw_M9.mws

Trying to read file C:\Maple9\P9\Cli9plus/Help/clibasis_M9.mws...

Success... inserting topic *Cliplus,clibasis* from the file:

C:\Maple9\P9\Cli9plus/Help/clibasis_M9.mws

Trying to read file C:\Maple9\P9\Cli9plus/Help/clieval_M9.mws...

Success... inserting topic *Cliplus,clieval* from the file:

C:\Maple9\P9\Cli9plus/Help/clieval_M9.mws

Trying to read file C:\Maple9\P9\Cli9plus/Help/cliexpand_M9.mws...

Success... inserting topic *Cliplus,cliexpand* from the file:

C:\Maple9\P9\Cli9plus/Help/cliexpand_M9.mws

Trying to read file C:\Maple9\P9\Cli9plus/Help/climul_M9.mws...

Success... inserting topic *Cliplus,climul* from the file:

C:\Maple9\P9\Cli9plus/Help/climul_M9.mws

Trying to read file C:\Maple9\P9\Cli9plus/Help/clirev_M9.mws...

Success... inserting topic *Cliplus,clirev* from the file:

C:\Maple9\P9\Cli9plus/Help/clirev_M9.mws

Trying to read file C:\Maple9\P9\Cli9plus/Help/dottedcbasis_M9.mws...

Success... inserting topic *Cliplus,dottedcbasis* from the file:

C:\Maple9\P9\Cli9plus/Help/dottedcbasis_M9.mws

Trying to read file C:\Maple9\P9\Cli9plus/Help/dwedge_M9.mws...

Success... inserting topic *Cliplus,dwedge* from the file:

C:\Maple9/P9/Cli9plus/Help/dwedge_M9.mws
Trying to read file C:\Maple9/P9/Cli9plus/Help/dwedge_to_wedge_M9.mws...
Success... inserting topic Cliplus,convert,dwedge_to_wedge from the file:

C:\Maple9/P9/Cli9plus/Help/dwedge_to_wedge_M9.mws
Trying to read file C:\Maple9/P9/Cli9plus/Help/LCbig_M9.mws...
Success... inserting topic Cliplus,LCbig from the file:

C:\Maple9/P9/Cli9plus/Help/LCbig_M9.mws
Trying to read file C:\Maple9/P9/Cli9plus/Help/makeclialias_M9.mws...
Success... inserting topic Cliplus,makeclialias from the file:

C:\Maple9/P9/Cli9plus/Help/makeclialias_M9.mws
Trying to read file C:\Maple9/P9/Cli9plus/Help/RCbig_M9.mws...
Success... inserting topic Cliplus,RCbig from the file:

C:\Maple9/P9/Cli9plus/Help/RCbig_M9.mws
Trying to read file C:\Maple9/P9/Cli9plus/Help/setup_M9.mws...
Success... inserting topic Cliplus,setup from the file:

C:\Maple9/P9/Cli9plus/Help/setup_M9.mws
Trying to read file C:\Maple9/P9/Cli9plus/Help/wedge_to_dwedge_M9.mws...
Success... inserting topic Cliplus,convert,wedge_to_dwedge from the file:

C:\Maple9/P9/Cli9plus/Help/wedge_to_dwedge_M9.mws

Finished inserting 14 file topics into the HDB and Browser

> **#!setup**

Inserting help pages for GTP:

```
> restart:with(code_support);
HDB_LIB_PATH:=convert(libname[1],name);
HELP_FILE_PATH:=`C:\Maple9/P9/GTP9/Help/`;
BROWSER_PATH:=`Mathematics/Algebra/`;
ModuleName :=`GTP`;
Parent :=`Clifford,setup`;
GrandParent :=`Clifford,intro`;
MapleVersion:="M9";
typesLIST:=["gradedeven","gradedmonom","gradedodd","gradedpolynom"];
convertsLIST:=[];
```

