

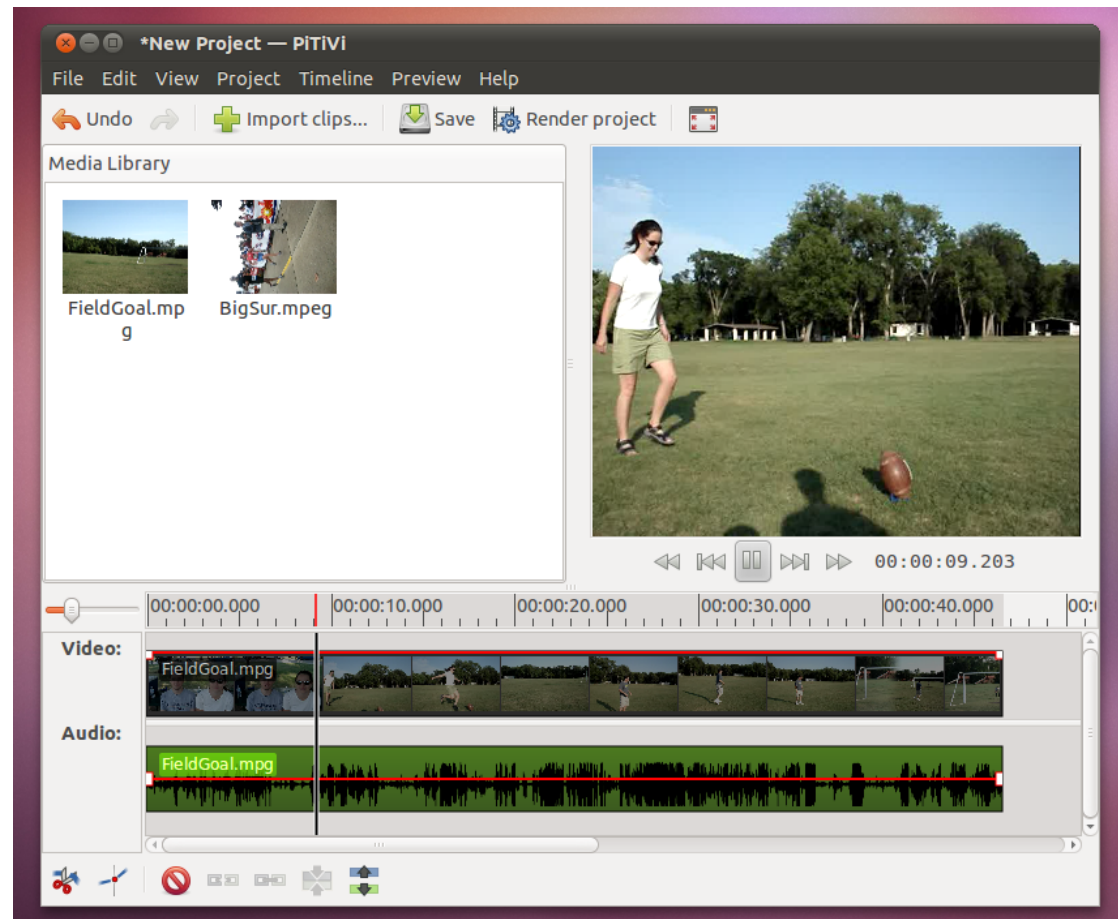
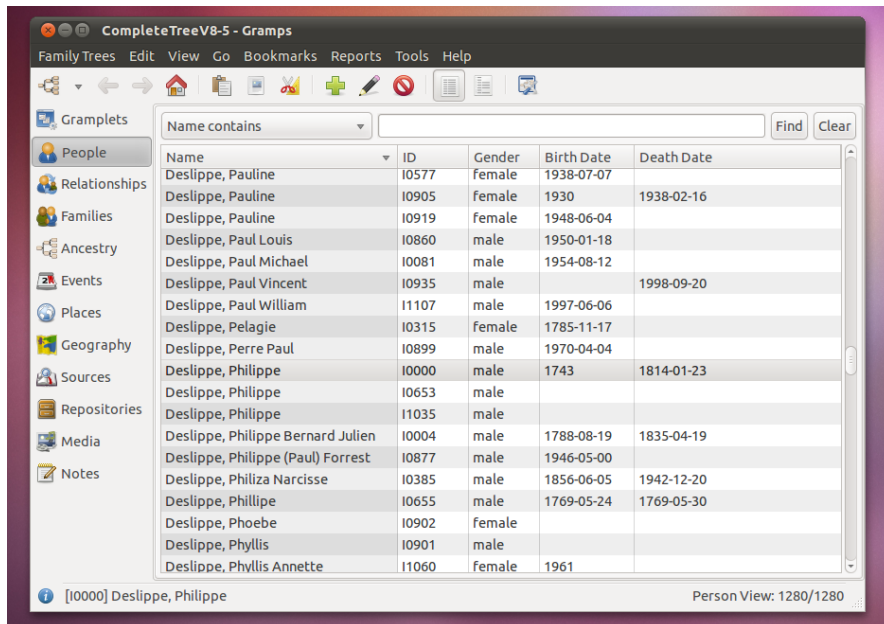
# Developing Apps for Ubuntu using pyGTK and Quickly

