

"code_support" for CLIFFORD, Bigebra, Octonion, GTP, Cliplus, Octonion in Maple 12

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

Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 12

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Last revised: December 20, 2008

*[NamesInLibrary, 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 20, 2008

```
> #####
#####
### It is assumed that directories can be entered either as
strings:
### (a) In Windows:   "C:\\Maple11\\Clifford\\Help_11_New\\"
### (b) In Linux:
"/home/fauser/BIG_ALL/P11/Clifford/Help_11_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,NamesInLibrary;
local setup;
option package, load=setup:
#####
```

1. Procedure **NamesInLibrary** gives names of programs stored in the library specified as the argument. It gives names as strings.

```
> NamesInLibrary:=proc(lib) local e,L;
#####
options `Copyright (c) 2002-2009 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 20, 2008`;
#####
    L:=march('list',lib):
```

```

    for e in L do
      if SearchText(":",e[1],1..1)=0 then print(e[1]);
    end if;
  end do;
end proc:

```

>

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) 2002-2009 by Rafal Ablamowicz and Bertfried
  Fauser. All rights reserved.`;
  description `Last revised: December 20, 2008`;
  #####
  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) 2002-2009 by Rafal Ablamowicz and
  Bertfried Fauser. All rights reserved.`;
  description `Last revised: December 20, 2008`;

```

```
#####
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;
#####
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:\\Maple10\\P10\\test1\\", or as `symbol`, for example, `C:\\Maple10/P10/test1`.

```
> get_dir:=proc(dir::{string,symbol})
  local wc_line,out_list,dirl;
  #####
  options `Copyright (c) 2002-2009 by Rafal Ablamowicz and
```

```

Bertfried Fauser. All rights reserved.`;
  description `Last revised: December 20, 2008`;
#####
if type(dir,symbol) then
  dir1:=convert(dir,symbol_dir_to_string_dir):
else
  dir1:=dir:
end if;
#####
out_list:=ssystem(cat("dir ",dir1));
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,filenamenew,n,nout,nb;
    #####
    options `Copyright (c) 2002-2009 by Rafal Ablamowicz and Bertfried
    Fauser. All rights reserved.`;
    description `Last revised: December 20, 2008`;
    #####
    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);

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

            filenamenew:=cat(substring(filename,1..n-1),substrin,substring(fil
            ename,n+nout..N-nb),fileext);
            end if;
        elif n+nout-1=N then
            filenamenew:=cat(substring(filename,1..n-1),substrin);
        else
            error "wrong string lengths"
        end if;
    return filenamenew;
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., "adfmatrix.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) 2002-2009 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 20, 2008`;
#####
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;
  #####
  ##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:\\Maple10\\P10\\test1\\", to a different directory "dir_out" also specified as a string, for example, "C:\\Maple10\\P10\\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) 2002-2009 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 20, 2008`;
#####
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;
#####
changenameflag:=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;
changenameflag:=true:
end if;
#####
dir_list:=get_dir(dir1);
#####
for file in dir_list do
```

```

fileold:=file:
if changenameflag 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 changenameflag then
    printf("processing file %s renamed as %s with replacement(s):
%a\n",fileold,filenew,N)
elif makerepflag and not changenameflag then
    printf("processing file %s without renaming but with
replacement(s): %a\n",fileold,N);
elif not makerepflag and changenameflag 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) 2002-2009 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 20, 2008`;
#####
    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., "M10". It is expected that the file names *_M10.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) 2002-2009 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 20, 2008`;
#####
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;
#####

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) 2002-2009 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`;
description `Last revised: December 20, 2008`;
#####
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) 2002-2009 by Rafal Ablamowicz and Bertfried
    Fauser. All rights reserved.`;
    description `Last revised: December 20, 2008`;
    #####
    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];
            end while;
        end if;
    end for;
end proc;

```

```

        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_d
  ir`;
  #####
  options `Copyright (c) 2002-2009 by Rafal Ablamowicz and Bertfried
  Fauser. All rights reserved.`;
  description `Last revised: December 20, 2008`;
  #####
  `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
12`);
print(`Copyright (c) 2002-2009 by Rafal Ablamowicz and Bertfried
Fauser. All rights reserved.`);
print(`Last revised: December 20, 2008`);
print(``);
#####
end proc:

end module:
savelib(code_support);

```

Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 12
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Last revised: December 20, 2008

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

Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 12
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[*NamesInLibrary, change_helpfiles, change_name, copy_file, get_TEXT, get_dir, inserthelppages, makeLIST, modifyLIST, replace_in_file, split*]