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[*change_helpfiles, change_name, copy_file, get_TEXT, get_dir, insert_helppages, makeLIST, modifyLIST, replace_in_file, split*]

```

HDB_LIB_PATH := C:\Maple9\Cliffordlib
HELP_FILE_PATH := C:\Maple9\P9\GTP9\Help\
BROWSER_PATH := Mathematics/Algebra/
ModuleName := GTP
Parent := Clifford,setup
GrandParent := Clifford,intro
MapleVersion := "M9"
typesLIST := ["gradedeven", "gradedmonom", "gradedodd", "gradedpolynom"]
convertsLIST := [ ]

```

Step 1: Generating an automatic list from help page files:

```

> Lauto:=makeLIST (ModuleName, Parent, GrandParent, HELP_FILE_PATH, Maple
Version) ;

```

```

Lauto := [[ GTP,&t, Clifford,setup, ["GTP,&t", "&t"]],
  [ GTP,cmulB, Clifford,setup, ["GTP,cmulB", "cmulB"]],
  [ GTP,gbasis, Clifford,setup, ["GTP,gbasis", "gbasis"]],
  [ GTP,gcollect, Clifford,setup, ["GTP,gcollect", "gcollect"]],
  [ GTP,gprod, Clifford,setup, ["GTP,gprod", "gprod"]],
  [ GTP,type,gradedeven, Clifford,setup, ["GTP,type,gradedeven", "type,gradedeven"]],
  [ GTP,type,gradedmonom, Clifford,setup, ["GTP,type,gradedmonom", "type,gradedmonom"]],
  [ GTP,type,gradedodd, Clifford,setup, ["GTP,type,gradedodd", "type,gradedodd"]],
  [ GTP,type,gradedpolynom, Clifford,setup, ["GTP,type,gradedpolynom", "type,gradedpolynom"]],
  , [ GTP,gradedprod, Clifford,setup, ["GTP,gradedprod", "gradedprod"]],
  [ GTP,grade, Clifford,setup, ["GTP,grade", "grade"]],
  [ GTP,tensorrank, Clifford,setup, ["GTP,tensorrank", "tensorrank"]]]

```

Step 2: Modifying, if needed, certain entries in Lauto list:

```

> modsLIST:= [
  [ `GTP, cmulB` , ["GTP, cmulB", "cmulB", "cmul"] ]
]:
> for mem in modsLIST do
  Lauto:=modifyLIST (Lauto, op (mem) )
end do:
Lauto;
[[ GTP,&t, Clifford,setup, ["GTP,&t", "&t"]],
  [ GTP,cmulB, Clifford,setup, ["GTP,cmulB", "cmulB", "cmul"]],
  [ GTP,gbasis, Clifford,setup, ["GTP,gbasis", "gbasis"]],
  [ GTP,gcollect, Clifford,setup, ["GTP,gcollect", "gcollect"]],
  [ GTP,gprod, Clifford,setup, ["GTP,gprod", "gprod"]],

```

```
[ GTP,type,gradedeven, Clifford,setup, ["GTP,type,gradedeven", "type,gradedeven"]],
[ GTP,type,gradedmonom, Clifford,setup, ["GTP,type,gradedmonom", "type,gradedmonom"]],
[ GTP,type,gradedodd, Clifford,setup, ["GTP,type,gradedodd", "type,gradedodd"]],
[ GTP,type,gradedpolynom, Clifford,setup, ["GTP,type,gradedpolynom", "type,gradedpolynom"]],
, [ GTP,gradedprod, Clifford,setup, ["GTP,gradedprod", "gradedprod"]],
[ GTP,grade, Clifford,setup, ["GTP,grade", "grade"]],
[ GTP,tensorrank, Clifford,setup, ["GTP,tensorrank", "tensorrank"]]]
```

