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 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_support ver. 1.03 for CLIFFORD et al. for Maple 11
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[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 directory `C:\Maple10/Cliffordlib`.
> libname;
   "C:\Maple11/SINGULARPLURALlinklib"

> Inserting help pages for CLIFFORD:

> HDB_LIB_PATH:=convert(libname[1],name);   ##Path to HDB library
HELP_FILE_PATH:=`C:\\Maple11/P11/Cliff11/Help/`;   ##Directory where *_M11.mws help files are located
BROWSER_PATH:=`Mathematics/Algebra/`;   ##Location in the browser
ModuleName  :=`Clifford`;   ##Name of the
```plaintext
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 := "M11";                              ### substring of file names that gives Maple version

## list of types defined in the module

```plaintext

## list of types converts defined in the module

```plaintext
convertsLIST:= ["mlist", "str_to_int"];

> HDB_LIB_PATH := C:\Maple11/Cliffordlib
> HELP_FILE_PATH := C:\Maple11/P11/Cliff11/Help/
> BROWSER_PATH := Mathematics/Algebra/
> ModuleName := Clifford
> Parent := Clifford,intro
> GrandParent := Clifford,intro
> MapleVersion := "M11"


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

> Lauto:= makeLIST(ModuleName, Parent, GrandParent, HELP_FILE_PATH, MapleVersion);
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,coycle, Clifford.intro, [ "Clifford,coycle", "coycle"] |
| 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,type,displayid, Clifford.intro, [ "Clifford,type,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"] |
Step 2: Modifying, if needed, certain entries in Lauto list:

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

```plaintext
> 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;
```

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

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

Trying to read file C:\Maple11\P11\Cliff11\Help\&c_M11.mws...
Success... inserting topic Clifford,&c from the file:
C:\Maple11/P11/Cliff11/Help/&c_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/adfmatrix_M11.mws...
Success... inserting topic Clifford,adfmatrix from the file:

C:\Maple11/P11/Cliff11/Help/adfmatrix_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/all_sigs_M11.mws...
Success... inserting topic Clifford,all_sigs from the file:

C:\Maple11/P11/Cliff11/Help/all_sigs_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/antisymmatrix_M11.mws...
Success... inserting topic Clifford,type,antisymmatrix from the file:

C:\Maple11/P11/Cliff11/Help/antisymmatrix_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/beta_minus_M11.mws...
Success... inserting topic Clifford,beta_minus from the file:

C:\Maple11/P11/Cliff11/Help/beta_minus_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/beta_plus_M11.mws...
Success... inserting topic Clifford,beta_plus from the file:

C:\Maple11/P11/Cliff11/Help/beta_plus_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/Bsignature_M11.mws...
Success... inserting topic Clifford,Bsignature from the file:

C:\Maple11/P11/Cliff11/Help/Bsignature_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/buildm_M11.mws...
Success... inserting topic Clifford,buildm from the file:

C:\Maple11/P11/Cliff11/Help/buildm_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/bygrade_M11.mws...
Success... inserting topic Clifford,bygrade from the file:

C:\Maple11/P11/Cliff11/Help/bygrade_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/cbasis_M11.mws...
Success... inserting topic Clifford,cbasis from the file:

C:\Maple11/P11/Cliff11/Help/cbasis_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/cdfmatrix_M11.mws...
Success... inserting topic Clifford,cdfmatrix from the file:

C:\Maple11/P11/Cliff11/Help/cdfmatrix_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/cexpQ_M11.mws...
Success... inserting topic Clifford,cexpQ from the file:

C:\Maple11/P11/Cliff11/Help/cexpQ_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/cexp_M11.mws...
Success... inserting topic Clifford,cexp from the file:

C:\Maple11/P11/Cliff11/Help/cexp_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/cinv_M11.mws...
Success... inserting topic Clifford,cinv from the file:

C:\Maple11/P11/Cliff11/Help/cinv_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/clibasmon_M11.mws...
Success... inserting topic Clifford,type,clibasmon from the file:

C:\Maple11/P11/Cliff11/Help/clibasmon_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/clibilinear_M11.mws...
Success... inserting topic Clifford,clibilinear from the file:

C:\Maple11/P11/Cliff11/Help/clibilinear_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/clicollect_M11.mws...
Success... inserting topic Clifford,clicollect from the file:

C:\Maple11/P11/Cliff11/Help/clicollect_M11.mws
Success... inserting topic Clifford,cmulQ from the file:

C:\Maple11\P11\Cliff11\Help\cmulQ_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\cmulRS_M11.mws...
Success... inserting topic Clifford,cmulRS from the file:

C:\Maple11\P11\Cliff11\Help\cmulRS_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\cmul_M11.mws...
Success... inserting topic Clifford,cmul from the file:

C:\Maple11\P11\Cliff11\Help\cmul_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\cmul_user_defined_M11.mws...
Success... inserting topic Clifford,cmul_user_defined from the file:

C:\Maple11\P11\Cliff11\Help\cmul_user_defined_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\cocycle_M11.mws...
Success... inserting topic Clifford,cocycle from the file:

C:\Maple11\P11\Cliff11\Help\cocycle_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\commutingelements_M11.mws...
Success... inserting topic Clifford,commutingelements from the file:

C:\Maple11\P11\Cliff11\Help\commutingelements_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\conjugation_M11.mws...
Success... inserting topic Clifford,conjugation from the file:

C:\Maple11\P11\Cliff11\Help\conjugation_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\c_conjug_M11.mws...
Success... inserting topic Clifford,c_conjug from the file:

C:\Maple11\P11\Cliff11\Help\c_conjug_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\ddfmatrix_M11.mws...
Success... inserting topic Clifford,ddfmatrix from the file:

C:\Maple11\P11\Cliff11\Help\ddfmatrix_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\dfmatrix_M11.mws...
Success... inserting topic Clifford,type,dfmatrix from the file:

C:\Maple11\P11\Cliff11\Help\dfmatrix_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\diagmatrix_M11.mws...
Success... inserting topic Clifford,type,diagmatrix from the file:

C:\Maple11\P11\Cliff11\Help\diagmatrix_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\diagonalize_M11.mws...
Success... inserting topic Clifford,diagonalize from the file:

C:\Maple11\P11\Cliff11\Help\diagonalize_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\displayid_M11.mws...
Success... inserting topic Clifford,displayid from the file:

C:\Maple11\P11\Cliff11\Help\displayid_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\evenelement_M11.mws...
Success... inserting topic Clifford,type,evenelement from the file:

C:\Maple11\P11\Cliff11\Help\evenelement_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\extract_M11.mws...
Success... inserting topic Clifford,extract from the file:

C:\Maple11\P11\Cliff11\Help\extract_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\factoridempotent_M11.mws...
Success... inserting topic Clifford,factoridempotent from the file:

C:\Maple11\P11\Cliff11\Help\factoridempotent_M11.mws

Trying to read file C:\Maple11\P11\Cliff11\Help\fieldelement_M11.mws...
Success... inserting topic Clifford,type,fieldelement from the file:
C:\Maple11/P11/Cliff11/Help/fieldelement_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/find1str_M11.mws...
Success... inserting topic Clifford,find1str from the file:

C:\Maple11/P11/Cliff11/Help/find1str_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/findbasis_M11.mws...
Success... inserting topic Clifford,findbasis from the file:

C:\Maple11/P11/Cliff11/Help/findbasis_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/gencomplex_M11.mws...
Success... inserting topic Clifford,type,gencomplex from the file:

C:\Maple11/P11/Cliff11/Help/gencomplex_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/genquatbasis_M11.mws...
Success... inserting topic Clifford,type,genquatbasis from the file:

C:\Maple11/P11/Cliff11/Help/genquatbasis_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/genquaternion_M11.mws...
Success... inserting topic Clifford,type,genquaternion from the file:

C:\Maple11/P11/Cliff11/Help/genquaternion_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/gradeinv_M11.mws...
Success... inserting topic Clifford,gradeinv from the file:

C:\Maple11/P11/Cliff11/Help/gradeinv_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/idempotent_M11.mws...
Success... inserting topic Clifford,type,idempotent from the file:

C:\Maple11/P11/Cliff11/Help/idempotent_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/intro_M11.mws...
Success... inserting topic Clifford,intro from the file:

C:\Maple11/P11/Cliff11/Help/intro_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/isproduct_M11.mws...
Success... inserting topic Clifford,isproduct from the file:

C:\Maple11/P11/Cliff11/Help/isproduct_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/isVahlenmatrix_M11.mws...
Success... inserting topic Clifford,isVahlenmatrix from the file:

C:\Maple11/P11/Cliff11/Help/isVahlenmatrix_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/Kfield_M11.mws...
Success... inserting topic Clifford,Kfield from the file:

C:\Maple11/P11/Cliff11/Help/Kfield_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/LC_M11.mws...
Success... inserting topic Clifford,LC from the file:

C:\Maple11/P11/Cliff11/Help/LC_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/LCQ_M11.mws...
Success... inserting topic Clifford,LCQ from the file:

C:\Maple11/P11/Cliff11/Help/LCQ_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/makealiases_M11.mws...
Success... inserting topic Clifford,makealiases from the file:

C:\Maple11/P11/Cliff11/Help/makealiases_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/makeclibasmon_M11.mws...
Success... inserting topic Clifford,makeclibasmon from the file:

C:\Maple11/P11/Cliff11/Help/makeclibasmon_M11.mws
Trying to read file C:\Maple11/P11/Cliff11/Help/matKrepr_M11.mws...
Success... inserting topic Clifford,matKrepr from the file:

C:\Maple11/P11/Cliff11/Help/matKrepr_M11.mws
Inserting help pages for Bigebra:

> HDB_LIB_PATH:=convert(libname[1],name);  
HELP_FILE_PATH:="C:\\Maple11\\P11\\Bigebra11\\Help/`;  
#Directory where *_M11.mws help files are located 
BROWSER_PATH:=`Mathematics/Algebra/``;  
ModuleName :=`Bigebra``;  
Parent :=`Bigebra,help``;
GrandParent := `Clifford,intro`;
MapleVersion := "M11"

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

HDB_LIB_PATH := C:\Maple11/Cliffordlib
HELP_FILE_PATH := C:\Maple11/P11/Bigebra11/Help/

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