> **NamesInLibrary (libname [1]) ;**

"matquatR.m"
"matcompR.m"
"matquatL.m"
"Bigebra.m"
"matcompL.m"
"_implicitbezierpolynomial.m"
"matrealR.m"
"Octonion.m"
"RJgrobner.m"
"Define.m"
"Clifford.m"
"matrealL.m"
"code_support.m"
"Cliplus.m"
"GTP.m"

[>

[>

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

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Last modified: December 20, 2008, 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 apckage can be found in [code_support,examples](#).
- Procedure **insert_helppages** accomplishes insertion of the help topics into the library archive that has been marched.
- The help topics are given in a list L of type 'listlist' as the first argument to **insert_helppages** while Maple version, for example "M10", is listed as the second argument.

Examples:

```
> restart:with(code_support);

      Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 12
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      Last revised: December 20, 2008

[NamesInLibrary, 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 following directory:
> savelibname;

      "C:\Maple12\Cliffordlib"
>
Inserting help pages for CLIFFORD:
> HDB_LIB_PATH:=convert(libname[1],name);          ##Path to HDB
      library
HELP_FILE_PATH:=`C:\Maple12\P12\Cliff12\Help/`;    ##Directory
      where *_M12.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:="M12";                      ### 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", "evenelement",

"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:\Maple12\Cliffordlib
        HELP_FILE_PATH := C:\Maple12\P12\Cliff12\Help\
        BROWSER_PATH := Mathematics/Algebra/
        ModuleName := Clifford
        Parent := Clifford,intro
        GrandParent := Clifford,intro
        MapleVersion := "M12"
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"]

```

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"]], [
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", "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:\Maple12/P12/Cliff12/Help/&c_M12.mws...
```

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

