```
FMPasteBox.py
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```
#
   #
      FMPasteBox.py
   #
      FMPasteBox
   #
 5
   from __future__ import print_function
   import objc
   import Foundation
10 import AppKit
   from PyObjCTools import AppHelper
   import FMPasteBoxAppDelegate
15
   # py3 stuff
   py3 = False
   try:
20
       unicode('')
       punicode = unicode
       pstr = str
       punichr = unichr
   except NameError:
25
       punicode = str
       pstr = bytes
       py3 = True
       punichr = chr
30 if __name__ == '__main__':
       AppHelper.runEventLoop()
   FMPasteBoxAppDelegate.py
   #
   #
     FMPasteBoxAppDelegate.py
   #
      FMPasteBox  
   #
 5
   from __future__ import print_function
   import sys
   import os
10 import io
   import pprint
   pp = pprint.pprint
15 import pdb
   kwlog = True
   import objc
20 import Foundation
   NSObject = Foundation.NSObject
   NSMutableDictionary = Foundation.NSMutableDictionary
   NSData = Foundation.NSData
25 import AppKit
   NSWindowController = AppKit.NSWindowController
   NSApplication = AppKit.NSApplication
```

```
NSUserDefaults = AppKit.NSUserDefaults
   NSMutableAttributedString = AppKit.NSMutableAttributedString
30 NSBeep = AppKit.NSBeep
   NSPasteboard = AppKit.NSPasteboard
   import FMPasteBoxLayoutObjects
35 import FMPasteBoxTools
   read_pb = FMPasteBoxTools.read_pb
   makeunicode = FMPasteBoxTools.makeunicode
   fmpPasteboardTypes = FMPasteBoxTools.fmpPasteboardTypes
   additionalFMPPasteboardTypes = FMPasteBoxTools.additionalFMPPasteboardTypes
40 displaynameTypes = FMPasteBoxTools.displaynameTypes
   datetimestamp = FMPasteBoxTools.datetimestamp
   import FMPasteBoxVersion
45 import FMPasteBoxPrefController
   PrefController = FMPasteBoxPrefController.FMPasteBoxPreferenceController
   # py3 stuff
50 \text{ py3} = \text{False}
   try:
       unicode('')
       punicode = unicode
       pstr = str
       punichr = unichr
55
   except NameError:
       punicode = str
       pstr = bytes
       py3 = True
60
       punichr = chr
   class FMPasteBoxAppDelegate(NSObject):
       menClipboardtype = objc.IBOutlet()
65
       butGetClipboard = objc.IBOutlet()
       butPushClipboard = objc.IBOutlet()
       tfXMLEditor = objc.IBOutlet()
       appWindow = objc.IBOutlet()
70
       def initialize(self):
           if kwlog:
               print( "FMPasteBoxAppDelegate.initialize()" )
           userdefaults = NSMutableDictionary.dictionary()
           userdefaults.setObject_forKey_(u"", u'txtFileMakerAppPath')
           userdefaults.setObject_forKey_(u"", u'txtExportsPath')
75
           userdefaults.setObject_forKey_(False, u'cbDoExports')
           NSUserDefaults.standardUserDefaults().registerDefaults_(userdefaults)
           self.preferenceController = None
80
       def awakeFromNib(self):
           # for later
           defaults = NSUserDefaults.standardUserDefaults()
           # set up type menu
85
           self.menClipboardtype.removeAllItems()
           menuItems = [ u"" ]
           menuItems.extend( displaynameTypes.keys() )
           menuItems.sort()
           for menuItem in menuItems:
90
               self.menClipboardtype.addItemWithTitle_( menuItem )
           self.menClipboardtype.setTitle_( u"" )
```

```
# set up text view
            self.tfXMLEditor.setUsesFindPanel_(True)
            window = self.tfXMLEditor.window()
95
            window.makeFirstResponder_(self.tfXMLEditor)
        def applicationDidFinishLaunching_(self, notification):
            app = NSApplication.sharedApplication()
            app.activateIgnoringOtherApps_(True)
100
            window = self.tfXMLEditor.window()
            window.makeFirstResponder_(self.tfXMLEditor)
        @objc.IBAction
        def getClipboard_(self, sender):
105
            pasteboardContents = read_pb()
            if not pasteboardContents:
                # abort - nothing on pasteboard
                NSBeep()
