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l i v e c o d e

Providing a Complete Hierarchical File Listing (Directory Walking)

> How might one get a list of all files from a folder which contains nested
> folders and files several levels deep?

In my ignorance, I forgot to check my archived mail files which contained this modified code snippet from Geoff Canyon:

```
global gHierList,gMainFolder,gBaseLevels
local tCount

on mouseUp
  put "" into gHierList
  put "" into fld "Result"
  answer folder "Pick a folder you want to walk:"
  put it into gMainFolder
  if gMainFolder = "" then exit mouseUp
  set the itemDel to "/"
  put 0 into tCount
  put the number of items of gMainFolder into gBaseLevels
  put the directory into tOrigDir
  directoryWalk gMainFolder
  set the directory to tOrigDir
  put gHierList into fld "Result"
end mouseUp

on directoryWalk whatFolder
  set the itemDel to "/"
  set the directory to whatFolder
  put the files into temp
  add the number of lines of temp to tCount
  sort temp
  repeat for each line x in temp
    put whatFolder & "/" & x & cr after gHierList
  end repeat
  put the folders into tDirList
  sort tDirList
  delete line 1 of tDirList
  repeat for each line x in tDirList
    directoryWalk (whatFolder & "/" & x)
  end repeat
end directoryWalk
```

Posted 8/27/2002 by Scott Rossi to the MetaCard List   (See the complete post/thread)

And here's an expanded version that adds some additional features (Windows only, however, but it can be modified to work on Macs as well) — Editor.

I wrote a quick little "directorywalker" stack that does this, and reports back whether it is a file (optionally along with its type) or a folder, and (optionally) indents the hierarchy. It was for Windows files only (so there's no Mac type/creator checking), but here's the script:

```
-- Card controls: [X] Show Hierarchy, [X] Show Type, [popup menu "Delimiters" – had "Spaces (2)", "Spaces (4)" or "Tabs" as choices
-- Field 1 holds the result

global gHierList,gMainFolder,gBaseLevels

on mouseUp
  put "" into gHierList
  answer folder "Pick a folder you want to walk:"
  if it = "" then exit mouseUp
  set the itemDel to "/"
  put it into gMainFolder
  put the number of items of gMainFolder into gBaseLevels
  directoryWalk gMainFolder,(the hilite of btn "ShowHierarchy"),(the selectedText of btn "Delimiters"),(the hilite of btn "ShowType")
  put gHierList into field 1
end mouseUp

on directoryWalk whatFolder,showHier,pDel,showType
  set the itemDel to "/"
  if "(2)" is in pDel then put 2 into numSpcs
  else put 4 into numSpcs
  put "                              " into spcPad
  set the directory to whatFolder
  if showHier then
    put ((the number of items of whatFolder)) - gBaseLevels into numLevels
```

```
         if pDel <> "tabs" then
           do "put format(" & quote & "%" & (numLevels*numSpcs) & "s" & quote & "," & quote & quote & ")  into tPad"
         else
           do "put format(" & quote & "%" & (numLevels) & "s" & quote & "," & quote & quote & ")  into tPad"
           replace " " with numToChar(9) in tPad
         end if
         put last item of whatFolder into tFolderName
         if showType then put numToChar(9) & "folder" after tFolderName
         if numLevels <> 0 then
           put tPad & tFolderName into line (the number of lines of gHierList)+1 of gHierList
         else
           put tFolderName into line (the number of lines of gHierList)+1 of gHierList
         end if
       end if
       put the files into temp
       sort temp
       repeat with x = 1 to the number of lines of temp
         if not(showHier) then
           put whatFolder & "/" & (line x of temp) into line (the number of lines of gHierList)+1 of gHierList
         else
           put whatFolder & "/" & (line x of temp) into tPath
           put ((the number of items of tPath)) - gBaseLevels into numLevels
           if pDel <> "tabs" then
             do "put format(" & quote & "%" & (numLevels*numSpcs) & "s" & quote & "," & quote & quote & ") into tPad"
           else
             do "put format(" & quote & "%" & (numLevels) & "s" & quote & "," & quote & quote & ") into tPad"
             replace " " with numToChar(9) in tPad
           end if
           put line x of temp into tFile
           if showType then put addFileType(tFile) into tFile
           if numLevels <> 0 then
             put tPad & tFile into line (the number of lines of gHierList)+1 of gHierList
           else
             put tFile into line (the number of lines of gHierList)+1 of gHierList
           end if
         end if
       end repeat
       put the directories into tDirList
       sort tDirList
       repeat with x =  2 to the number of lines of tDirList
         directoryWalk (whatFolder & "/" & (line x of tDirList)),showHier,pDel,showType
       end repeat
   end directoryWalk

   function addFileType what
     put offset(".",what) into tChar
     if tChar <> 0 then
       put char tChar to length(what) of what into tExt
       put queryRegistry("HKEY_CLASSES_ROOT\"&(queryregistry("HKEY_CLASSES_ROOT\"&tExt& "\")) & "\") into tType
     else
       put "" into tType
       put "" into tExt
     end if
     if tType = "" then
       if tExt <> "" then
         delete char 1 of tExt  -- remove "."
         put toUpper(tExt) && "File" into tType
       else
         put "File" into tType
       end if
     end if
     return what & numToChar(9) & tType
   end addFileType
```

Posted 8/27/2002 by Ken Ray to the MetaCard List   (See the complete post/thread)
Updated 4/14/2003 by Ken Ray (with special thanks to Hugh Senior)

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