```
C:\Maple12/P12/Cliff12/Help/&c_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliff12/Help/adfmatrix_M12.mws...
```

Success... inserting topic Clifford,adfmatrix from the file:
C:\Maple12/P12/Cliff12/Help/adfmatrix_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/all_sigs_M12.mws...
Success... inserting topic Clifford,all_sigs from the file:
C:\Maple12/P12/Cliff12/Help/all_sigs_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/antisymmatrix_M12.mws...
Success... inserting topic Clifford,type,antisymmatrix from the file:
C:\Maple12/P12/Cliff12/Help/antisymmatrix_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/beta_minus_M12.mws...
Success... inserting topic Clifford,beta_minus from the file:
C:\Maple12/P12/Cliff12/Help/beta_minus_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/beta_plus_M12.mws...
Success... inserting topic Clifford,beta_plus from the file:
C:\Maple12/P12/Cliff12/Help/beta_plus_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/Bsignature_M12.mws...
Success... inserting topic Clifford,Bsignature from the file:
C:\Maple12/P12/Cliff12/Help/Bsignature_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/buildm_M12.mws...
Success... inserting topic Clifford,buildm from the file:
C:\Maple12/P12/Cliff12/Help/buildm_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/bygrade_M12.mws...
Success... inserting topic Clifford,bygrade from the file:
C:\Maple12/P12/Cliff12/Help/bygrade_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/cbasis_M12.mws...
Success... inserting topic Clifford,cbasis from the file:
C:\Maple12/P12/Cliff12/Help/cbasis_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/cdfmatrix_M12.mws...
Success... inserting topic Clifford,cdfmatrix from the file:
C:\Maple12/P12/Cliff12/Help/cdfmatrix_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/cexpQ_M12.mws...
Success... inserting topic Clifford,cexpQ from the file:
C:\Maple12/P12/Cliff12/Help/cexpQ_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/cexp_M12.mws...
Success... inserting topic Clifford,cexp from the file:
C:\Maple12/P12/Cliff12/Help/cexp_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/cinv_M12.mws...
Success... inserting topic Clifford,cinv from the file:
C:\Maple12/P12/Cliff12/Help/cinv_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/clibasmon_M12.mws...
Success... inserting topic Clifford,type,clibasmon from the file:
C:\Maple12/P12/Cliff12/Help/clibasmon_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/clibilinear_M12.mws...
Success... inserting topic Clifford,clibilinear from the file:
C:\Maple12/P12/Cliff12/Help/clibilinear_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/clicollect_M12.mws...
Success... inserting topic Clifford,clicollect from the file:
C:\Maple12/P12/Cliff12/Help/clicollect_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/clidata_M12.mws...
Success... inserting topic Clifford,clidata from the file:

C:\Maple12/P12/Cliff12/Help/clidata_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/CLIFFORD_ENV_M12.mws...
Success... inserting topic Clifford,CLIFFORD_ENV from the file:

C:\Maple12/P12/Cliff12/Help/CLIFFORD_ENV_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/clilinear_M12.mws...
Success... inserting topic Clifford,clilinear from the file:

C:\Maple12/P12/Cliff12/Help/clilinear_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/climatrix_M12.mws...
Success... inserting topic Clifford,type,climatrix from the file:

C:\Maple12/P12/Cliff12/Help/climatrix_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/climinpoly_M12.mws...
Success... inserting topic Clifford,climinpoly from the file:

C:\Maple12/P12/Cliff12/Help/climinpoly_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/climon_M12.mws...
Success... inserting topic Clifford,type,climon from the file:

C:\Maple12/P12/Cliff12/Help/climon_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cliparse_M12.mws...
Success... inserting topic Clifford,cliparse from the file:

C:\Maple12/P12/Cliff12/Help/cliparse_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/clipolynom_M12.mws...
Success... inserting topic Clifford,type,clipolynom from the file:

C:\Maple12/P12/Cliff12/Help/clipolynom_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cliprod_M12.mws...
Success... inserting topic Clifford,type,cliprod from the file:

C:\Maple12/P12/Cliff12/Help/cliprod_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cliremove_M12.mws...
Success... inserting topic Clifford,cliremove from the file:

C:\Maple12/P12/Cliff12/Help/cliremove_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cliscalar_M12.mws...
Success... inserting topic Clifford,type,cliscalar from the file:

C:\Maple12/P12/Cliff12/Help/cliscalar_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/clisolve_M12.mws...
Success... inserting topic Clifford,clisolve from the file:

C:\Maple12/P12/Cliff12/Help/clisolve_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/clisort_M12.mws...
Success... inserting topic Clifford,clisort from the file:

C:\Maple12/P12/Cliff12/Help/clisort_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cliterms_M12.mws...
Success... inserting topic Clifford,cliterms from the file:

C:\Maple12/P12/Cliff12/Help/cliterms_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cmulgen_M12.mws...
Success... inserting topic Clifford,cmulgen from the file:

C:\Maple12/P12/Cliff12/Help/cmulgen_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cmulNUM_M12.mws...
Success... inserting topic Clifford,cmulNUM from the file:

C:\Maple12/P12/Cliff12/Help/cmulNUM_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cmulQ_M12.mws...
Success... inserting topic Clifford,cmulQ from the file:

C:\Maple12/P12/Cliff12/Help/cmulQ_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cmuls_M12.mws...
Success... inserting topic Clifford,cmuls from the file:
C:\Maple12/P12/Cliff12/Help/cmuls_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cmuls_M12.mws...
Success... inserting topic Clifford,cmuls from the file:
C:\Maple12/P12/Cliff12/Help/cmuls_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cmuls_user_defined_M12.mws...
Success... inserting topic Clifford,cmuls_user_defined from the file:
C:\Maple12/P12/Cliff12/Help/cmuls_user_defined_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/cocycle_M12.mws...
Success... inserting topic Clifford,cocycle from the file:
C:\Maple12/P12/Cliff12/Help/cocycle_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/commutingelements_M12.mws...
Success... inserting topic Clifford,commutingelements from the file:
C:\Maple12/P12/Cliff12/Help/commutingelements_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/conjugation_M12.mws...
Success... inserting topic Clifford,conjugation from the file:
C:\Maple12/P12/Cliff12/Help/conjugation_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/c_conjug_M12.mws...
Success... inserting topic Clifford,c_conjug from the file:
C:\Maple12/P12/Cliff12/Help/c_conjug_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/ddfmatrix_M12.mws...
Success... inserting topic Clifford,ddfmatrix from the file:
C:\Maple12/P12/Cliff12/Help/ddfmatrix_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/dfmatrix_M12.mws...
Success... inserting topic Clifford,type,dfmatrix from the file:
C:\Maple12/P12/Cliff12/Help/dfmatrix_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/diagmatrix_M12.mws...
Success... inserting topic Clifford,type,diagmatrix from the file:
C:\Maple12/P12/Cliff12/Help/diagmatrix_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/diagonalize_M12.mws...
Success... inserting topic Clifford,diagonalize from the file:
C:\Maple12/P12/Cliff12/Help/diagonalize_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/displayid_M12.mws...
Success... inserting topic Clifford,displayid from the file:
C:\Maple12/P12/Cliff12/Help/displayid_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/evenement_M12.mws...
Success... inserting topic Clifford,type,evenement from the file:
C:\Maple12/P12/Cliff12/Help/evenement_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/extract_M12.mws...
Success... inserting topic Clifford,extract from the file:
C:\Maple12/P12/Cliff12/Help/extract_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/factoridempotent_M12.mws...
Success... inserting topic Clifford,factoridempotent from the file:
C:\Maple12/P12/Cliff12/Help/factoridempotent_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/fieldelement_M12.mws...
Success... inserting topic Clifford,type,fieldelement from the file:
C:\Maple12/P12/Cliff12/Help/fieldelement_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/findlstr_M12.mws...

Success... inserting topic Clifford,find1str from the file:
C:\Maple12/P12/Cliff12/Help/find1str_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/findbasis_M12.mws...
Success... inserting topic Clifford,findbasis from the file:
C:\Maple12/P12/Cliff12/Help/findbasis_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/gencomplex_M12.mws...
Success... inserting topic Clifford,type,gencomplex from the file:
C:\Maple12/P12/Cliff12/Help/gencomplex_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/genquatbasis_M12.mws...
Success... inserting topic Clifford,type,genquatbasis from the file:
C:\Maple12/P12/Cliff12/Help/genquatbasis_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/genquaternion_M12.mws...
Success... inserting topic Clifford,type,genquaternion from the file:
C:\Maple12/P12/Cliff12/Help/genquaternion_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/gradeinv_M12.mws...
Success... inserting topic Clifford,gradeinv from the file:
C:\Maple12/P12/Cliff12/Help/gradeinv_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/idempotent_M12.mws...
Success... inserting topic Clifford,type,idempotent from the file:
C:\Maple12/P12/Cliff12/Help/idempotent_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/intro_M12.mws...
Success... inserting topic Clifford,intro from the file:
C:\Maple12/P12/Cliff12/Help/intro_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/isproduct_M12.mws...
Success... inserting topic Clifford,isproduct from the file:
C:\Maple12/P12/Cliff12/Help/isproduct_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/isVahlenmatrix_M12.mws...
Success... inserting topic Clifford,isVahlenmatrix from the file:
C:\Maple12/P12/Cliff12/Help/isVahlenmatrix_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/Kfield_M12.mws...
Success... inserting topic Clifford,Kfield from the file:
C:\Maple12/P12/Cliff12/Help/Kfield_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/LCQ_M12.mws...
Success... inserting topic Clifford,LCQ from the file:
C:\Maple12/P12/Cliff12/Help/LCQ_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/LC_M12.mws...
Success... inserting topic Clifford,LC from the file:
C:\Maple12/P12/Cliff12/Help/LC_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/makealiases_M12.mws...
Success... inserting topic Clifford,makealiases from the file:
C:\Maple12/P12/Cliff12/Help/makealiases_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/makeclibasmon_M12.mws...
Success... inserting topic Clifford,makeclibasmon from the file:
C:\Maple12/P12/Cliff12/Help/makeclibasmon_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/matKrepr_M12.mws...
Success... inserting topic Clifford,matKrepr from the file:
C:\Maple12/P12/Cliff12/Help/matKrepr_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/maxgrade_M12.mws...