                # we must return implicit None! Crashing otherwise.
110
            defaults = NSUserDefaults.standardUserDefaults()
            exportClipboards = defaults.boolForKey_( u'cbDoExports' )
            if exportClipboards:
                exportFolder = makeunicode(defaults.objectForKey_( u'txtExportsPath' ))
115
                if os.path.exists( exportFolder ):
                    d,t = FMPasteBoxTools.datetimestamp()
                    dayFolder = os.path.join( exportFolder, d )
                    mainType = "-"
120
                    try:
                        mainType = mainType + pasteboardContents.typ.name
                    except:
                        pass
                    sessionFolder = os.path.join( dayFolder, t + mainType)
125
                    try:
                        # pdb.set_trace()
                        exportItems = pasteboardContents.additionals[:]
                        exportItems.append( pasteboardContents )
                        for item in exportItems:
130
                            name = item.typ.name
                            ext = item.typ.fileExt
                            data = item.data
                            path = os.path.join( sessionFolder, name + ext )
                            if ext == ".xml":
135
                                data = makeunicode( data )
                                data = data.encode("utf-8")
                            if not os.path.exists( sessionFolder ):
                                os.makedirs( sessionFolder )
140
                            f = io.open(path, 'wb')
                            f.write( data )
                            f.close()
                            if ext == ".xml":
145
                                # pdb.set_trace()
                                FMPasteBoxLayoutObjects.exportAssets( path, sessionFolder )
                    except Exception as err:
                        print()
                        print( "ADDITIONALS FAILED" )
150
                        print( err )
                        print()
            pbType = pasteboardContents.typ
            pbTypeName = pbType.name
155
            self.menClipboardtype.setTitle_( pbTypeName )
```

```
self.tfXMLEditor.setString_( makeunicode( pasteboardContents.data ) )
            window = self.tfXMLEditor.window()
            window.makeFirstResponder_(self.tfXMLEditor)
160
        def textView(self):
            # model
            return makeunicode( self.tfXMLEditor.string() )
        @objc.IBAction
165
        def pushClipboard_(self, sender):
            # get text view data
            data = makeunicode(self.textView())
            data = data.encode("utf-8")
            l = len(data)
170
            nsdata = NSData.dataWithBytes_length_(data, l)
            # get pasteboard type
            pasteboardType = displaynameTypes.get( self.menClipboardtype.title(), u"" )
            if not pasteboardType:
175
                NSBeep()
                # we must return implicit None! Crashing otherwise.
                return
            # write to pasteboard
            pasteboard = NSPasteboard.generalPasteboard()
180
            pasteboard.clearContents()
            pasteboardTypeName = pasteboardType.pbname
            pasteboard.setData_forType_( nsdata, pasteboardTypeName)
        @objc.IBAction
        def showPreferencePanel_(self, sender):
185
            if self.preferenceController == None:
                self.preferenceController = PrefController.alloc().init()
            self.preferenceController.showWindow_( self.preferenceController )
   FMPasteBoxPrefController.py
   #
   #
       FMPasteBoxPreferenceController.py
   #
   #
       Created by Karsten Wolf on 07.02.18.
        Copyright 2018 Karsten Wolf. All rights reserved.