```plaintext
> modsLIST:=
  [\`Bigebra,\&cco\`,["Bigebra,Clifford co-product","\&cco"]],
  [\`Bigebra,\&gco_d\`,["Bigebra,Grassmann doted co-product","\&gco_d"]],
  [\`Bigebra,\&gco\`,["Bigebra,Grassmann co-product","\&gco"]],
  [\`Bigebra,\&gco_d\`,["Bigebra,Grassmann doted 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"]],
```

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"]],
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:\Maple11/P11/Bigebra11/Help/&cco_M11.mws...

Success... inserting topic Bigebra,&cco from the file:

C:\Maple11/P11/Bigebra11/Help/&cco_M11.mws

Trying to read file C:\Maple11/P11/Bigebra11/Help/&gco_d_M11.mws...
C:\Maple11/P11/Bigebra11/Help/linop2_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/linop_M11.mws...
Success... inserting topic Bigebra,linop from the file:

C:\Maple11/P11/Bigebra11/Help/linop_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/lists2mat2_M11.mws...
Success... inserting topic Bigebra,lists2mat2 from the file:

C:\Maple11/P11/Bigebra11/Help/lists2mat2_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/lists2mat_M11.mws...
Success... inserting topic Bigebra,lists2mat from the file:

C:\Maple11/P11/Bigebra11/Help/lists2mat_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/make_BI_Id_M11.mws...
Success... inserting topic Bigebra,make_BI_Id from the file:

C:\Maple11/P11/Bigebra11/Help/make_BI_Id_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/mapop2_M11.mws...
Success... inserting topic Bigebra,mapop2 from the file:

C:\Maple11/P11/Bigebra11/Help/mapop2_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/mapop_M11.mws...
Success... inserting topic Bigebra,mapop from the file:

C:\Maple11/P11/Bigebra11/Help/mapop_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/meet_M11.mws...
Success... inserting topic Bigebra,meet from the file:

C:\Maple11/P11/Bigebra11/Help/meet_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/op2mat2_M11.mws...
Success... inserting topic Bigebra,op2mat2 from the file:

C:\Maple11/P11/Bigebra11/Help/op2mat2_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/op2mat_M11.mws...
Success... inserting topic Bigebra,op2mat from the file:

C:\Maple11/P11/Bigebra11/Help/op2mat_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/pairing_M11.mws...
Success... inserting topic Bigebra,pairing from the file:

C:\Maple11/P11/Bigebra11/Help/pairing_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/peek_M11.mws...
Success... inserting topic Bigebra,peek from the file:

C:\Maple11/P11/Bigebra11/Help/peek_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/poke_M11.mws...
Success... inserting topic Bigebra,poke from the file:

C:\Maple11/P11/Bigebra11/Help/poke_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/remove_eq_M11.mws...
Success... inserting topic Bigebra,remove_eq from the file:

C:\Maple11/P11/Bigebra11/Help/remove_eq_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/switch_M11.mws...
Success... inserting topic Bigebra,switch from the file:

C:\Maple11/P11/Bigebra11/Help/switch_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/tcollect_M11.mws...
Success... inserting topic Bigebra,tcollect from the file:

C:\Maple11/P11/Bigebra11/Help/tcollect_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/tensorbasmonom_M11.mws...
Success... inserting topic Bigebra,tensorbasmonom from the file:

C:\Maple11/P11/Bigebra11/Help/tensorbasmonom_M11.mws
Trying to read file C:\Maple11/P11/Bigebra11/Help/tensormonom_M11.mws...
Success... inserting topic Bigebra,tensormonom from the file:
C:\Maple11/P11/Bigebra11/Help/tensormonom_M11.mws

Trying to read file C:\Maple11/P11/Bigebra11/Help/tensorpolynom_M11.mws...
Success... inserting topic Bigebra,type,tensorpolynom from the file:
C:\Maple11/P11/Bigebra11/Help/tensorpolynom_M11.mws

Trying to read file C:\Maple11/P11/Bigebra11/Help/tsolve1_M11.mws...
Success... inserting topic Bigebra,tsolve1 from the file:
C:\Maple11/P11/Bigebra11/Help/tsolve1_M11.mws

Trying to read file C:\Maple11/P11/Bigebra11/Help/VERSION_M11.mws...
Success... inserting topic Bigebra,VERSION from the file:
C:\Maple11/P11/Bigebra11/Help/VERSION_M11.mws

***********************
Finished inserting 38 file topics into the HDB and Browser
***********************

> #?tensorpolynom

Inserting help pages for Cliplus:

> HDB_LIB_PATH:=convert(libname[1],name);
HELP_FILE_PATH:='C:\\Maple11/P11/Cliplus11/Help/`;
BROWSER_PATH:='Mathematics/Algebra/`;
ModuleName :=`Cliplus`;
Parent :=`Cliplus,setup`;
GrandParent :=`Clifford,intro`;
MapleVersion:="M11";
typesLIST:=[];
convertsLIST:=["wedge_to_dwedge","dwedge_to_wedge"];

HDB_LIB_PATH := C:\Maple11/Cliffordlib
HELP_FILE_PATH := C:\Maple11/P11/Cliplus11/Help/
BROWSER_PATH := Mathematics/Algebra/
ModuleName := Cliplus
Parent := Cliplus,setup
GrandParent := Clifford,intro
MapleVersion := "M11"

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

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

Trying to read file C:\Maple11/P11/Cliplus11/Help/&dw_M11.mws...
Success... inserting topic Cliplus,&dw from the file:

C:\Maple11/P11/Cliplus11/Help/&dw_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/clibasis_M11.mws...
Success... inserting topic Cliplus,clibasis from the file:

C:\Maple11/P11/Cliplus11/Help/clibasis_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/clieval_M11.mws...
Success... inserting topic Cliplus,clieval from the file:

C:\Maple11/P11/Cliplus11/Help/clieval_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/cliexpand_M11.mws...
Success... inserting topic Cliplus,cliexpand from the file:

C:\Maple11/P11/Cliplus11/Help/cliexpand_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/climul_M11.mws...
Success... inserting topic Cliplus,climul from the file:

C:\Maple11/P11/Cliplus11/Help/climul_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/clirev_M11.mws...
Success... inserting topic Cliplus,clirev from the file:

C:\Maple11/P11/Cliplus11/Help/clirev_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/dottedcbasis_M11.mws...
Success... inserting topic Cliplus,dottedcbasis from the file:

C:\Maple11/P11/Cliplus11/Help/dottedcbasis_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/dwedge_M11.mws...
Success... inserting topic Cliplus,dwedge from the file:

C:\Maple11/P11/Cliplus11/Help/dwedge_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/dwedge_to_wedge_M11.mws...
Success... inserting topic Cliplus,convert,dwedge_to_wedge from the file:

C:\Maple11/P11/Cliplus11/Help/dwedge_to_wedge_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/LCbig_M11.mws...
Success... inserting topic Cliplus,LCbig from the file:

C:\Maple11/P11/Cliplus11/Help/LCbig_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/makeclialiases_M11.mws...
Success... inserting topic Cliplus,makeclialiases from the file:

C:\Maple11/P11/Cliplus11/Help/makeclialiases_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/RCbig_M11.mws...
Success... inserting topic Cliplus,RCbig from the file:

C:\Maple11/P11/Cliplus11/Help/RCbig_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/setup_M11.mws...
Success... inserting topic Cliplus,setup from the file:

C:\Maple11/P11/Cliplus11/Help/setup_M11.mws

Trying to read file C:\Maple11/P11/Cliplus11/Help/wedge_to_dwedge_M11.mws...
Success... inserting topic Cliplus,convert,wedge_to_dwedge from the file:

C:\Maple11/P11/Cliplus11/Help/wedge_to_dwedge_M11.mws

***********************
Finished inserting 14 file topics into the HDB and Browser
***********************
Inserting help pages for GTP:

```
> #?setup

> convert(libname[1],name);
  HELP_FILE_PATH:=`C:\Maple11/P11/GTP11/Help/`;
  BROWSER_PATH:=`Mathematics/Algebra/`;
  ModuleName :=`GTP`;
  Parent :=`Clifford,setup`;
  GrandParent :=`Clifford,intro`;
  MapleVersion:="M11``

```

```
  typesLIST:=["gradedeven","gradedmonom","gradedodd","gradedpolynom"];
  converts:=[[];```

```