Success... inserting topic Clifford,maxgrade from the file:

C:\Maple12/P12/Cliff12/Help/maxgrade_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/maxindex_M12.mws...
Success... inserting topic Clifford,maxindex from the file:

C:\Maple12/P12/Cliff12/Help/maxindex_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/mdfmatrix_M12.mws...
Success... inserting topic Clifford,mdfmatrix from the file:

C:\Maple12/P12/Cliff12/Help/mdfmatrix_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/minimalideal_M12.mws...
Success... inserting topic Clifford,minimalideal from the file:

C:\Maple12/P12/Cliff12/Help/minimalideal_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/mlist_M12.mws...
Success... inserting topic Clifford,convert,mlist from the file:

C:\Maple12/P12/Cliff12/Help/mlist_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/nilpotent_M12.mws...
Success... inserting topic Clifford,type,nilpotent from the file:

C:\Maple12/P12/Cliff12/Help/nilpotent_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/oddelement_M12.mws...
Success... inserting topic Clifford,type,oddelement from the file:

C:\Maple12/P12/Cliff12/Help/oddelement_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/ord_M12.mws...
Success... inserting topic Clifford,ord from the file:

C:\Maple12/P12/Cliff12/Help/ord_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/permsign_M12.mws...
Success... inserting topic Clifford,permsign from the file:

C:\Maple12/P12/Cliff12/Help/permsign_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/primitiveidemp_M12.mws...
Success... inserting topic Clifford,type,primitiveidemp from the file:

C:\Maple12/P12/Cliff12/Help/primitiveidemp_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/pseudodet_M12.mws...
Success... inserting topic Clifford,pseudodet from the file:

C:\Maple12/P12/Cliff12/Help/pseudodet_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/purequatbasis_M12.mws...
Success... inserting topic Clifford,type,purequatbasis from the file:

C:\Maple12/P12/Cliff12/Help/purequatbasis_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/qdisplay_M12.mws...
Success... inserting topic Clifford,qdisplay from the file:

C:\Maple12/P12/Cliff12/Help/qdisplay_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/qinv_M12.mws...
Success... inserting topic Clifford,qinv from the file:

C:\Maple12/P12/Cliff12/Help/qinv_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/qmul_M12.mws...
Success... inserting topic Clifford,qmul from the file:

C:\Maple12/P12/Cliff12/Help/qmul_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/qnorm_M12.mws...
Success... inserting topic Clifford,qnorm from the file:

C:\Maple12/P12/Cliff12/Help/qnorm_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/quaternion_M12.mws...
Success... inserting topic Clifford,type,quaternion from the file:

C:\Maple12/P12/Cliff12/Help/quaternion_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/q_conjug_M12.mws...
Success... inserting topic Clifford,q_conjug from the file:
C:\Maple12/P12/Cliff12/Help/q_conjug_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/RCQ_M12.mws...
Success... inserting topic Clifford,RCQ from the file:
C:\Maple12/P12/Cliff12/Help/RCQ_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/RC_M12.mws...
Success... inserting topic Clifford,RC from the file:
C:\Maple12/P12/Cliff12/Help/RC_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/rd_clibasmon_M12.mws...
Success... inserting topic Clifford,rd_clibasmon from the file:
C:\Maple12/P12/Cliff12/Help/rd_clibasmon_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/rd_climon_M12.mws...
Success... inserting topic Clifford,rd_climon from the file:
C:\Maple12/P12/Cliff12/Help/rd_climon_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/rd_clipolynom_M12.mws...
Success... inserting topic Clifford,rd_clipolynom from the file:
C:\Maple12/P12/Cliff12/Help/rd_clipolynom_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/reorder_M12.mws...
Success... inserting topic Clifford,reorder from the file:
C:\Maple12/P12/Cliff12/Help/reorder_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/reversion_M12.mws...
Success... inserting topic Clifford,reversion from the file:
C:\Maple12/P12/Cliff12/Help/reversion_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/RHnumber_M12.mws...
Success... inserting topic Clifford,RHnumber from the file:
C:\Maple12/P12/Cliff12/Help/RHnumber_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/rmulm_M12.mws...
Success... inserting topic Clifford,rmulm from the file:
C:\Maple12/P12/Cliff12/Help/rmulm_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/rot3d_M12.mws...
Success... inserting topic Clifford,rot3d from the file:
C:\Maple12/P12/Cliff12/Help/rot3d_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/scalarpart_M12.mws...
Success... inserting topic Clifford,scalarpart from the file:
C:\Maple12/P12/Cliff12/Help/scalarpart_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/setup_M12.mws...
Success... inserting topic Clifford,setup from the file:
C:\Maple12/P12/Cliff12/Help/setup_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/sexp_M12.mws...
Success... inserting topic Clifford,sexp from the file:
C:\Maple12/P12/Cliff12/Help/sexp_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/specify_constants_M12.mws...
Success... inserting topic Clifford,specify_constants from the file:
C:\Maple12/P12/Cliff12/Help/specify_constants_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/spinorKbasis_M12.mws...
Success... inserting topic Clifford,spinorKbasis from the file:
C:\Maple12/P12/Cliff12/Help/spinorKbasis_M12.mws

Trying to read file C:\Maple12/P12/Cliff12/Help/spinorKrepr_M12.mws...