 5
   #
   from __future__ import print_function
10 import objc
   import Foundation
   NSUserDefaults = Foundation.NSUserDefaults
15 import AppKit
   NSApplication = AppKit.NSApplication
   NSWindowController = AppKit.NSWindowController
   import FMPasteBoxTools
20
   # py3 stuff
   py3 = False
    try:
25
        unicode('')
        punicode = unicode
        pstr = str
```

```
punichr = unichr
   except NameError:
30
       punicode = str
       pstr = bvtes
       py3 = True
       punichr = chr
35 class FMPasteBoxPreferenceController (NSWindowController):
       butSetFileMakerAppPath = objc.IBOutlet()
       butSetExportsPath = objc.IBOutlet()
40
       cbDoExports = objc.IBOutlet()
       txtFileMakerAppPath = objc.IBOutlet()
       txtExportsPath = objc.IBOutlet()
45
       def init(self):
           self = self.initWithWindowNibName_("Preferences")
           wnd = self.window()
           wnd.setTitle_( u"FMPasteBox Preferences" )
50
           wnd.setDelegate_( self )
           defaults = NSUserDefaults.standardUserDefaults()
           self.txtFileMakerAppPath.setStringValue_( defaults.objectForKey_( u'txtFileMakerAppPath') )
           self.txtExportsPath.setStringValue_( defaults.objectForKey_( u'txtExportsPath') )
55
           self.cbDoExports.setState_( defaults.objectForKey_( u'cbDoExports') )
           return self
       def windowWillClose_(self, notification):
           defaults = NSUserDefaults.standardUserDefaults()
           defaults.setObject_forKey_(self.txtFileMakerAppPath.stringValue(), u'txtFileMakerAppPath')
60
           defaults.setObject_forKey_(self.txtExportsPath.stringValue(), u'txtExportsPath')
           defaults.setObject_forKey_(self.cbDoExports.state(), u'cbDoExports')
       @objc.IBAction
65
       def chooseFolder_(self, sender):
           if sender == self.butSetFileMakerAppPath:
               folders = FMPasteBoxTools.getApplicationDialog()
               if folders:
                   self.txtFileMakerAppPath.setStringValue_( folders )
70
           elif sender == self.butSetExportsPath:
               folders = FMPasteBoxTools.getFolderDialog()
               if folders:
                   self.txtExportsPath.setStringValue_( folders[0] )
   FMPasteBoxTools.py
  # -*- coding: utf-8 -*-
  from __future__ import print_function
 5 """Some tools which are needed by most files.
   11 11 11
   import sys
   import os
10 import re
   import struct
   import traceback
   import datetime
   import unicodedata
```

```
15 import hashlib
   import xml.etree.ElementTree
   ElementTree = xml.etree.ElementTree
20 import mactypes
   import appscript
  asc = appscript
   import pdb
25 import FMPasteBoxVersion
   kwdbg = FMPasteBoxVersion.developmentversion
   kwlog = FMPasteBoxVersion.developmentversion
   import pprint
30 pp = pprint.pprint
   import urllib
   import objc
35
  import Foundation
  NSURL = Foundation.NSURL
  NSFileManager = Foundation.NSFileManager
  NSUserDefaults = Foundation.NSUserDefaults
40 NSString = Foundation.NSString
  import AppKit
  NSOpenPanel = AppKit.NSOpenPanel
  NSAlert = AppKit.NSAlert
45 NSSavePanel = AppKit.NSSavePanel
  NSFileHandlingPanelOKButton = AppKit.NSFileHandlingPanelOKButton
  NSPasteboard = AppKit.NSPasteboard
  NSPasteboardCommunicationException = AppKit.NSPasteboardCommunicationException
50 # py3 stuff
  py3 = False
   try:
       unicode('')
55
       punicode = unicode
       pstr = str
       punichr = unichr
   except NameError:
       punicode = str
60
       pstr = bytes
       py3 = True
       punichr = chr
   def num2ostype( num ):
65
       if num == 0:
           return '????'
       s = struct.pack(">I", num)
       return makeunicode(s, "macroman")
70 def ostype2num( ostype ):
       return struct.pack('BBBB', list(ostype))
  def makeunicode(s, srcencoding="utf-8", normalizer="NFC"):
       if type(s) not in (punicode, pstr):
75
           s = str(s)
       if type(s) != punicode:
           s = punicode(s, srcencoding)
       s = unicodedata.normalize(normalizer, s)
```

```
return s
80
   def NSURL2str( nsurl ):
        if isinstance(nsurl, NSURL):
            return str(nsurl.absoluteString())
        return nsurl
85
   def getFileProperties( theFile ):
        .....