>

Step 3: Inserting all help pages into HDB and the browser using the last modified list:

```
> insert_helppages (Lauto, MapleVersion) ;
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/&t_M9.mws...
Success... inserting topic GTP,&t from the file:
```

```
C:\Maple9/P9/GTP9/Help/&t_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/cmulB_M9.mws...
Success... inserting topic GTP,cmulB from the file:
```

```
C:\Maple9/P9/GTP9/Help/cmulB_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/gbasis_M9.mws...
Success... inserting topic GTP,gbasis from the file:
```

```
C:\Maple9/P9/GTP9/Help/gbasis_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/gcollect_M9.mws...
Success... inserting topic GTP,gcollect from the file:
```

```
C:\Maple9/P9/GTP9/Help/gcollect_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/gprod_M9.mws...
Success... inserting topic GTP,gprod from the file:
```

```
C:\Maple9/P9/GTP9/Help/gprod_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/gradedeven_M9.mws...
Success... inserting topic GTP,type,gradedeven from the file:
```

```
C:\Maple9/P9/GTP9/Help/gradedeven_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/gradedmonom_M9.mws...
Success... inserting topic GTP,type,gradedmonom from the file:
```

```
C:\Maple9/P9/GTP9/Help/gradedmonom_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/gradedodd_M9.mws...
Success... inserting topic GTP,type,gradedodd from the file:
```

```
C:\Maple9/P9/GTP9/Help/gradedodd_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/gradedpolynom_M9.mws...
Success... inserting topic GTP,type,gradedpolynom from the file:
```

```
C:\Maple9/P9/GTP9/Help/gradedpolynom_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/gradedprod_M9.mws...
Success... inserting topic GTP,gradedprod from the file:
```

```
C:\Maple9/P9/GTP9/Help/gradedprod_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/grade_M9.mws...
Success... inserting topic GTP,grade from the file:
```

```
C:\Maple9/P9/GTP9/Help/grade_M9.mws
```

```
Trying to read file C:\Maple9/P9/GTP9/Help/tensorrank_M9.mws...
Success... inserting topic GTP,tensorrank from the file:
```

```
C:\Maple9/P9/GTP9/Help/tensorrank_M9.mws
```

```
*****
Finished inserting 12 file topics into the HDB and Browser
*****
```

```
> #?cmulB
```

```
>
```

Inserting help pages for Octonion:

```
> restart:with(code_support);
```

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```
[change_helpfiles, change_name, copy_file, get_TEXT, get_dir, insert_helppages, makeLIST,
modifyLIST, replace_in_file, split]
```

```
> HDB_LIB_PATH:=convert(libname[1], name);
HELP_FILE_PATH:=`C:\Maple9/P9/Octonion9/Help/`;
BROWSER_PATH:=`Mathematics/Algebra/`;
ModuleName :=`Octonion`;
Parent :=`Octonion,setup`;
GrandParent :=`Clifford,intro`;
MapleVersion:="M9";
typesLIST :=["Fano_triples", "octonion"];
convertsLIST:=[];
```

```
HDB_LIB_PATH := C:\Maple9\Cliffordlib
HELP_FILE_PATH := C:\Maple9/P9/Octonion9/Help/
BROWSER_PATH := Mathematics/Algebra/
ModuleName := Octonion
Parent := Octonion,setup
GrandParent := Clifford,intro
MapleVersion := "M9"
typesLIST := ["Fano_triples", "octonion"]
convertsLIST := [ ]
```

Step 1: Generating an automatic list from help page files:

```
> Lauto:=makeLIST(ModuleName, Parent, GrandParent, HELP_FILE_PATH, Maple
Version);
```

```
Lauto := [[Octonion,associator, Octonion,setup, ["Octonion,associator", "associator"]],
```

```

[ Octonion,commutator, Octonion,setup, ["Octonion,commutator", "commutator"]],
[ Octonion,def_omutable, Octonion,setup, ["Octonion,def_omutable", "def_omutable"]], [
Octonion,type,Fano_triples, Octonion,setup, ["Octonion,type,Fano_triples", "type,Fano_triples"]]
, [ Octonion,type,octonion, Octonion,setup, ["Octonion,type,octonion", "type,octonion"]],
[ Octonion,oinv, Octonion,setup, ["Octonion,oinv", "oinv"]],
[ Octonion,omutable, Octonion,setup, ["Octonion,omutable", "omutable"]],
[ Octonion,omul, Octonion,setup, ["Octonion,omul", "omul"]],
[ Octonion,onorm, Octonion,setup, ["Octonion,onorm", "onorm"]],
[ Octonion,oversion, Octonion,setup, ["Octonion,oversion", "oversion"]],
[ Octonion,o_conjug, Octonion,setup, ["Octonion,o_conjug", "o_conjug"]],
[ Octonion,Phi, Octonion,setup, ["Octonion,Phi", "Phi"]],
[ Octonion,purevectorpart, Octonion,setup, ["Octonion,purevectorpart", "purevectorpart"]],
[ Octonion,realpart, Octonion,setup, ["Octonion,realpart", "realpart"]],
[ Octonion,setup, Clifford,intro, ["Octonion,setup", "setup"]]

```

>

Step 2: Modifying, if needed, certain entries in Lauto list:

```

> modsLIST:= [
  [ `Octonion,omul` , ["Octonion,omul", "omul", "&o", "octonion", "Octonion
  "]]
]:
> for mem in modsLIST do
  Lauto:=modifyLIST(Lauto,op(mem))
end do:
Lauto;

```

```

[[ Octonion,associator, Octonion,setup, ["Octonion,associator", "associator"]],
[ Octonion,commutator, Octonion,setup, ["Octonion,commutator", "commutator"]],
[ Octonion,def_omutable, Octonion,setup, ["Octonion,def_omutable", "def_omutable"]], [
Octonion,type,Fano_triples, Octonion,setup, ["Octonion,type,Fano_triples", "type,Fano_triples"]]
, [ Octonion,type,octonion, Octonion,setup, ["Octonion,type,octonion", "type,octonion"]],
[ Octonion,oinv, Octonion,setup, ["Octonion,oinv", "oinv"]],
[ Octonion,omutable, Octonion,setup, ["Octonion,omutable", "omutable"]],
[ Octonion,omul, Octonion,setup, ["Octonion,omul", "omul", "&o", "octonion", "Octonion"]],
[ Octonion,onorm, Octonion,setup, ["Octonion,onorm", "onorm"]],
[ Octonion,oversion, Octonion,setup, ["Octonion,oversion", "oversion"]],
[ Octonion,o_conjug, Octonion,setup, ["Octonion,o_conjug", "o_conjug"]],
[ Octonion,Phi, Octonion,setup, ["Octonion,Phi", "Phi"]],
[ Octonion,purevectorpart, Octonion,setup, ["Octonion,purevectorpart", "purevectorpart"]],
[ Octonion,realpart, Octonion,setup, ["Octonion,realpart", "realpart"]],

```

[*[Octonion,setup, Clifford,intro, ["Octonion,setup", "setup"]]]*

[>

[**Step 3: Inserting all help pages into HDB and the browser using the last modified list:**

> **insert_helppages (Lauto, MapleVersion) ;**

Trying to read file C:\Maple9/P9/Octonion9/Help/associator_M9.mws...
Success... inserting topic Octonion,associator from the file:

C:\Maple9/P9/Octonion9/Help/associator_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/commutator_M9.mws...
Success... inserting topic Octonion,commutator from the file:

C:\Maple9/P9/Octonion9/Help/commutator_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/def_omultable_M9.mws...
Success... inserting topic Octonion,def_omultable from the file:

C:\Maple9/P9/Octonion9/Help/def_omultable_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/Fano_triples_M9.mws...
Success... inserting topic Octonion,type,Fano_triples from the file:

C:\Maple9/P9/Octonion9/Help/Fano_triples_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/octonion_M9.mws...
Success... inserting topic Octonion,type,octonion from the file:

C:\Maple9/P9/Octonion9/Help/octonion_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/oinv_M9.mws...
Success... inserting topic Octonion,oinv from the file:

C:\Maple9/P9/Octonion9/Help/oinv_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/omultable_M9.mws...
Success... inserting topic Octonion,omultable from the file:

C:\Maple9/P9/Octonion9/Help/omultable_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/omul_M9.mws...
Success... inserting topic Octonion,omul from the file:

C:\Maple9/P9/Octonion9/Help/omul_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/onorm_M9.mws...
Success... inserting topic Octonion,onorm from the file:

C:\Maple9/P9/Octonion9/Help/onorm_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/oversion_M9.mws...
Success... inserting topic Octonion,oversion from the file:

C:\Maple9/P9/Octonion9/Help/oversion_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/o_conjug_M9.mws...
Success... inserting topic Octonion,o_conjug from the file:

C:\Maple9/P9/Octonion9/Help/o_conjug_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/Phi_M9.mws...
Success... inserting topic Octonion,Phi from the file:

C:\Maple9/P9/Octonion9/Help/Phi_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/purevectorpart_M9.mws...
Success... inserting topic Octonion,purevectorpart from the file:

C:\Maple9/P9/Octonion9/Help/purevectorpart_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/realpart_M9.mws...
Success... inserting topic Octonion,realpart from the file:

C:\Maple9/P9/Octonion9/Help/realpart_M9.mws

Trying to read file C:\Maple9/P9/Octonion9/Help/setup_M9.mws...
Success... inserting topic Octonion,setup from the file:

C:\Maple9/P9/Octonion9/Help/setup_M9.mws

Finished inserting 15 file topics into the HDB and Browser

>

> **#?octonion**

Inserting help pages for code_support:

> **restart:with(code_support) :**

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> **HDB_LIB_PATH:=convert(libname[1],name);**
HELP_FILE_PATH:=`C:\Maple9/P9/Code_support9/Help/`;
BROWSER_PATH:=`Mathematics/Algebra/`;
ModuleName :=`code_support`;
Parent :=`code_support,code_support`;
GrandParent :=`Clifford,intro`;
MapleVersion:="M9";
typesLIST := [];
convertsLIST:= [];

HDB_LIB_PATH := C:\Maple9\Cliffordlib
HELP_FILE_PATH := C:\Maple9/P9/Code_support9/Help/
BROWSER_PATH := Mathematics/Algebra/
ModuleName := code_support
Parent := code_support,code_support
GrandParent := Clifford,intro
MapleVersion := "M9"
typesLIST := []
convertsLIST := []

Step 1: Generating an automatic list from help page files:

> **Lauto:=makeLIST(ModuleName,Parent,GrandParent,HELP_FILE_PATH,MapleVersion);**

Lauto := [

[code_support,code_support, Clifford,intro, ["code_support,code_support", "code_support"]],