```

Success... inserting topic Clifford,spinorKrepr from the file:
      C:\Maple12/P12/Cliff12/Help/spinorKrepr_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/squaremodf_M12.mws...
Success... inserting topic Clifford,squaremodf from the file:
      C:\Maple12/P12/Cliff12/Help/squaremodf_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/str_to_int_M12.mws...
Success... inserting topic Clifford,convert,str_to_int from the file:
      C:\Maple12/P12/Cliff12/Help/str_to_int_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/subs_clipolynom_M12.mws...
Success... inserting topic Clifford,subs_clipolynom from the file:
      C:\Maple12/P12/Cliff12/Help/subs_clipolynom_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/symmatrix_M12.mws...
Success... inserting topic Clifford,type,symmatrix from the file:
      C:\Maple12/P12/Cliff12/Help/symmatrix_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/tensorprod_M12.mws...
Success... inserting topic Clifford,type,tensorprod from the file:
      C:\Maple12/P12/Cliff12/Help/tensorprod_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/useproduct_M12.mws...
Success... inserting topic Clifford,useproduct from the file:
      C:\Maple12/P12/Cliff12/Help/useproduct_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/vectorpart_M12.mws...
Success... inserting topic Clifford,vectorpart from the file:
      C:\Maple12/P12/Cliff12/Help/vectorpart_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/version_M12.mws...
Success... inserting topic Clifford,version from the file:
      C:\Maple12/P12/Cliff12/Help/version_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/wedge_M12.mws...
Success... inserting topic Clifford,wedge from the file:
      C:\Maple12/P12/Cliff12/Help/wedge_M12.mws
Trying to read file C:\Maple12/P12/Cliff12/Help/wexp_M12.mws...
Success... inserting topic Clifford,wexp from the file:
      C:\Maple12/P12/Cliff12/Help/wexp_M12.mws

```

```

*****
Finished inserting 110 file topics into the HDB and Browser
*****

```

```
[ > #?cmulRS
```

```
[ >
```

Inserting help pages for Bigebra:

```

> HDB_LIB_PATH:=convert(libname[1],name);
HELP_FILE_PATH:=`C:\Maple12/P12/Bigebra12/Help/`; ##Directory
where *_M12.mws help files are located
BROWSER_PATH:=`Mathematics/Algebra/`;
ModuleName :=`Bigebra`;
Parent :=`Bigebra,help`;
GrandParent :=`Clifford,intro`;
MapleVersion:="M12";

```

```
typesLIST := ["tensorpolynom"];
convertsLIST := [];
```

```
HDB_LIB_PATH := C:\Maple12\Cliffordlib
HELP_FILE_PATH := C:\Maple12\P12\Bigebra12\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 := "M12"
typesLIST := ["tensorpolynom"]
convertsLIST := [ ]
```

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

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

```
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, ["Bigebra,gantipode", "gantipode"] ],
 [ Bigebra,gco_unit, Bigebra,help, ["Bigebra,gco_unit", "gco_unit"] ],
 [ Bigebra,gswitch, Bigebra,help, ["Bigebra,gswitch", "gswitch"] ],
 [ Bigebra,help, Clifford,intro, ["Bigebra,help", "help"] ],
 [ Bigebra,init, Bigebra,help, ["Bigebra,init", "init"] ],
 [ Bigebra,linop2, Bigebra,help, ["Bigebra,linop2", "linop2"] ],
 [ Bigebra,linop, Bigebra,help, ["Bigebra,linop", "linop"] ],
 [ 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, Bigebra,help, ["Bigebra,mapop", "mapop"]],
[Bigebra,meet, Bigebra,help, ["Bigebra,meet", "meet"]],
[Bigebra,op2mat2, Bigebra,help, ["Bigebra,op2mat2", "op2mat2"]],
[Bigebra,op2mat, Bigebra,help, ["Bigebra,op2mat", "op2mat"]],
[Bigebra,pairing, Bigebra,help, ["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, ["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", "type,tensorpolynom"]],
[Bigebra,tsolve1, Bigebra,help, ["Bigebra,tsolve1", "tsolve1"]],
[Bigebra,VERSION, Bigebra,help, ["Bigebra,VERSION", "VERSION"]]

```

>

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

```

> modsLIST := [
  [ `Bigebra, &cco`, ["Bigebra, Clifford co-product", "&cco"] ],
  [ `Bigebra, &gco_d`, ["Bigebra, Grassmann dotted
co-product", "&gco_d"] ],
  [ `Bigebra, &gco`, ["Bigebra, Grassmann co-product", "&gco"] ],
  [ `Bigebra, &gco_d`, ["Bigebra, Grassmann dotted
co-product", "&gco_d"] ],
  [ `Bigebra, &gco`, ["Bigebra, 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:\Maple12\P12\Bigebra12\Help/&cco_M12.mws...
Success... inserting topic Bigebra,&cco from the file:
```

```
C:\Maple12\P12\Bigebra12\Help/&cco_M12.mws
```

```
Trying to read file C:\Maple12\P12\Bigebra12\Help/&gco_d_M12.mws...
Success... inserting topic Bigebra,&gco_d from the file:
```