        sfm = NSFileManager.defaultManager()
90
        props = sfm.fileAttributesAtPath_traverseLink_( theFile, True )
        if not props:
            return {}
        mtprops = props.mutableCopy()
        mtprops.removeObjectsForKeys_( [
95
            u"NSFileExtensionHidden"
            u"NSFileGroupOwnerAccountID",
            u"NSFileGroupOwnerAccountName",
            u"NSFileOwnerAccountID",
            u"NSFileOwnerAccountName"
100
            #u"NSFilePosixPermissions",
            #u"NSFileReferenceCount",
            # u"NSFileSize",
            #u"NSFileSystemFileNumber",
            u"NSFileSystemNumber",
105
            u"NSFileType",
            # u"NSFileHFSCreatorCode",
            # u"NSFileHFSTypeCode",
            #u"NSFileCreationDate"
            ] )
110
        return mtprops
   def setFileProperties( theFile, props ):
        sfm = NSFileManager.defaultManager()
        return sfm.changeFileAttributes_atPath_( props, theFile )
115
    def datestring_nsdate( dt=datetime.datetime.now() ):
        now = str(dt)
        now = now[:19]
        now = now + " +0000"
120
        return now
   def setFileModificationDate( filepath, modfdt ):
        l = getFileProperties( filepath )
        date = Foundation.NSDate.dateWithString_( datestring_nsdate( modfdt ) )
125
        l['NSFileModificationDate'] = date
        setFileProperties( filepath, l)
        folder, filename = os.path.split( filepath )
        print( "Setting file(%s) modification date to %s" % (filename, repr(modfdt )))
130 def uniquepath(folder, filenamebase, ext, nfill=3, startindex=1, sep="_", always=True):
        folder = os.path.abspath( folder )
135
        if not always:
            path = os.path.join(folder, filename + ext )
            if not os.path.exists( path ):
                return path
140
        n = startindex
        while True:
            serialstring = str(n).rjust(nfill, "0")
```

```
filename = filenamebase + sep + serialstring + ext
145
            fullpath = os.path.join(folder, filename)
            if n >= 10**nfill:
                nfill = nfill + 1
150
            if not os.path.exists(fullpath):
                return fullpath
            n += 1
155
   def gethashval( s ):
        m = hashlib.sha1()
        size = len(s)
        t = b"blob %i\0%s" % (size, s)
160
        m.update(t)
        return (m.hexdigest(), size)
    def cancelContinueAlert(title, message, butt1="OK", butt2=False):
165
        """Run a generic Alert with buttons "Weiter" & "Abbrechen".
           Returns True if "Weiter"; False otherwise
        alert = NSAlert.alloc().init()
170
        alert.setAlertStyle_( 0 )
        alert.setInformativeText_( title )
        alert.setMessageText_( message )
        alert.setShowsHelp_( False )
        alert.addButtonWithTitle_( butt1 )
175
        if butt2:
            # button 2 has keyboard equivalent "Escape"
            button2 = alert.addButtonWithTitle_( butt2 )
            button2.setKeyEquivalent_( unichr(27) )
180
        f = alert.runModal()
        return f == AppKit.NSAlertFirstButtonReturn
    def errorDialog( message="Error", title="Some error occured..."):
185
        return cancelContinueAlert(title, message)
    def getFileDialog(multiple=False):
        panel = NSOpenPanel.openPanel()
        panel.setCanChooseFiles_(True)
190
        panel.setCanChooseDirectories_(False)
        panel.setAllowsMultipleSelection_(multiple)
        rval = panel.runModalForTypes_( None )
        if rval:
            return [t for t in panel.filenames()]
195
        return []
   def getApplicationDialog():
        panel = NSOpenPanel.openPanel()
        panel.setCanChooseFiles_(True)
200
        panel.setCanChooseDirectories_(False)
        panel.setAllowsMultipleSelection_(False)
        rval = panel.runModalForTypes_( ['app'] )
            l = [makeunicode(t.path()) for t in panel.URLs()]
205