```

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

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:=modifyLIST(Lauto, op(mem))
>
> [[ 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 help pages (Lauto, MapleVersion);
> Trying to read file C:\Maple11\P11\GTP11\Help\&t_M11.mws...
> Success... inserting topic GTP, &t from the file:
> C:\Maple11\P11\GTP11\Help\&t_M11.mws
> Trying to read file C:\Maple11\P11\GTP11\Help\cmulB_M11.mws...
> Success... inserting topic GTP, cmulB from the file:
> C:\Maple11\P11\GTP11\Help\cmulB_M11.mws
> Trying to read file C:\Maple11\P11\GTP11\Help\gbasis_M11.mws...
> Success... inserting topic GTP, gbasis from the file:
> C:\Maple11\P11\GTP11\Help\gbasis_M11.mws
> Trying to read file C:\Maple11\P11\GTP11\Help\gcollect_M11.mws...
> Success... inserting topic GTP, gcollect from the file:
> C:\Maple11\P11\GTP11\Help\gcollect_M11.mws
> Trying to read file C:\Maple11\P11\GTP11\Help\gprod_M11.mws...
> Success... inserting topic GTP, gprod from the file:
> C:\Maple11\P11\GTP11\Help\gprod_M11.mws
> Trying to read file C:\Maple11\P11\GTP11\Help\gradedeven_M11.mws...
> Success... inserting topic GTP, type, gradedeven from the file:
C:\Maple11/P11/GTP11/Help/gradedeven_M11.mws
Trying to read file C:\Maple11/P11/GTP11/Help/gradedmonom_M11.mws...
Success... inserting topic GTP,type,gradedmonom from the file:

C:\Maple11/P11/GTP11/Help/gradedmonom_M11.mws
Trying to read file C:\Maple11/P11/GTP11/Help/gradedodd_M11.mws...
Success... inserting topic GTP,type,gradedodd from the file:

C:\Maple11/P11/GTP11/Help/gradedodd_M11.mws
Trying to read file C:\Maple11/P11/GTP11/Help/gradedpolynom_M11.mws...
Success... inserting topic GTP,type,gradedpolynom from the file:

C:\Maple11/P11/GTP11/Help/gradedpolynom_M11.mws
Trying to read file C:\Maple11/P11/GTP11/Help/gradedprod_M11.mws...
Success... inserting topic GTP,gradedprod from the file:

C:\Maple11/P11/GTP11/Help/gradedprod_M11.mws
Trying to read file C:\Maple11/P11/GTP11/Help/grade_M11.mws...
Success... inserting topic GTP,grade from the file:

C:\Maple11/P11/GTP11/Help/grade_M11.mws
Trying to read file C:\Maple11/P11/GTP11/Help/tensorrank_M11.mws...
Success... inserting topic GTP,tensorrank from the file:

C:\Maple11/P11/GTP11/Help/tensorrank_M11.mws

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

> ##?cmulB

> 

> ##############

[Inserting help pages for Octonion:

> HDB_LIB_PATH:=convert(libname[1],name);
HELP_FILE_PATH:='C:\Maple11/P11/Octonion11/Help/';
BROWSER_PATH:='Mathematics/Algebra/';
ModuleName := 'Octonion';
Parent := 'Octonion,setup';
GrandParent := 'Clifford,intro';
MapleVersion:="M11";
typesLIST :=["Fano_triples","octonion"];
convertsLIST:=[];

HDB_LIB_PATH := C:\Maple11/Cliffordlib
HELP_FILE_PATH := C:\Maple11/P11/Octonion11/Help/
BROWSER_PATH := Mathematics/Algebra/
ModuleName := Octonion
Parent := Octonion,setup
GrandParent := Clifford,intro
Step 1: Generating an automatic list from help page files:

```maple
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_omultable, Octonion, setup, ["Octonion, def_omultable", "def_omultable"]],
          [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, omultable, Octonion, setup, ["Octonion, omultable", "omultable"]],
          [Octonion, omul, Octonion, setup, ["Octonion, omul", "omul"]],
          [Octonion, onorm, Octonion, setup, ["Octonion, onorm", "onorm"]],
          [Octonion, oversion, Octonion, setup, ["Octonion, oversion", "overservation"]],
          [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:

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

```maple
typesLIST := ["Fano_triples", "octonion"]
convertsLIST := []
```

```
> 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_omultable, Octonion, setup, ["Octonion,def_omultable", "def_omultable"]],
          [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, omultable, Octonion, setup, ["Octonion,omultable", "omultable"]],
          [Octonion, omul, Octonion, setup, ["Octonion,omul", "omul"]],
          [Octonion, onorm, Octonion, setup, ["Octonion,onorm", "onorm"]],
          [Octonion, oversion, Octonion, setup, ["Octonion,overservation", "overservation"]],
          [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", "setupt"]]]
```
[Octonion,omultable, Octonion,setup; "Octonion,omultable", "omultable"]
[Octonion,omul, Octonion,setup; "Octonion,omul", "omul", "&o", "octonion", "Octonion"]
[Octonion,onorm, Octonion,setup; "Octonion,onorm", "onorm"]
[Octonion,overs, Octonion,setup; "Octonion,overs", "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:\Maple11/P11/Octonion11/Help/associator_M11.mws...
Success... inserting topic Octonion,associator from the file:

C:\Maple11/P11/Octonion11/Help/associator_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/commutator_M11.mws...
Success... inserting topic Octonion,commutator from the file:

C:\Maple11/P11/Octonion11/Help/commutator_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/def_omultable_M11.mws...
Success... inserting topic Octonion,def_omultable from the file:

C:\Maple11/P11/Octonion11/Help/def_omultable_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/Fano_triples_M11.mws...
Success... inserting topic Octonion,type,Fano_triples from the file:

C:\Maple11/P11/Octonion11/Help/Fano_triples_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/octonion_M11.mws...
Success... inserting topic Octonion,type,octonion from the file:

C:\Maple11/P11/Octonion11/Help/octonion_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/oinv_M11.mws...
Success... inserting topic Octonion,oinv from the file:

C:\Maple11/P11/Octonion11/Help/oinv_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/omultable_M11.mws...
Success... inserting topic Octonion,omultable from the file:

C:\Maple11/P11/Octonion11/Help/omultable_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/omul_M11.mws...
Success... inserting topic Octonion,omul from the file:

C:\Maple11/P11/Octonion11/Help/omul_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/onorm_M11.mws...
Success... inserting topic Octonion,onorm from the file:

C:\Maple11/P11/Octonion11/Help/onorm_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/overs_M11.mws...
Success... inserting topic Octonion,oversion from the file:

C:\Maple11/P11/Octonion11/Help/overs_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/o_conjug_M11.mws...
Success... inserting topic Octonion,o_conjug from the file:
Trying to read file C:\Maple11/P11/Octonion11/Help/Phi_M11.mws...
Success... inserting topic Octonion,Phi from the file:

C:\Maple11/P11/Octonion11/Help/Phi_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/purevectorpart_M11.mws...
Success... inserting topic Octonion,purevectorpart from the file:

C:\Maple11/P11/Octonion11/Help/purevectorpart_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/realpart_M11.mws...
Success... inserting topic Octonion,realpart from the file:

C:\Maple11/P11/Octonion11/Help/realpart_M11.mws

Trying to read file C:\Maple11/P11/Octonion11/Help/setup_M11.mws...
Success... inserting topic Octonion,setup from the file:

C:\Maple11/P11/Octonion11/Help/setup_M11.mws

*******************************
Finished inserting 15 file topics into the HDB and Browser
*******************************

> # list of types defined in the module
> typesLIST:=['antisymmatrix','clibasmon','climatrix','climon','clipolynom',
> "cliprod","cliscalar","diagmatrix","dfmatrix","evenelement",
> "fieldelement","gencomplex","genquatbasis","genquaternion",
> "idempotent","nilpotent","oddelement","primitiveidemp","purequatbasis",
> "quaternion","symmatrix","tensorprod'];

> # list of types converts defined in the module
> convertsLIST:=['mlist','str_to_int'];

> 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"]

> Inserting help pages for SchurFkt:

> HDB_LIB_PATH:=convert(libname[1],name);
HELP_FILE_PATH:='C:\\Maple11/P11/SchurFkt11/Help/';
BROWSER_PATH:='Mathematics/Algebra/';
ModuleName := 'SchurFkt';
Parent := `SchurFkt, Overview`;
GrandParent := `Algebra`;
MapleVersion := "M11";

# list of types defined in the module

typesLIST := ["sfktmonom", "sfktterm", "sfktpolynom",
               "pfktmonom", "pfktterm", "pfktpolynom",
               "mfktmonom", "mfktterm", "mfktpolynom",
               "hfktmonom", "hfktterm", "hfktpolynom",
               "efktmonom", "efktterm", "efktpolynom",
               "ffktmonom", "ffktterm", "ffktpolynom"
               ];

# list of types converts defined in the module

convertsLIST := [];

HDB_LIB_PATH := C:\Maple11/Cliffordlib
HELP_FILE_PATH := C:\Maple11/P11/SchurFkt11/Help/
BROWSER_PATH := Mathematics/Algebra/
ModuleName := SchurFkt
Parent := SchurFkt, Overview
GrandParent := Algebra
MapleVersion := "M11"

> L := with(SchurFkt);

L := [AlexComp, CharHook, CompNM, FLAT, Frob2part, GesselThetaP, GesselThetaS,
     KostkaPC, KostkaTable, LaplaceM, LaplaceM_mon, LaplaceTable, MLIN, MurNak, MurNak2,
     antipS, branch, cinner, cinnerP, cmp2part, cmp2prtmult, concatM, conipart, counitInnerP,
     counitInnerS, couter, couterE, couterH, couterM, couterON, couterP, cplethP, cplethS, dimSN,
     e_to_h, e_to_s, evalJacobiTrudiMatrix, getSfktSeries, grAlexComp, h_to_m, h_to_s, inner, innerH,
     innerP, isLattice, m_to_p, maxlengthSymFkt, mset2part, outer, outerE, outerH, outerM, outerON,
     outerP, outerS, p_to_m, p_to_s, part2Frob, part2mset, plethP, plethS, plethSnm, s_to_h, s_to_hJT,
     s_to_hmat, s_to_p, s_to_x, skew, sq_coeff, truncLEN, truncWT, x_to_s, zee]
# for m in L do
# item:=convert(cat("Mathematics/Algebra/SchurFkt/",convert(m,string)),symbol);
# INTERFACE_HELP('delete',browser=item,helpfile=HDB_LIB_PATH);
# end do;
> #m:="type";
> #item:=convert(cat("Mathematics/Algebra/SchurFkt/",convert(m,string)),symbol);
> #INTERFACE_HELP('delete',browser=item,helpfile=HDB_LIB_PATH);
> #?SchurFkt

### From Bertfried

#### types

- `type/sfktmonom`, `type/sfktterm`, `type/sfktpolynom`,

- `SchurFkt,type,sfktpolynom`, Parent,["SchurFkt,type,sfktmonom","SchurFkt,type,sfktterm","SchurFkt,type,sfktpolynom"]

- `SchurFkt,type`, Parent,["SchurFkt,type,pfktpolynom","SchurFkt,type,pfktterm","SchurFkt,type,pfktpolynom"]

- `SchurFkt,type`, Parent,["SchurFkt,type,mfktpolynom","SchurFkt,type,mfktterm","SchurFkt,type,mfktpolynom"]

- `SchurFkt,type`, Parent,["SchurFkt,type,hfktpolynom","SchurFkt,type,hfktterm","SchurFkt,type,hfktpolynom"]

- `SchurFkt,type`, Parent,["SchurFkt,type,efktpolynom","SchurFkt,type,efktterm","SchurFkt,type,efktpolynom"]

- `SchurFkt,type`, Parent,["SchurFkt,type,ffktpolynom","SchurFkt,type,ffktterm","SchurFkt,type,ffktpolynom"]

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