```
C:\Maple12\P12\Bigebra12\Help/&gco_d_M12.mws
```

Trying to read file C:\Maple12/P12/Bigebral2/Help/&gco_M12.mws...
Success... inserting topic Bigebra,&gco from the file:
C:\Maple12/P12/Bigebral2/Help/&gco_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/&gco_pl_M12.mws...
Success... inserting topic Bigebra,&gco_pl from the file:
C:\Maple12/P12/Bigebral2/Help/&gco_pl_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/&map_M12.mws...
Success... inserting topic Bigebra,&map from the file:
C:\Maple12/P12/Bigebral2/Help/&map_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/&t_M12.mws...
Success... inserting topic Bigebra,&t from the file:
C:\Maple12/P12/Bigebral2/Help/&t_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/&v_M12.mws...
Success... inserting topic Bigebra,&v from the file:
C:\Maple12/P12/Bigebral2/Help/&v_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/bracket_M12.mws...
Success... inserting topic Bigebra,bracket from the file:
C:\Maple12/P12/Bigebral2/Help/bracket_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/contract_M12.mws...
Success... inserting topic Bigebra,contract from the file:
C:\Maple12/P12/Bigebral2/Help/contract_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/define_M12.mws...
Success... inserting topic Bigebra,define from the file:
C:\Maple12/P12/Bigebral2/Help/define_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/drop_t_M12.mws...
Success... inserting topic Bigebra,drop_t from the file:
C:\Maple12/P12/Bigebral2/Help/drop_t_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/EV_M12.mws...
Success... inserting topic Bigebra,EV from the file:
C:\Maple12/P12/Bigebral2/Help/EV_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/gantipode_M12.mws...
Success... inserting topic Bigebra,gantipode from the file:
C:\Maple12/P12/Bigebral2/Help/gantipode_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/gco_unit_M12.mws...
Success... inserting topic Bigebra,gco_unit from the file:
C:\Maple12/P12/Bigebral2/Help/gco_unit_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/gswitch_M12.mws...
Success... inserting topic Bigebra,gswitch from the file:
C:\Maple12/P12/Bigebral2/Help/gswitch_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/help_M12.mws...
Success... inserting topic Bigebra,help from the file:
C:\Maple12/P12/Bigebral2/Help/help_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/init_M12.mws...
Success... inserting topic Bigebra,init from the file:
C:\Maple12/P12/Bigebral2/Help/init_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/linop2_M12.mws...
Success... inserting topic Bigebra,linop2 from the file:
C:\Maple12/P12/Bigebral2/Help/linop2_M12.mws

Trying to read file C:\Maple12/P12/Bigebral2/Help/linop_M12.mws...

Success... inserting topic Bigebra,linop from the file:
C:\Maple12/P12/Bigebra12/Help/linop_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/lists2mat2_M12.mws...
Success... inserting topic Bigebra,lists2mat2 from the file:
C:\Maple12/P12/Bigebra12/Help/lists2mat2_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/lists2mat_M12.mws...
Success... inserting topic Bigebra,lists2mat from the file:
C:\Maple12/P12/Bigebra12/Help/lists2mat_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/make_BI_Id_M12.mws...
Success... inserting topic Bigebra,make_BI_Id from the file:
C:\Maple12/P12/Bigebra12/Help/make_BI_Id_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/mapop2_M12.mws...
Success... inserting topic Bigebra,mapop2 from the file:
C:\Maple12/P12/Bigebra12/Help/mapop2_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/mapop_M12.mws...
Success... inserting topic Bigebra,mapop from the file:
C:\Maple12/P12/Bigebra12/Help/mapop_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/meet_M12.mws...
Success... inserting topic Bigebra,meet from the file:
C:\Maple12/P12/Bigebra12/Help/meet_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/op2mat2_M12.mws...
Success... inserting topic Bigebra,op2mat2 from the file:
C:\Maple12/P12/Bigebra12/Help/op2mat2_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/op2mat_M12.mws...
Success... inserting topic Bigebra,op2mat from the file:
C:\Maple12/P12/Bigebra12/Help/op2mat_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/pairing_M12.mws...
Success... inserting topic Bigebra,pairing from the file:
C:\Maple12/P12/Bigebra12/Help/pairing_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/peek_M12.mws...
Success... inserting topic Bigebra,peek from the file:
C:\Maple12/P12/Bigebra12/Help/peek_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/poke_M12.mws...
Success... inserting topic Bigebra,poke from the file:
C:\Maple12/P12/Bigebra12/Help/poke_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/remove_eq_M12.mws...
Success... inserting topic Bigebra,remove_eq from the file:
C:\Maple12/P12/Bigebra12/Help/remove_eq_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/switch_M12.mws...
Success... inserting topic Bigebra,switch from the file:
C:\Maple12/P12/Bigebra12/Help/switch_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/tcollect_M12.mws...
Success... inserting topic Bigebra,tcollect from the file:
C:\Maple12/P12/Bigebra12/Help/tcollect_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/tensorbasmonom_M12.mws...
Success... inserting topic Bigebra,tensorbasmonom from the file:
C:\Maple12/P12/Bigebra12/Help/tensorbasmonom_M12.mws
Trying to read file C:\Maple12/P12/Bigebra12/Help/tensormonom_M12.mws...
Success... inserting topic Bigebra,tensormonom from the file:

C:\Maple12/P12/Bigebra12/Help/tensormonom_M12.mws

Trying to read file C:\Maple12/P12/Bigebra12/Help/tensorpolynom_M12.mws...
Success... inserting topic Bigebra,type,tensorpolynom from the file:

C:\Maple12/P12/Bigebra12/Help/tensorpolynom_M12.mws

Trying to read file C:\Maple12/P12/Bigebra12/Help/tsolve1_M12.mws...
Success... inserting topic Bigebra,tsolve1 from the file:

C:\Maple12/P12/Bigebra12/Help/tsolve1_M12.mws

Trying to read file C:\Maple12/P12/Bigebra12/Help/VERSION_M12.mws...
Success... inserting topic Bigebra,VERSION from the file:

C:\Maple12/P12/Bigebra12/Help/VERSION_M12.mws

Finished inserting 38 file topics into the HDB and Browser

[> **#!switch**

[>

Inserting help pages for Cliplus:

```
> HDB_LIB_PATH:=convert(libname[1],name);
HELP_FILE_PATH:=`C:\Maple12/P12/Cliplus12/Help/`;
BROWSER_PATH:=`Mathematics/Algebra/`;
ModuleName :=`Cliplus`;
Parent :=`Cliplus,setup`;
GrandParent :=`Clifford,intro`;
MapleVersion:="M12";
typesLIST:=[];
convertsLIST:=["wedge_to_dwedge","dwedge_to_wedge"];
```

HDB_LIB_PATH := C:\Maple12/Cliffordlib

HELP_FILE_PATH := C:\Maple12/P12/Cliplus12/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 := "M12"

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,MapleVersion);
```

```

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,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 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:\Maple12/P12/Cliplus12/Help/&dw_M12.mws...
```

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

```
    C:\Maple12/P12/Cliplus12/Help/&dw_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/clibasis_M12.mws...
```

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

```
    C:\Maple12/P12/Cliplus12/Help/clibasis_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/clieval_M12.mws...
```

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

```
    C:\Maple12/P12/Cliplus12/Help/clieval_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/cliexpand_M12.mws...
```

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

```
    C:\Maple12/P12/Cliplus12/Help/cliexpand_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/climul_M12.mws...
```

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

```
    C:\Maple12/P12/Cliplus12/Help/climul_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/clirev_M12.mws...
```

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

```
    C:\Maple12/P12/Cliplus12/Help/clirev_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/dottedcbasis_M12.mws...
```

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

```
    C:\Maple12/P12/Cliplus12/Help/dottedcbasis_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/dwedge_M12.mws...
```

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

```
    C:\Maple12/P12/Cliplus12/Help/dwedge_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/dwedge_to_wedge_M12.mws...
```

```
Success... inserting topic Cliplus,convert,dwedge_to_wedge from the file:
```

```
    C:\Maple12/P12/Cliplus12/Help/dwedge_to_wedge_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/LCbig_M12.mws...
```

```
Success... inserting topic Cliplus,LCbig from the file:
```

```
    C:\Maple12/P12/Cliplus12/Help/LCbig_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/makeclialias_M12.mws...
```

```
Success... inserting topic Cliplus,makeclialias from the file:
```

```
    C:\Maple12/P12/Cliplus12/Help/makeclialias_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/RCbig_M12.mws...
```

```
Success... inserting topic Cliplus,RCbig from the file:
```

```
    C:\Maple12/P12/Cliplus12/Help/RCbig_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/setup_M12.mws...
```

```
Success... inserting topic Cliplus,setup from the file:
```

```
    C:\Maple12/P12/Cliplus12/Help/setup_M12.mws
```

```
Trying to read file C:\Maple12/P12/Cliplus12/Help/wedge_to_dwedge_M12.mws...
```

```
Success... inserting topic Cliplus,convert,wedge_to_dwedge from the file:
```

```
    C:\Maple12/P12/Cliplus12/Help/wedge_to_dwedge_M12.mws
```

```
*****
```

```
Finished inserting 14 file topics into the HDB and Browser
```

```
*****
```

[> **#!setup**

[>

[>

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

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