            return l[0]
        return ""
```

```
def getFolderDialog(multiple=False):
        panel = NSOpenPanel.openPanel()
210
        panel.setCanChooseFiles_(False)
        panel.setCanChooseDirectories_(True)
        panel.setAllowsMultipleSelection_(multiple)
        rval = panel.runModalForTypes_([])
        if rval:
215
            return [t for t in panel.filenames()]
        return []
   def saveAsDialog(path):
        panel = NSSavePanel.savePanel()
220
        if path:
            panel.setDirectory_( path )
        panel.setMessage_( u"Save as OPML" )
225
        panel.setExtensionHidden_( False )
        panel.setCanSelectHiddenExtension_(True)
        panel.setRequiredFileType_( u"opml" )
            if not os.path.isdir( path ):
230
                folder, fle = os.path.split(path)
            else:
                folder = path
                fle = "Untitled.opml"
            rval = panel.runModalForDirectory_file_(folder, fle)
235
        else:
            rval = panel.runModal()
        if rval == NSFileHandlingPanelOKButton:
            return panel.filename()
240
        return False
   def datetimestamp( dt=None ):
        # '2018-02-17 19:41:02'
        if not dt:
245
            dt = datetime.datetime.now()
        now = str(dt)
        now = now[:19]
        d, t = now.split()
        t = t.replace(':', '')
250
        return (d,t)
   def get_type_from_hexstring( hexstring ):
        """Extract the 4-char macroman type code from the pasteboard type name."""
        h = int(hexstring, 16)
        s = struct.pack(">I", h)
255
        s = makeunicode(s, 'macroman')
        return s
    def get_hexstring_for_type( typ_ ):
260
        11 11 11
        .....
        s = struct.pack( "BBBB", typ_ )
        i = struct.unpack( ">I", s)
        return hex(i)
265
    def get_type_from_intstring( intstring ):
        h = int(intstring)
        s = struct.pack(">I", h)
        s = makeunicode(s, 'macroman')
270
        return s
```

```
def get_flavor(s):
        """Return the 4-char type from a pasteboard name
275
        # seems like the standart naming scheme for the pasteboard server
        re_pbtype = re.compile( u"CorePasteboardFlavorType 0x([A-F0-9]{,8})")
        m = re_pbtype.match(s)
        result = ""
280
        if m:
            t = m.groups()[0]
            result = get_type_from_hexstring(t)
        return result
285
   def writePasteboardFlavour( folder, basename, ext, data ):
        p = uniquepath(folder, basename, ext)
        if data:
            f = open (p, 'wb')
290
            f.write( data )
            f.close()
   # fmpa 18
   # XMVL - 0x584D564C - Value Lists
295 # public.utf16-plain-text - Custom Menu Set Catalogue
   # public.utf16-plain-text - Custom Menu Catalogue
   # fmpa 15
    # XML2 - 0x584D4C32 - generic xml for layout objects
300
   # FMPA 11
   # XMFN - 0x584D464E - Custom Functions
   # FileMaker Advanced Pasteboard types
305 # XMFD - 0x584D4644 - fields
   # XMTB - 0x584D5442 - basetables
    # XMSC - 0x584D5343 - scripts
   # XMSS - 0x584D5353 - script step
    # XMLO - 0x584D4C4F - layout objects
310
   # FileMaker Developer Pasteboard types
   # beides binaerformate
   # FTR5 - 0x46545235 -
    # FMP5
315
    class PasteboardType(object):
        canonicalTypes = {
            u'com.adobe.pdf': u'Apple PDF pasteboard type',
            u'public.jpeg': u"CorePasteboardFlavorType 0x4A504547",
320
            u'NeXT TIFF v4.0 pasteboard type': u'public.tiff',
            # XML2
            u'dyn.ah62d4rv4gk8zuxnqgk': u"CorePasteboardFlavorType 0x584D4C32",
        }
325
        def __init__(self, pbname, typ, dataType, name, fileExt):
            self.pbname = pbname
            self.typ = typ
            self.dataType = dataType
330
            self.name = name
            self.fileExt = fileExt
            self.canonicalType = self.canonicalTypes.get( pbname, pbname )