```maple
> Lauto:=makeLIST(ModuleName,Parent,GrandParent,HELP_FILE_PATH,Maple Version);
Lauto := [[SchurFkt,AlexComp, SchurFkt,Overview, ["SchurFkt,AlexComp", "AlexComp"]],
          [SchurFkt,antipS, SchurFkt,Overview, ["SchurFkt,antipS", "antipS"]],
          [SchurFkt,branch, SchurFkt,Overview, ["SchurFkt,branch", "branch"]],
```
[SchurFkt,CharHook, SchurFkt,Overview, ["SchurFkt,CharHook", "CharHook"]],
[SchurFkt,cinner, SchurFkt,Overview, ["SchurFkt,cinner", "cinner"]],
[SchurFkt,cmp2part, SchurFkt,Overview, ["SchurFkt,cmp2part", "cmp2part"]],
[SchurFkt,cmp2prtMult, SchurFkt,Overview, ["SchurFkt,cmp2prtMult", "cmp2prtMult"]],
[SchurFkt,CompNM, SchurFkt,Overview, ["SchurFkt,CompNM", "CompNM"]],
[SchurFkt,concatM, SchurFkt,Overview, ["SchurFkt,concatM", "concatM"]],
[SchurFkt,conjpart, SchurFkt,Overview, ["SchurFkt,conjpart", "conjpart"]],
[SchurFkt,couterE, SchurFkt,Overview, ["SchurFkt,couterE", "couterE"]],
[SchurFkt,couterH, SchurFkt,Overview, ["SchurFkt,couterH", "couterH"]],
[SchurFkt,couterM, SchurFkt,Overview, ["SchurFkt,couterM", "couterM"]],
[SchurFkt,couterON, SchurFkt,Overview, ["SchurFkt,couterON", "couterON"]],
[SchurFkt,couterP, SchurFkt,Overview, ["SchurFkt,couterP", "couterP"]],
[SchurFkt,couter, SchurFkt,Overview, ["SchurFkt,couter", "couter"]],
[SchurFkt,cplethP, SchurFkt,Overview, ["SchurFkt,cplethP", "cplethP"]],
[SchurFkt,cplethS, SchurFkt,Overview, ["SchurFkt,cplethS", "cplethS"]],
[SchurFkt,dimSN, SchurFkt,Overview, ["SchurFkt,dimSN", "dimSN"]],
[SchurFkt,Dummy, SchurFkt,Overview, ["SchurFkt,Dummy", "Dummy"]],
[SchurFkt,FLAT, SchurFkt,Overview, ["SchurFkt,FLAT", "FLAT"]],
[SchurFkt,Frob2part, SchurFkt,Overview, ["SchurFkt,Frob2part", "Frob2part"]],
[SchurFkt,GesselTheta, SchurFkt,Overview, ["SchurFkt,GesselTheta", "GesselTheta"]],
[SchurFkt,getSfktSeries, SchurFkt,Overview, ["SchurFkt,getSfktSeries", "getSfktSeries"]],
[SchurFkt,grAlexComp, SchurFkt,Overview, ["SchurFkt,grAlexComp", "grAlexComp"]],
[SchurFkt,h_to_s, SchurFkt,Overview, ["SchurFkt,h_to_s", "h_to_s"]],
[SchurFkt,innerP, SchurFkt,Overview, ["SchurFkt,innerP", "innerP"]],
[SchurFkt,inner, SchurFkt,Overview, ["SchurFkt,inner", "inner"]],
[SchurFkt,isLattice, SchurFkt,Overview, ["SchurFkt,isLattice", "isLattice"]],
[SchurFkt,KostkaPC, SchurFkt,Overview, ["SchurFkt,KostkaPC", "KostkaPC"]],
[SchurFkt,KostkaTable, SchurFkt,Overview, ["SchurFkt,KostkaTable", "KostkaTable"]],
[SchurFkt,LaplaceM, SchurFkt,Overview, ["SchurFkt,LaplaceM", "LaplaceM"]],
[SchurFkt,LaplaceM_mon, SchurFkt,Overview, ["SchurFkt,LaplaceM_mon", "LaplaceM_mon"]],
[SchurFkt,LaplaceTable, SchurFkt,Overview, ["SchurFkt,LaplaceTable", "LaplaceTable"]],
[SchurFkt,MLIN, SchurFkt,Overview, ["SchurFkt,MLIN", "MLIN"]],
[SchurFkt,mset2part, SchurFkt,Overview, ["SchurFkt,mset2part", "mset2part"]],
[SchurFkt,MurNak2, SchurFkt,Overview, ["SchurFkt,MurNak2", "MurNak2"]],
[SchurFkt,MurNak, SchurFkt,Overview, ["SchurFkt,MurNak", "MurNak"]],
[SchurFkt,m_to_p, SchurFkt,Overview, ["SchurFkt,m_to_p", "m_to_p"]],
Step 2: Modifying, if needed, certain entries in Lauto list:

> ###From Bertfried
> ###Bertfried: Please do not insert Grandparent or parent into this list:
> L:=[`SchurFkt,Overview`,

"SchurFkt","Schurfkt","schurfkt","help","SchurFkt,help","schurfkt, help"],
"SchurFkt,Overview","SchurFkt,overview","schurfkt,overview",
   "Symmetric functions","Schur functions""],
   [\`SchurFkt,AlexComp`,["Anti Lexicographical Ordering"]],
   [\`SchurFkt,CharHook`,["hook","hook Schur function"]],
   [\`SchurFkt,CompNM`,["generate compositions"]],
   [\`SchurFkt,FLAT`,["flattening","associativity"]],
   [\`SchurFkt,Frob2part`,["partition","Frobenius partition"]],
   [\`SchurFkt,GesselTheta`,["GesselThetaS","GesselThetaP"]],
   [\`SchurFkt,KostkaPC`,["Kostka matrix","partition","composition"]],
   [\`SchurFkt,KostkaTable`,["Kostka matrix","partition","composition"]],
   [\`SchurFkt,LaplaceM`,["Laplace pairing","monomial symmetric functions","cliffrdization"]],
   # [\`SchurFkt,LaplaceM_mon`,["Laplace pairing on monomials","monomial symmetric functions"]],
   [\`SchurFkt,LaplaceTable`,["Laplace matrix","cliffordization"]],
   [\`SchurFkt,MLIN`,["multi linear","tensor product"]],
   [\`SchurFkt,Murnak`,["Murnaghan Nakayama","rule","character"]],
   [\`SchurFkt,Murnak2`,["Murnaghan Nakayama","rule","character"]],
   [\`SchurFkt,PartNM`,["partition","generation of partitions"]],
   [\`SchurFkt,Scalar`,["Redfield","Hall","Schur","Schur Hall scalar product","Schur functions","symmetric functions"]],
   # [\`SchurFkt,ScalarRM`,["Redfield","Hall","Schur","Schur Hall scalar product","Schur functions","complete symmetric functions","monomial symmetric functions"]],
   # [\`SchurFkt,ScalarMH`,["Redfield","Hall","Schur","Schur Hall scalar product","Schur functions","complete symmetric functions","monomial symmetric functions"]],
   [\`SchurFkt,ScalarP`,["Redfield","Hall","Schur","Schur Hall scalar product","power sum symmetric functions"]],
   [\`SchurFkt,antipS`,["antipode","outer Hopf algebra"]],
   [\`SchurFkt,branch`,["group branching","induction","subduction","reduction"]],
   [\`SchurFkt,cinner`,["inner coproduct"]],
   [\`SchurFkt,cmp2part`,["composition","composition projected to partition"]],
   [\`SchurFkt,cmp2prtMult`,["composition","composition as multiset"]],
[SchurFkt,outerP`,["outer product","power sum symmetric functions"]],
[SchurFkt,outerS`,["outer product","Schur functions","symmetric functions"]],
[SchurFkt,p_to_m`,["power sum symmetric function","monomial symmetric function"]],
[SchurFkt,p_to_s`,["power sum symmetric function","Schur function","symmetric function"]],
[SchurFkt,part2Frob`,["partition","Frobenius notation"]],
[SchurFkt,part2mset`,["partition","partition in multiset notation"]],
[SchurFkt,plethS`,["plethysm","Schur function plethysm"]],
[SchurFkt,plethP`,["plethysm","power sum plethysm"]],
[SchurFkt,s_to_h`,["Schur functions","symmetric functions","complete symmetric functions"]],
[SchurFkt,s_to_p`,["Schur functions","symmetric functions","power sum symmetric functions"]],
[SchurFkt,s_to_x`,["Schur functions","symmetric functions","indeterminants","alphabet"]],
[SchurFkt,skew`,["skew","Foulkes derivative","Littlewood Richardson rule"]],
[SchurFkt,sq_coeff`,["coefficients","dimension"]],
[SchurFkt,truncWT`,["weight","truncate","Schur function series"]],
[SchurFkt,x_to_s`,["alphabet","Schur functions","symmetric functions","indeterminants"]],
[SchurFkt,zee`,["permutation","normalization","zee","z"]]
]:
[SchurFkt,KostkaTable, ["Kostka matrix", "partition", "composition"]],
[SchurFkt,LaplaceM, ["Laplace pairing", "monomial symmetric functions", "cliffordization"]],
[SchurFkt,LaplaceTable, ["Laplace matrix", "cliffordization"]],
[SchurFkt,MLIN, ["multi linear", "tensor product"]],
[SchurFkt,MurNak, ["Murnaghan Nakayama", "rule", "character"]],
[SchurFkt,MurNak2, ["Murnaghan Nakayama", "rule", "character"]],
[SchurFkt,antipS, ["antipode", "outer Hopf algebra"]],
[SchurFkt,branch, ["group branching", "induction", "subduction", "reduction"]],
[SchurFkt,cinner, ["inner coproduct"]],
[SchurFkt,cmp2part, ["composition", "composition projected to partition"]],
[SchurFkt,cmp2prtMult, ["composition", "composition as multiset"]],
[SchurFkt,concatM, ["monomial concatenation product", "concatenation product", "product"]],
[SchurFkt,conjpart, ["conjugate", "conjugate partition", "partition"]],
[SchurFkt,couter, ["outer coproduct", "Schur outer coproduct"]], [SchurFkt,couterE, ["outer coproduct", "Schur outer coproduct", "elementary symmetric functions"]], [SchurFkt,couterH, ["outer coproduct", "Schur outer coproduct", "complete symmetric functions"]], [SchurFkt,couterM, ["ouer coproduct", "monomial coproduct"]], [SchurFkt,couterON, ["outer coproduct", "Schur outer coproduct", "orthogonal Schur functions"]], [SchurFkt,couterP, ["outer coproduct", "Schur outer coproduct", "orthogonal Schur functions"]],
[SchurFkt,cplethS, ["ouer coproduct", "power sum coproduct"]],
[SchurFkt,cplethP, ["plethysm coproduct Schur functions"]],
[SchurFkt,cplethP, ["plethysm coproduct power sum basis"]],
[SchurFkt,dimSN, ["SchurFkt,Overview", "sfkt polynom"]],
[SchurFkt,grAlexComp, ["graded anti lexicographic ordering"]],
[SchurFkt,inner, ["homogeneous symmetric functions", "Schur functions"]],
[SchurFkt,innerP, ["inner product", "Schur function inner product"]],
[SchurFkt,innerP, ["inner product", "power sum inner product"]],
[SchurFkt,isLattice, ["lattice permutation test"]],
[SchurFkt,m_to_p, ["monomial symmetric functions", "power sum symmetric functions"]],
[SchurFkt,mset2part, ["multiset partition", "partition"]],
[SchurFkt,outer, ["outer product", "Schur functions", "symmetric functions"]],
[SchurFkt,outerE, ["outer product", "elementary symmetric functions"]],
[SchurFkt,Overview, ["S-function", "Schur function series"]],
[SchurFkt,h_to_s, ["graded anti lexicographic ordering"]],
[SchurFkt,inner, ["homogeneous symmetric functions", "Schur functions"]],
[SchurFkt,innerP, ["inner product", "Schur function inner product"]],
[SchurFkt,innerP, ["inner product", "power sum inner product"]],
[SchurFkt,isLattice, ["lattice permutation test"]],
[SchurFkt,m_to_p, ["monomial symmetric functions", "power sum symmetric functions"]],
[SchurFkt,mset2part, ["multiset partition", "partition"]],