```
[code_support,examples,code_support,code_support, ["code_support,examples", "examples"]],  
[code_support,INSERT_HELPPAGES,code_support,code_support,  
["code_support,INSERT_HELPPAGES", "INSERT_HELPPAGES"]]]
```

>

Step 2: Modifying, if needed, certain entries in Lauto list:

```
> #modsLIST:= [  
# [ `Octonion,omul` , ["Octonion,omul", "omul", "&o", "octonion", "Octonio  
n" ] ]  
# ] :
```

```
> #for mem in modsLIST do  
# Lauto:=modifyLIST(Lauto,op(mem))  
#end do:  
Lauto;
```

```
[[code_support,code_support, Clifford,intro, ["code_support,code_support", "code_support"]],  
[code_support,examples,code_support,code_support, ["code_support,examples", "examples"]],  
[code_support,INSERT_HELPPAGES,code_support,code_support,  
["code_support,INSERT_HELPPAGES", "INSERT_HELPPAGES"]]]
```

>

Step 3: Inserting all help pages into HDB and the browser using the last modified list:

```
> insert_helppages(Lauto,MapleVersion);
```

```
Trying to read file C:\Maple9/P9/Code_support9/Help/code_support_M9.mws...  
Success... inserting topic code_support,code_support from the file:
```

```
C:\Maple9/P9/Code_support9/Help/code_support_M9.mws
```

```
Trying to read file C:\Maple9/P9/Code_support9/Help/examples_M9.mws...  
Success... inserting topic code_support,examples from the file:
```

```
C:\Maple9/P9/Code_support9/Help/examples_M9.mws
```

```
Trying to read file C:\Maple9/P9/Code_support9/Help/INSERT_HELPPAGES_M9.mws...  
Success... inserting topic code_support,INSERT_HELPPAGES from the file:
```

```
C:\Maple9/P9/Code_support9/Help/INSERT_HELPPAGES_M9.mws
```

```
*****
```

```
Finished inserting 3 file topics into the HDB and Browser
```

```
*****
```

```
> ?code_support
```

>

>

See Also: [code_support,examples](#), [code_support,code_support](#)

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