        def __repr__(self):
```

```
335
            return u"PasteboardType(%s, %s, %s, %s, %s, %s)" % (
                    repr(self.pbname),
                    repr(self.typ),
                    repr(self.dataType),
                    repr(self.name),
340
                    repr(self.fileExt),
                    repr(self.canonicalType),)
    class PasteboardEntry(object):
        def __init__(self, name, data, typ):
345
            self.name = name
            self.data = data
            self.typ = typ
            self.additionals = []
350
        def __repr__(self):
            return u"PasteboardEntry(%s, data[%i], %s, %s)" % (
                    repr(self.name),
                    len(self.data),
                    repr(self.typ),
355
                    repr(self.additionals))
    fmpPasteboardTypes = {
        u"CorePasteboardFlavorType 0x584D4C32":
360
            PasteboardType(u"CorePasteboardFlavorType 0x584D4C32",
                             'XML2', 'fullXML', "Layout Objects", '.xml'),
        u"CorePasteboardFlavorType 0x584D5442":
            PasteboardType(u"CorePasteboardFlavorType 0x584D5442",
365
                             'XMTB', 'snippetXML', "Base Tables", '.xml'),
        u"CorePasteboardFlavorType 0x584D4644":
            PasteboardType(u"CorePasteboardFlavorType 0x584D4644",
                             'XMFD', 'snippetXML', "Fields", '.xml'),
370
        u"CorePasteboardFlavorType 0x584D5343":
            PasteboardType(u"CorePasteboardFlavorType 0x584D5343",
                             'XMSC', 'snippetXML', "Scripts", '.xml'),
375
        u"CorePasteboardFlavorType 0x584D5353":
            PasteboardType(u"CorePasteboardFlavorType 0x584D5353",
                             'XMSS', 'snippetXML', "Script Steps", '.xml'),
        u"CorePasteboardFlavorType 0x584D464E":
380
            PasteboardType(u"CorePasteboardFlavorType 0x584D464E",
                             'XMFN', 'snippetXML', "Custom Functions", '.xml'),
        u"CorePasteboardFlavorType 0x584D4C4F":
            PasteboardType(u"CorePasteboardFlavorType 0x584D4C4F",
385
                             'XMLO', 'snippetXML', "Layout Objects (obsolete)", '.xml'),
    }
    displaynameTypes = {}
    # "Custom Functions" -> PasteboardType(u"CorePasteboardFlavorType 0x584D464E",...
390 for typeName in fmpPasteboardTypes:
        typ = fmpPasteboardTypes[typeName]
        displaynameTypes[typ.name] = typ
    additionalFMPPasteboardTypes = {
395
        u"CorePasteboardFlavorType 0x4A504547":
            PasteboardType(u"CorePasteboardFlavorType 0x4A504547",
                             'JPEG', 'binaryData',
                             "Layout Objects JPEG Image", '.jpg'),
```

```
400
        u'Apple PDF pasteboard type':
            PasteboardType(u'Apple PDF pasteboard type',
                             'PDF', 'binaryData',
                             "Layout Objects PDF Image", '.pdf'),
405
        u'com.adobe.pdf':
            PasteboardType(u'com.adobe.pdf',
                             'PDF', 'binaryData',
                             "Layout Objects PDF Image", '.pdf'),
410
        u'Apple PICT pasteboard type':
            PasteboardType(u'Apple PICT pasteboard type',
                             'PICT', 'binaryData',
                             "Layout Objects PICT Image (obsolete)", '.pict'),
415
        u'NeXT TIFF v4.0 pasteboard type':
            PasteboardType(u'NeXT TIFF v4.0 pasteboard type',
                             'TIFF', 'binaryData',
                             "Layout Objects TIFF Image", '.tif'),
420
        u'public.jpeg':
            PasteboardType(u'public.jpeg',
                             'JPEG', 'binaryData',
                             "Layout Objects JPEG Image", '.jpg'),
425
        u'public.tiff':
            PasteboardType(u'public.tiff',
                             'TIFF', 'binaryData',