[SchurFkt,outer, ["outer product", "Schur functions", "symmetric functions"]],
[SchurFkt,outerE, ["outer product", "elementary symmetric functions"],
for mem in modsLIST do
    Lauto:=modifyLIST(Lauto,op(mem))
end do:
Lauto;

[[SchurFkt, AlexComp, SchurFkt, Overview, ["Anti Lexicographical Ordering"]],
 [SchurFkt, antipS, SchurFkt, Overview, ["antipode", "outer Hopf algebra"]], [SchurFkt, branch, SchurFkt, Overview, ["group branching", "induction", "subduction", "reduction"]],
 [SchurFkt, CharHook, SchurFkt, Overview, ["hook", "hook Schur function"]],
 [SchurFkt, cinner, SchurFkt, Overview, ["inner coproduct"]],
 [SchurFkt, cmp2part, SchurFkt, Overview, ["composition", "composition projected to partition"]],
 [SchurFkt, cmp2prtMult, SchurFkt, Overview, ["composition", "composition as multiset"]],
 [SchurFkt, CompNM, SchurFkt, Overview, ["generate compositions"]], [SchurFkt, concatM, SchurFkt, Overview, ["monomial concatenation product", "concatenation product", "product"]],
 [SchurFkt, conipart, SchurFkt, Overview, ["conjugate", "conjugate partition", "partition"]],
 [SchurFkt, couterE, SchurFkt, Overview, ["outer coproduct", "Schur outer coproduct", "elementary symmetric functions"]], [SchurFkt, couterH, SchurFkt, Overview, ["outer coproduct", "Schur outer coproduct", "complete symmetric functions"]].
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:\Maple11\P11\SchurFkt11\Help\AlexComp_M11.mws...
Success... inserting topic SchurFkt,AlexComp from the file: C:\Maple11\P11\SchurFkt11\Help\AlexComp_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help\antipS_M11.mws...
Trying to read file C:\Maple11\P11\SchurFkt11\Help\cplethS_M11.mws...
Success... inserting topic SchurFkt,cplethS from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\dimSN_M11.mws...
Success... inserting topic SchurFkt,dimSN from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\Dummy_M11.mws...
Success... inserting topic SchurFkt,Dummy from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\FLAT_M11.mws...
Success... inserting topic SchurFkt,FLAT from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\Frob2part_M11.mws...
Success... inserting topic SchurFkt,Frob2part from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\GesselTheta_M11.mws...
Success... inserting topic SchurFkt,GesselTheta from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\getSfktSeries_M11.mws...
Success... inserting topic SchurFkt,getSfktSeries from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\grAlexComp_M11.mws...
Success... inserting topic SchurFkt,grAlexComp from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\h_to_s_M11.mws...
Success... inserting topic SchurFkt,h_to_s from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\innerP_M11.mws...
Success... inserting topic SchurFkt,innerP from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\inner_M11.mws...
Success... inserting topic SchurFkt,inner from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\isLattice_M11.mws...
Success... inserting topic SchurFkt,isLattice from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\KostkaPC_M11.mws...
Success... inserting topic SchurFkt,KostkaPC from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\KostkaTable_M11.mws...
Success... inserting topic SchurFkt,KostkaTable from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\LaplaceM_M11.mws...
Success... inserting topic SchurFkt,LaplaceM from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\LaplaceM_mon_M11.mws...
Success... inserting topic SchurFkt,LaplaceM_mon from the file:

Trying to read file C:\Maple11\P11\SchurFkt11\Help\LaplaceTable_M11.mws...
Success... inserting topic SchurFkt,LaplaceTable from the file:
Trying to read file C:\Maple11\P11\SchurFkt11\Help/MLIN_M11.mws...
Success... inserting topic SchurFkt,MLIN from the file:
  C:\Maple11\P11\SchurFkt11\Help/MLIN_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/mset2part_M11.mws...
Success... inserting topic SchurFkt,mset2part from the file:
  C:\Maple11\P11\SchurFkt11\Help/mset2part_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/MurNak2_M11.mws...
Success... inserting topic SchurFkt,MurNak2 from the file:
  C:\Maple11\P11\SchurFkt11\Help/MurNak2_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/MurNak_M11.mws
Success... inserting topic SchurFkt,MurNak from the file:
  C:\Maple11\P11\SchurFkt11\Help/MurNak_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/m_to_p_M11.mws...
Success... inserting topic SchurFkt,m_to_p from the file:
  C:\Maple11\P11\SchurFkt11\Help/m_to_p_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/outerE_M11.mws...
Success... inserting topic SchurFkt,outerE from the file:
  C:\Maple11\P11\SchurFkt11\Help/outerE_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/outerH_M11.mws...
Success... inserting topic SchurFkt,outerH from the file:
  C:\Maple11\P11\SchurFkt11\Help/outerH_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/outerM_M11.mws
Success... inserting topic SchurFkt,outerM from the file:
  C:\Maple11\P11\SchurFkt11\Help/outerM_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/outerON_M11.mws...
Success... inserting topic SchurFkt,outerON from the file:
  C:\Maple11\P11\SchurFkt11\Help/outerON_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/outerP_M11.mws...
Success... inserting topic SchurFkt,outerP from the file:
  C:\Maple11\P11\SchurFkt11\Help/outerP_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/outerS_M11.mws...
Success... inserting topic SchurFkt,outerS from the file:
  C:\Maple11\P11\SchurFkt11\Help/outerS_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/outer_M11.mws
Success... inserting topic SchurFkt,outer from the file:
  C:\Maple11\P11\SchurFkt11\Help/outer_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/Overview_M11.mws...
Success... inserting topic SchurFkt,Overview from the file:
  C:\Maple11\P11\SchurFkt11\Help/Overview_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/part2Frob_M11.mws...
Success... inserting topic SchurFkt,part2Frob from the file:
  C:\Maple11\P11\SchurFkt11\Help/part2Frob_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/part2mset_M11.mws...
Success... inserting topic SchurFkt,part2mset from the file:
  C:\Maple11\P11\SchurFkt11\Help/part2mset_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/PartNM_M11.mws...
Success... inserting topic SchurFkt,PartNM from the file:
  C:\Maple11\P11\SchurFkt11\Help/PartNM_M11.mws

Trying to read file C:\Maple11\P11\SchurFkt11\Help/plethP_M11.mws...
Success... inserting topic SchurFkt,plethP from the file: 
C:\Maple11/P11/SchurFkt11/Help/plethP_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/plethSnm_M11.mws...
Success... inserting topic SchurFkt,plethSnm from the file: 
C:\Maple11/P11/SchurFkt11/Help/plethSnm_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/plethS_M11.mws...
Success... inserting topic SchurFkt,plethS from the file: 
C:\Maple11/P11/SchurFkt11/Help/plethS_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/p_to_m_M11.mws...
Success... inserting topic SchurFkt,p_to_m from the file: 
C:\Maple11/P11/SchurFkt11/Help/p_to_m_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/p_to_s_M11.mws...
Success... inserting topic SchurFkt,p_to_s from the file: 
C:\Maple11/P11/SchurFkt11/Help/p_to_s_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/ScalarP_M11.mws...
Success... inserting topic SchurFkt,ScalarP from the file: 
C:\Maple11/P11/SchurFkt11/Help/ScalarP_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/Scalar_M11.mws...
Success... inserting topic SchurFkt,Scalar from the file: 
C:\Maple11/P11/SchurFkt11/Help/Scalar_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/sfktpolynom_M11.mws...
Success... inserting topic SchurFkt,sfktpolynom from the file: 
C:\Maple11/P11/SchurFkt11/Help/sfktpolynom_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/skew_M11.mws...
Success... inserting topic SchurFkt,skew from the file: 
C:\Maple11/P11/SchurFkt11/Help/skew_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/sq_coeff_M11.mws...
Success... inserting topic SchurFkt,sq_coeff from the file: 
C:\Maple11/P11/SchurFkt11/Help/sq_coeff_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/s_to_h_M11.mws...
Success... inserting topic SchurFkt,s_to_h from the file: 
C:\Maple11/P11/SchurFkt11/Help/s_to_h_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/s_to_p_M11.mws...
Success... inserting topic SchurFkt,s_to_p from the file: 
C:\Maple11/P11/SchurFkt11/Help/s_to_p_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/s_to_x_M11.mws...
Success... inserting topic SchurFkt,s_to_x from the file: 
C:\Maple11/P11/SchurFkt11/Help/s_to_x_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/truncWT_M11.mws...
Success... inserting topic SchurFkt,truncWT from the file: 
C:\Maple11/P11/SchurFkt11/Help/truncWT_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/x_to_s_M11.mws...
Success... inserting topic SchurFkt,x_to_s from the file: 
C:\Maple11/P11/SchurFkt11/Help/x_to_s_M11.mws
Trying to read file C:\Maple11/P11/SchurFkt11/Help/zee_M11.mws...
Success... inserting topic SchurFkt,zee from the file: 
C:\Maple11/P11/SchurFkt11/Help/zee_M11.mws

***************
Finished inserting 66 file topics into the HDB and Browser
**Inserting help pages for SINGULARPLURALlink:**

