GUI Using Python – PyGTK and Glade

A. Jai Sathish Kumar
sathishavadi@gmail.com

S. Rajeswari
sraji.me@gmail.com
Too Many Choices?
No Standard

GUI Tool available
There are some factors that decides the GUI tool.
Money
Linux User OR Windows User
Linux and Windows User
A GNOME User
A KDE User
What is PyGTK?
PyGTK
Easy to create your own GUI
PyGTK is Free Open Source Software
PyGTK supports Multiplatform Applications

Let's have a threesome
What is GTK?
GTK (GIMP ToolKit)
Library for creating Graphical User Interfaces
PyGTK Programming Basics
Import required Libraries
Create a Window
Pack Widgets into it
Set Appropriate Signals to Widgets
Connect Signals to Callback Functions
Uses **main loop** to start **GTK+** event processing loop
import pygtk
pygtk.require('2.0')
import gtk

class WelcomeMsg:
    def __init__(self):
        window = gtk.Window()
        window.set_title("Welcome")
        window.set_border_width(10)
        window.set_size_request(200,100)
        window.connect("destroy", self.quit)

        vbox = gtk.VBox()
        window.add(vbox)

        button = gtk.Button("Press Me !")
        button.connect("clicked", self.printMessage, "Welcome To Pycon India 2009, IISc")
        vbox.pack_start(button, True, True, 0)
button = gtk.Button("Close")
button.connect("clicked", self.quit)  # connect signals to callback
vbox.pack_start(button, True, True, 5)

window.show_all()

def printMessage(self, widget, data):  # callback function
    print data

def quit(self, widget):  # callback function
    gtk.main_quit()

def main(self):
    gtk.main()  # main loop

if __name__ == "__main__":
    p = WelcomeMsg()
    p.main()
Run in the terminal

python filename.py
END of PyGTK
WELCOME To GLADE
GLADE
What is Glade?
User Interface Designer

User Interface

GLADE

GTK+ User Interface Builder
Rapid Application Development Tool
Used in Many Programming Languages
User Interfaces are stored in XML format.
GLADE
GUI
Designing
A Drag & Drop Interface
Design starts by adding

i. Top Levels
ii. Containers
iii. Controls and Displays
Top Levels
Controls and Displays
Set the glade file

def __init__(self):
    self.gladefile = "glade file name"
    self.wTree = gtk.glade.XML(self.gladefile)
Create a **dictionary** and **Connect** it

dic = {
    "on_mainWindow_destroy" : gtk.main_quit,
}

self.wTree.signal_autoconnect(dic)
Resources
GuiProgramming

GUI Programming in Python

Python has a huge number of GUI frameworks (or toolkits) available for it, from Tkinter (traditionally bundled with Python, using Tk) to a number of other cross-platform solutions, as well as bindings to platform-specific (also known as “native”) technologies.

GUI Programming in Python is a similar page. It’s not apparent to this reporter how the aims of the two differ.

While Python supports arguably a larger number of GUI toolkits than any other language (family), the selection doesn’t satisfy a significant number of Python programmers; Straw Dogs, for example, is representative of several others when he writes, "if you want to create a GUI desktop app - don't use Python". Still, for most of us, Python GUI work is more-or-less a treat, and, in any case, more comfortable than the Java-oriented approach Straw Dogs favors.

Cross-browser Frameworks

<table>
<thead>
<tr>
<th>Package</th>
<th>Target</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyjamas</td>
<td>All major Web Browsers</td>
<td>Comprehensive Widget toolkit, Python-to-Javascript compiler and AJAX library. Provides the &quot;V&quot; in MVC. See also PyjamasDesktop</td>
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</tbody>
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Cross-platform Frameworks

The major cross-platform technologies upon which Python frameworks are based include Gtk, Qt, Tk and wxWidgets, although many other technologies provide actively maintained Python bindings.

http://wiki.python.org/moin/GuiProgramming
PyGTK: GTK+ for Python

What is PyGTK?

PyGTK lets you to easily create programs with a graphical user interface using the Python programming language. The underlying GTK+ library provides all kind of visual elements and utilities for it and, if needed, you can develop full featured applications for the GNOME Desktop.

PyGTK applications are truly multiplatform and they're able to run, unmodified, on Linux, Windows, MacOS X and other platforms.

Other distinctive features of PyGTK are, besides its ease of use and rapid prototyping, its first class accessibility support or the capability to deal with complex multilingual or bidirectional text for fully localized applications.

PyGTK is free software, so you can use, modify, distribute and study it with very few restrictions (LGPL license).

Latest news

PyObject 2.19.0 released
Monday 10 August 2009 by Gian Mario Tagliaretti
PyObject 2.19.0 has been released. This is an unstable release leading to 2.20.0. As usual, its sources can be fetched here. Check out the release.
What is Glade?

Glade is a RAD tool to enable quick & easy development of user interfaces for the GTK+ toolkit and the GNOME desktop environment.

The user interfaces designed in Glade are saved as XML, and by using the GtkBuilder GTK+ object these can be loaded by applications dynamically as needed.

By using GtkBuilder, Glade XML files can be used in numerous programming languages including C, C++, C#, Vala, Java, Perl, Python, and others.

Glade is Free Software released under the GNU GPL License.

http://glade.gnome.org/
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• IRC
• Forums
THANK YOU!
We thank and Google for pictures