                             "Layout Objects TIFF Image", '.tif'),
    }
430
    def read_pb():
        result = None
        hashes = set()
435
        additionals = []
        pasteboard = NSPasteboard.generalPasteboard()
        pbTypeNames = pasteboard.types()
        # additionalFMPPasteboardTypes
440
        for pbTypeName in pbTypeNames:
            if 1:
                print( "pbTypeName:", pbTypeName )
445
            pbType = mainType = None
            if pbTypeName in fmpPasteboardTypes:
                pbType = fmpPasteboardTypes.get( pbTypeName )
                mainType = True
450
            elif pbTypeName in additionalFMPPasteboardTypes:
                pbType = additionalFMPPasteboardTypes.get( pbTypeName )
                mainType = False
            if pbType == None:
455
                continue
            try:
                # pdb.set_trace()
460
                s = pasteboard.dataForType_( pbTypeName )
                data = s.bytes().tobytes()
```

```
# dont load duplicate data
                hashval, _ = gethashval( data )
465
                if hashval in hashes:
                    continue
                hashes.add( hashval )
470
                if mainType:
                    data = makeunicode(data)
                pbTypeName = pbType.canonicalType
475
                pbEntry = PasteboardEntry(pbTypeName, data, pbType)
                if mainType:
                    result = pbEntry
                else:
480
                    additionals.append( pbEntry )
            except Exception as v:
                print( v )
                # pdb.set_trace()
485
                pp(locals())
                print()
        if result:
            result.additionals = additionals
490
        if 1:
            print()
            print( "result = " )
            pp(result)
495
            print()
        return result
   FMPasteBoxVersion.py
   import os
   appname ="FMPasteBox"
   appnameshort = "FMPasteBox"
  5 author = "Karsten Wolf"
   years = "2018-2022"
    copyright = 'Copyright %s %s' % (years, author)
 10 \text{ version} = "0.3.1"
    creator = 'KWFP'
   bundleID = "org.kw.FMPasteBox"
   description = (u"Filemaker Pasteboard interface and editor")
15 longdescription = u"""FMPasteBox is a Mac OS X application for translating the FileMaker clipboard."""
   #document_creator = "Created by %s %s" % (appname, version)
   developmentversion = False
   setup.py
    11 11 11
```

Script for building FMPasteBox

```
Usage:
       python setup.py py2app
   from distutils.core import setup
   from setuptools.extension import Extension
10 import py2app
   import FMPasteBoxVersion
   setup(
15
       name = FMPasteBoxVersion.appname,
       version = FMPasteBoxVersion.version,
       description = FMPasteBoxVersion.description,
       long_description = FMPasteBoxVersion.longdescription,
       author = FMPasteBoxVersion.author,
20
       app=[{
           'script': "FMPasteBox.py",
           "plist": {
               "NSPrincipalClass": 'NSApplication',
25
               "CFBundleIdentifier": FMPasteBoxVersion.bundleID,
               "CFBundleName": FMPasteBoxVersion.appnameshort,
               "CFBundleSignature": FMPasteBoxVersion.creator,
               "CFBundleShortVersionString": FMPasteBoxVersion.version,
               "CFBundleGetInfoString": FMPasteBoxVersion.description,
30
               "NSHumanReadableCopyright": FMPasteBoxVersion.copyright,
           }
       }],
       data_files=[
35
           "English.lproj/MainMenu.nib",
           "English.lproj/Preferences.nib",
           #"English.lproj/FMPasteBoxDocument.nib",
           "+icon/FMPasteBox.icns",
           #"+icon/FMPasteBoxFile.icns",
40
           ],
       options={
           "py2app": {
               "iconfile": "+icon/FMPasteBox.icns",
45
               # "packages": [],
               "excludes": ["TkInter", 'Tcl', 'Tk'],
       } )
```