```maple
HDB_LIB_PATH := convert(libname[1], name);
HELP_FILE_PATH := `C:\Maple11/P11/SINGULARPLURALlink11/Help/`;
BROWSER_PATH := `Mathematics/Algebra/`;
ModuleName := `SINGULARPLURALlink`;
Parent := `SINGULARPLURALlink,Examples`;
GrandParent := `Algebra`;
MapleVersion := "M11";

#list of types defined in the module
typesLIST := [];
#list of types converts defined in the module
convertsLIST := [];

Lauto := makeLIST(ModuleName, Parent, GrandParent, HELP_FILE_PATH, Maple Version);
Lauto := [[SINGULARPLURALlink, Examples, Algebra,
            ["SINGULARPLURALlink, Examples", "Examples")]]
```

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

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

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

[[SINGULARPLURALlink,Examples, Algebra,
   "SINGULARPLURALLink,Examples", "Examples"]]

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:\Maple11/P11/SINGULARPLURALlink11/Help/Examples_M11.mws...
Success... inserting topic SINGULARPLURALlink,Examples from the file:
   C:\Maple11/P11/SINGULARPLURALlink11/Help/Examples_M11.mws
***************
Finished inserting 1 file topics into the HDB and Browser
***************

> #?SINGULARPLURALlink

Inserting help pages for SP:

> HDB_LIB_PATH:=convert(libname[1],name);
HELP_FILE_PATH:='C:\\Maple11/P11/SP11/Help/';
BROWSER_PATH:='Mathematics/Algebra/';
ModuleName :='SP';
Parent      :='SP,SPversion';
GrandParent :='Algebra';
MapleVersion:="M11";

#list of types defined in the module
#list of types converts defined in the module
HDB_LIB_PATH := C:\Maple11/Cliffordlib
HELP_FILE_PATH := C:\Maple11/P11/SP11/Help/
BROWSER_PATH := Mathematics/Algebra/

Remember table of SymmetricGroup has been read and assigned
Remember table of AlternatingGroup has been read and assigned
Remember table of Reynolds has been read and assigned
Remember table of FiniteGroups has been read and assigned
Remember table of generateGinvariants has been read and assigned

```
ModuleName := SP
Parent := SP,SPversion
GrandParent := Algebra
MapleVersion := "M11"
```

```
typesLIST := [ ]
convertsLIST := [ ]
```

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

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

```
Lauto := [[SP,AlternatingGroup, SP,SPversion, ["SP,AlternatingGroup", "AlternatingGroup"]],
 [SP,Dummy, SP,SPversion, ["SP,Dummy", "Dummy"]],
 [SP,FiniteGroups, SP,SPversion, ["SP,FiniteGroups", "FiniteGroups"]],
 [SP,generateGinvariants, SP,SPversion, ["SP,generateGinvariants", "generateGinvariants"]],
 [SP,gpolynom, SP,SPversion, ["SP,gpolynom", "gpolynom"]],
 [SP,hpolynom, SP,SPversion, ["SP,hpolynom", "hpolynom"]],
 [SP,isContained, SP,SPversion, ["SP,isContained", "isContained"]],
 [SP,isGinvariant, SP,SPversion, ["SP,isGinvariant", "isGinvariant"]],
 [SP,isSymmetric, SP,SPversion, ["SP,isSymmetric", "isSymmetric"]],
 [SP,MatrixAction, SP,SPversion, ["SP,MatrixAction", "MatrixAction"]],
 [SP,powersum, SP,SPversion, ["SP,powersum", "powersum"]],
 [SP,reduceGinvariants, SP,SPversion, ["SP,reduceGinvariants", "reduceGinvariants"]],
 [SP,Reynolds, SP,SPversion, ["SP,Reynolds", "Reynolds"]],
 [SP,Sigma, SP,SPversion, ["SP,Sigma", "Sigma"]],
 [SP,sigma_to_powersum, SP,SPversion, ["SP,sigma_to_powersum", "sigma_to_powersum"]],
 [SP,SPversion, Algebra, ["SP,SPversion", "SPversion"]],
 [SP,SymmetricGroup, SP,SPversion, ["SP,SymmetricGroup", "SymmetricGroup"]],
 [SP,SyzygyIdeal, SP,SPversion, ["SP,SyzygyIdeal", "SyzygyIdeal"]]]
```

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

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

```
# for mem in modsLIST do
  # Lauto:=modifyLIST(Lauto,op(mem))
#end do:
```
Step 3: Inserting all help pages into HDB and the browser using the last modified list:

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

Success... inserting topic SP, AlternatingGroup from the file:

```
C:\Maple11\P11\SP11\Help\AlternatingGroup_M11.mws
```

Success... inserting topic SP, Dummy from the file:

```
C:\Maple11\P11\SP11\Help\Dummy_M11.mws
```

Success... inserting topic SP, FiniteGroups from the file:

```
C:\Maple11\P11\SP11\Help\FiniteGroups_M11.mws
```

Success... inserting topic SP, generateGinvariants from the file:

```
C:\Maple11\P11\SP11\Help\generateGinvariants_M11.mws
```

Success... inserting topic SP, gpolynom from the file:

```
C:\Maple11\P11\SP11\Help\gpolynom_M11.mws
```

Success... inserting topic SP, hpolynom from the file:

```
C:\Maple11\P11\SP11\Help\hpolynom_M11.mws
```

Success... inserting topic SP, isContained from the file:
#?SP

Inserting help pages for code_support:

```maple
HDB_LIB_PATH:=convert(libname[1],name);
HELP_FILE_PATH:=`C:\\Maple11/P11/Code_support11/Help/`;
BROWSER_PATH:=`Mathematics/Algebra/`;
ModuleName :=`code_support`;
Parent :=`code_support,code_support`;
```
GrandParent := `Clifford,intro`;
MapleVersion := "M11";
typesLIST := [];
convertsLIST := [];

HDB_LIB_PATH := C:\Maple11/Cliffordlib
HELP_FILE_PATH := C:\Maple11/P11/Code_support11/Help/
BROWSER_PATH := Mathematics/Algebra/
ModuleName := code_support
Parent := code_support, code_support
GrandParent := Clifford, intro
MapleVersion := "M11"
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, examples, code_support, code_support, ["code_support,"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","Octonion"]]
    #]:
> 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, examples, code_support, code_support, ["code_support,"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:\Maple11\P11\Code_support11\Help/code_support_M11.mws...
Success... inserting topic code_support,code_support from the file:

    C:\Maple11\P11\Code_support11\Help/code_support_M11.mws

Trying to read file C:\Maple11\P11\Code_support11\Help/examples_M11.mws...
Success... inserting topic code_support,examples from the file:

    C:\Maple11\P11\Code_support11\Help/examples_M11.mws

Trying to read file C:\Maple11\P11\Code_support11\Help/INSERT_HELPPAGES_M11.mws...
Success... inserting topic code_support,INSERT_HELPPAGES from the file:

    C:\Maple11\P11\Code_support11\Help/INSERT_HELPPAGES_M11.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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"code_support' for CLIFFORD, Bigebra, Octonion, GTP, Cliplus, Octonion in Maple 11

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> restart:
with(code_support);

Module code_support ver. 1.03 for CLIFFORD et al. for Maple 11
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Last revised: March 10, 2007

[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, June 19, 2008

```maple
> restart:
> code_support:=module()
export
split, copy_file, get_dir, change_name, replace_in_file, change_helpfiles, 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) 2002-2008 by Rafal Ablamowicz and Bertfried Fauser. All rights reserved.`;
    description `Last revised: March 10, 2007`;
    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;
    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;
    OUT,line,n_lines,Text,path1,in_file1,out_file1;
    options `Copyright (c) 2002-2008 by Rafal Ablamowicz and Bertfried Fauser. All rights reserved.`;
    description `Last revised: March 10, 2007`;
if type(path,symbol) then
    path1:=path;
elseresult:=convert(path,string_dir_to_symbol_dir);
end if;

if type(in_file,symbol) then
    in_file1:=in_file;
elseresult:=convert(in_file,name);
end if:

if type(out_file,symbol) then
    out_file1:=out_file;
elseresult:=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];
    writeln(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,dir1;
    options `Copyright (c) 2002-2008 by Rafal Ablamowicz and
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:="";
        elseif 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 "substrout" with a new substring "substrin". It returns the name of the new file as a string. If the string "substrout" is not found in the "filename" then it is appended to the name of the file before ".mws" extension. Note that "substrout" could be an empty string "".

```maple
> change_name:=proc(filename::string,substrout::string,substrin::string)
    local N, fileext, filenamenew, n, nout, nb;
    N:=length(filename);  ###length of the whole string
    nout:=length(substrout);  ###length of the string to be removed
    n:=SearchText(substrout,filename);  ###location of the string to be removed
    if n+nout-1<N then
        if n=0 then
            fileext:=substring(filename,-4..-1):
        else
            nb:=N-(n+nout-1);
            fileext:=substring(filename,-nb..-1):
        fi;
        filenamenew:=cat(substring(filename,1..n-1),substrin,substring(filename,n+nout..N-nb),fileext);
    elif n+nout-1=N then
        filenamenew:=cat(substring(filename,1..n-1),substrin,substring(filename,n+nout..N-nb),fileext);
    else
        error "wrong string lengths";
    fi;
    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., "adffmatrix.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.

```plaintext
> 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,Tex
t,repflag;

options `Copyright (c) 2002-2008 by Rafal Ablamowicz and Bertfried Fauser. All rights reserved.`;
description `Last revised: March 10, 2007`;

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:
            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:\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.

```maple
> 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, file:

    local 
    dir1,dir2,N,dir_list,fileold,filenew, changenameflag,makerepflag, file:
```

The rest of the code snippet is not shown due to its extensive nature.
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), 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)
elseif makerepflag and not changenameflag then
    printf("processing file %s without renaming but with
replacement(s): %a\n", fileold, N);
elseif 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) 2002-2008 by Rafal Ablamowicz and Bertfried Fauser. All rights reserved.`;
description `Last revised: March 10, 2007`;
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
    textobject := NULL;
    line := readline(FILE);
    while line <> 0 do
        if length(line) <= 10 then
            line := ```||line||`` `:`
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

```maple
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,m;
    global typesLIST,convertsLIST;
    options `Copyright (c) 2002-2008 by Rafal Ablamowicz and Bertfried Fauser. All rights reserved.`;
    description `Last revised: March 10, 2007`;
    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;
```
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"),"");

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;

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),","",convert(dataentry,name)),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;
    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) 2002-2008 by Rafal Ablamowicz and Bertfried Fauser. All rights reserved.`;
    description `Last revised: March 10, 2007`;
    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 do;
        end if;
    end do;
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.
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;
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
)
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.

```maple
> setup:=proc()
    global `convert/string_dir_to_symbol_dir`, `convert/symbol_dir_to_string_dir`;
    `convert/string_dir_to_symbol_dir`, `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
            return convert(dir,string)
        end if;
        return convert(dir,string)
    end proc;
```

The module `code_support` provides two conversion functions: `convert/string_dir_to_symbol_dir` and `convert/symbol_dir_to_string_dir`. These functions are designed to convert directory names from string form to symbol form, and vice versa. The functions are intended to handle different operating systems, as indicated by the use of `\` and `/` in the directory names. The `setup` procedure globally declares these conversion functions and provides a method to handle directory names across different operating systems.
for i from 2 to nops(T) do dir1:=cat(dir1,T[i],"\\") end do;
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(`
Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 11
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Last revised: March 10, 2007`
);
print(`
`);

end module:
savelib(code_support);

> restart:with(code_support);

Module code_cupport ver. 1.03 for CLIFFORD et al. for Maple 11
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NamesInLibrary(libname[1]);

"matrealL.m"
"Clifford.m"
" AlternatingGroup_rem_table.m"
" SymmetricGroup_rem_table.m"
"Define.m"
"SINGULARPLURALLink.m"
"GTP.m"
" implicitbezierpolynomial.m"
"Bigebra.m"
"matquatL.m"
" Reynolds_rem_table.m"
"Cliplus.m"
"SchurFkt.m"
" FiniteGroups_rem_table.m"
" generateGinvariants_rem_table.m"
"SP.m"
"matcompR.m"
"TNB.m"
"code_support.m"
"matrealR.m"
"RJgrobner.m"
"Octonion.m"
"matcompL.m"
"GfG.m"
"matquatR.m"

See Also: code_support, examples

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Last modified: June 19, 2008, 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_support ver. 1.03 for CLIFFORD et al. for Maple 11
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[NamesInLibrary, 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:\Maple11\Clifford\Help_11_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:\Maple11\Clifford\Help_11_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:

```maple
> 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.

```maple
> 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:\Maple11\Clifford\Help_11_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:\Maple11\Clifford/Help_11_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_M10.mws` will be copied and saved as a new file `all_sigs_M10_copy1.mws` in the directory `C:\Maple10\P10\test1/`. The directory name can also be specified as a string "C:\\Maple10\\P10\\test1\".

```maple
> TEST1:="C:\\Maple10\\P10\\test1\";
> TEST2:="C:\\\Maple10\\P10\\test1\\";
> filein:="all_sigs_M10.mws";
> fileout:="all_sigs_M10_copy1.mws";

TEST1 := C:\Maple10\P10\test1/
TEST2 := "C:\Maple10\P10\test1"
filein := all_sigs_M10.mws
```
Example 4: Procedure `get_dir` returns a list of strings which are names of files located in the specified directory.

```plaintext
> dir1 := C:\Maple10\P10\test1\;
dir2 := `C:\Maple10/P10/test1/`;

   dir1 := "C:\\Maple10\\P10\\test1\\"

   dir2 := C:\Maple10\P10\test1/
```

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

S := ["all_sigs_M10.mws", "all_sigs_M10_copy1.mws", "examples723.mws",
    "Groebner.for.Grassmann_M10.23vii07.mws", "SchurFkt-code-22vii07.mws"]

S := ["all_sigs_M10.mws", "all_sigs_M10_copy1.mws", "examples723.mws",
    "Groebner.for.Grassmann_M10.23vii07.mws", "SchurFkt-code-22vii07.mws"]
```

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

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

   X := "adfmatrix_M8.mws"

> X1 := change_name(X, "_M8", "_M10");

   X1 := "adfmatrix_M10.mws"

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

   X2 := "adfmatrix.mws"

> X3 := change_name(X1, "_M10", "_M11");

   X3 := "adfmatrix_M11.mws"

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

   "adfmatrix"

> `S` := S;
S := ["all_sigs_M10.mws", "all_sigs_M10_copy1.mws", "examples723.mws",
    "Groebner.for.Grassmann_M10.23vii07.mws", "SchurFkt-code-22vii07.mws"]

> S := map(change_name, S, "_M10", "_M11");
S := ["all_sigs_M11.mws", "all_sigs_M11_copy1.mws", "examples723_M11.mws",
    "Groebner.for.Grassmann_M11.23vii07.mws", "SchurFkt-code-22vii07_M11.mws"]
```
Example 6: Procedure \texttt{replace\_in\_file} reads a Maple worksheet from directory \texttt{DIR1} and then saves it in a new directory \texttt{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.

\begin{verbatim}
> DIR1 := "C:\Maple8\P8\test1\";
> DIR2 := "C:\Maple10\P10\test2\";
> infile := "&c_M8.mws";
> cat(DIR1,infile);
> get_dir(DIR1);
> replace_in_file(cat(DIR1,"&c_M8.mws"),cat(DIR2,"&c_M10.mws"),
  ["Cliff8","Clifford[","`","November 16","2002"," Cli8plus","Cliplus[
  ],
  ["Clifford","Clifford:="","`"," January 4","2003","Cliplus","Cliplus:-"]];
> replace_in_file(cat(DIR1,"&c_M8.mws"),cat(DIR2,"&c_M10.mws"),["November 3","2003"],["January 5","2003"])
\end{verbatim}

Example 7: Procedure \texttt{change\_helpfiles} automatically copies all Maple worksheets from one directory to another after making appropriate replacements as in \texttt{replace\_in\_file} except that \texttt{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.
\texttt{TEST11:=`C:\Maple10/P10/test1/`;}
\texttt{TEST22:=`C:\Maple10/P10/test2/`;}

\texttt{TEST1 := "C:\Maple10\P10\test1\"}
\texttt{TEST2 := "C:\Maple10\P10\test2\"}
\texttt{TEST11 := `C:\Maple10/P10/test1/`}
\texttt{TEST22 := `C:\Maple10/P10/test2/`}

\texttt{\textgreater \ change\_helpfiles(\texttt{TEST1,TEST2,\{"Cliff8","October\ 8, \ 1995\},["Clifford"," 1995-2006"]}); \texttt{\#copying \ with \ replacements}}
\texttt{processing \ file \ all\_sigs\_M10.mws \ without \ renaming \ but \ with \ replacement(s): \ [8, 1]}
\texttt{processing \ file \ all\_sigs\_M10\_copy1.mws \ without \ renaming \ but \ with \ replacement(s): \ [8, 1]}
\texttt{processing \ file \ examples723.mws \ without \ renaming \ but \ with \ replacement(s): \ [0, 0]}
\texttt{processing \ file \ Groebner\textunderscore for.Grassmann\_M10.23vii07.mws \ without \ renaming \ but \ with \ replacement(s): \ [0, 0]}
\texttt{processing \ file \ SchurFkt\textunderscore code\_22vii07.mws \ without \ renaming \ but \ with \ replacement(s): \ [0, 0]}
\texttt{***********************}
\texttt{finished \ processing \ 5 \ files}

\texttt{\textgreater \ change\_helpfiles(\texttt{TEST1,TEST2,\{"Cliff8","Clifford"},"\_M10","\_M11" \}); \texttt{\#.copying \ with \ name \ changes}}
\texttt{processing \ file \ all\_sigs\_M10.mws \ renamed \ as \ all\_sigs\_M11.mws \ with \ replacement(s): \ [8]}
\texttt{processing \ file \ all\_sigs\_M10\_copy1.mws \ renamed \ as \ all\_sigs\_M11\_copy1.mws \ with \ replacement(s): \ [8]}
\texttt{processing \ file \ examples723.mws \ renamed \ as \ examples723\_M11.mws \ with \ replacement(s): \ [0]}
\texttt{processing \ file \ Groebner\textunderscore for.Grassmann\_M10.23vii07.mws \ renamed \ as \ Groebner\textunderscore for.Grassmann\_M11.23vii07.mws \ with \ replacement(s): \ [0]}
\texttt{processing \ file \ SchurFkt\textunderscore code\_22vii07.mws \ renamed \ as \ SchurFkt\textunderscore code\_22vii07\_M11.mws \ with \ replacement(s): \ [0]}
\texttt{***********************}
\texttt{finished \ processing \ 5 \ files}

\texttt{\textgreater \ change\_helpfiles(\texttt{TEST1,TEST2,\{"Cliff8","Clifford"}); \texttt{\#copying \ without \ name \ changes}}
\texttt{processing \ file \ all\_sigs\_M10.mws \ without \ renaming \ but \ with \ replacement(s): \ [8]}
\texttt{processing \ file \ all\_sigs\_M10\_copy1.mws \ without \ renaming \ but \ with \ replacement(s): \ [8]}
\texttt{processing \ file \ examples723.mws \ without \ renaming \ but \ with \ replacement(s): \ [0]}
\texttt{processing \ file \ Groebner\textunderscore for.Grassmann\_M10.23vii07.mws \ without \ renaming \ but \ with \ replacement(s): \ [0]}
\texttt{processing \ file \ SchurFkt\textunderscore code\_22vii07.mws \ without \ renaming \ but \ with \ replacement(s): \ [0]}
\texttt{***********************}
\texttt{finished \ processing \ 5 \ files}

\texttt{\textgreater \ change\_helpfiles(\texttt{TEST1,TEST2,\{"Cliff8","Cliff8"}); \texttt{\#copying \ without \ name \ changes \ or \ replacements}}
\texttt{processing \ file \ all\_sigs\_M10.mws \ without \ renaming \ and \ without \ replacements \ - \ just \ copying}
\texttt{processing \ file \ all\_sigs\_M10\_copy1.mws \ without \ renaming \ and \ without \ replacements \ - \ just \ copying}
processing file examples723.mws without renaming and without replacements - just copying
processing file Groebner.for.Grassmann_M10.23vii07.mws without renaming and without replacements - just copying
processing file SchurFkt-code-22vii07.mws without renaming and without replacements - just copying
finished processing 5 files

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

```maple
> change_helpfiles(TEST1,TEST2,[""],[""]); ###<<<Intended error message
Error, (in code_support:-replace_in_file) first list cannot contain an empty string
```

```maple
> change_helpfiles(TEST1,TEST2,["November 5",""],["January 5",""]);
###<<<Intended error message
Error, (in code_support:-replace_in_file) first list cannot contain an empty string
```

**Example 8:** 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.

```maple
> TEST1:="C:\\Maple10\\P10\\test1\\";
> TEST11:=`C:\Maple10/P10/test1/`;
> L1:=get_dir(TEST1);
> L11:=get_dir(TEST11);
> filename1:=cat(TEST1,L1[1]);
> filename11:=cat(TEST11,L11[1]);
```

**Example 9:** 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`.

```maple
> libname[1];
HDB_LIB_PATH := convert(libname[1], name);
HELP_FILE_PATH := 'C:\Maple10/P10/Cliff10/Help/';  # Directory where
*_M10.mws help files are located
BROWSER_PATH := 'Mathematics/Algebra/';
ModuleName := 'Clifford';
Parent := 'Clifford,intro';
GrandParent := 'Clifford,intro';
MapleVersion := "M10";  ### Substring of file names that gives Maple
version
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"] ];
**Example 10:** 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:

```plaintext
[ 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:

```plaintext
> 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,antisymmetric, Clifford,intro, ["Clifford,type,antisymmetric", "type,antisymmetric"] ],
                [ 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,cdmatrix, Clifford,intro, ["Clifford,cdmatrix", "cdmatrix"] ],
                [ 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,fielelement, Clifford,intro, ["Clifford,type,fielelement", "type,fielelement"]],
[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"]],
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,cdmatrix, Clifford,intro | ["Clifford,cdmatrix", "cdmatrix"] |
| 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,type,clilinear, Clifford,intro | ["Clifford,clilinear", "clilinear"] |
| 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,extract, Clifford,intro, ["Clifford,extract", "extract"]],
[Clifford,factoridempotent, Clifford,intro, ["Clifford,factoridempotent", "factoridempotent"]],
[Clifford,type,fieldelement, Clifford,intro, ["Clifford,type,fieldelement", "type,fieldelement"]],
[Clifford,fnd1str, Clifford,intro, ["Clifford,fnd1str", "fnd1str"]],
[Clifford,fndbasis, Clifford,intro, ["Clifford,fndbasis", "fndbasis"]],
[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,convert, Clifford,intro, ["Clifford,convert", "convert"]],
[Clifford,convert, 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"]],
Observe that the last entry now reads:

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

Example 11:
Procedure **NamesInLibrary** shows what programs have been added to the library specified as the single argument. For example, we can see what programs or files have been added so far do the library. For a complete information, see **march** command.

```maple
> libname;
   "C:\Maple11/SINGULARPLURALlinklib"

> NamesInLibrary(libname[1]);

"matrealL.m"
"Clifford.m"
"_AlternatingGroup_rem_table.m"
"_SymmetricGroup_rem_table.m"
"Define.m"
"SINGULARPLURALlink.m"
"GTP.m"
"_implicitbezierpolynomial.m"
"Bigebra.m"
"matquatL.m"
"_Reynolds_rem_table.m"
"Cliplus.m"
"SchurFkt.m"
"_FiniteGroups_rem_table.m"
"_generateGinvariants_rem_table.m"
"SP.m"
"matcompR.m"
"TNB.m"
"code_support.m"
"matrealR.m"
"RJgroebner.m"
"Octonion.m"
"matcompL.m"
"GfG.m"
"matquatR.m"
```

**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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