Jack Deslippe

# Why pyGTK?

- GTK Integration guarantees your app has a native Ubuntu look and feel.
- Ubuntu makes it easy to write/package and release pyGTK apps.
- Python is super easy to write and support.

## Examples



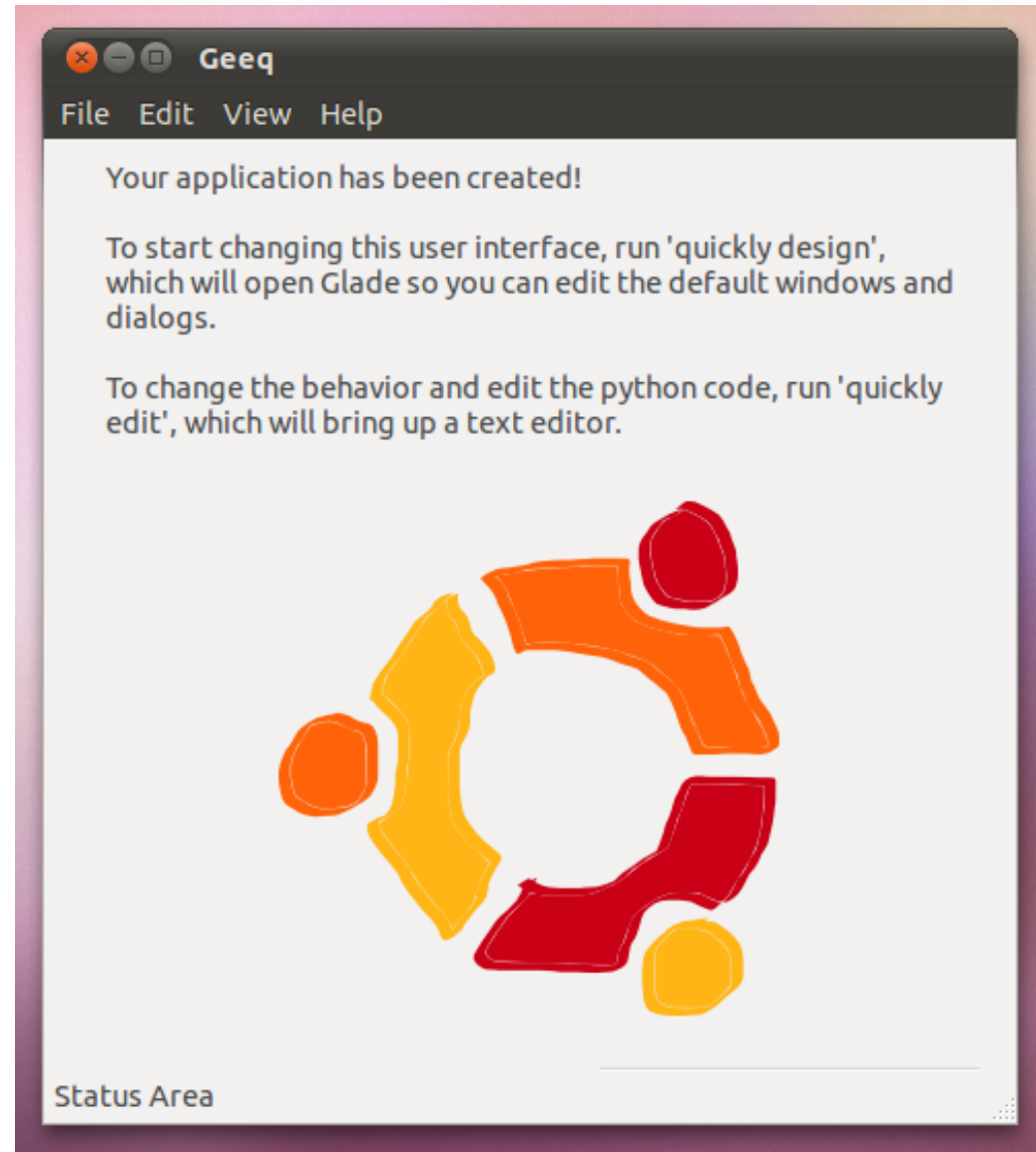
# Creating a new app - GEEQ

- You can get quickly from the Ubuntu Software Center ... or in a terminal type:

**“sudo apt-get install quickly”**

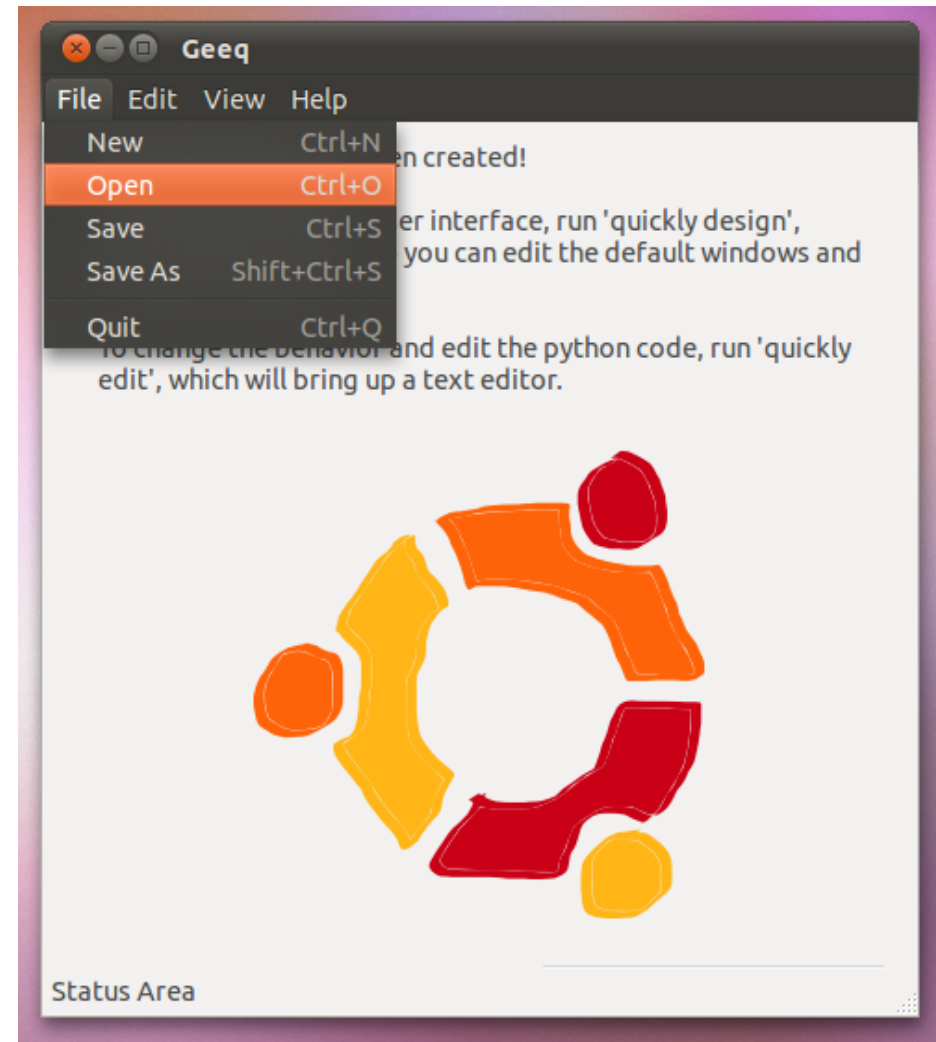
- Create a new project with by typing:

**“quickly create ubuntu-application geeq”**



# What you get for free.

- Enter the created directory "`cd geeq`" and type "`quickly run`"



# Designing the UI

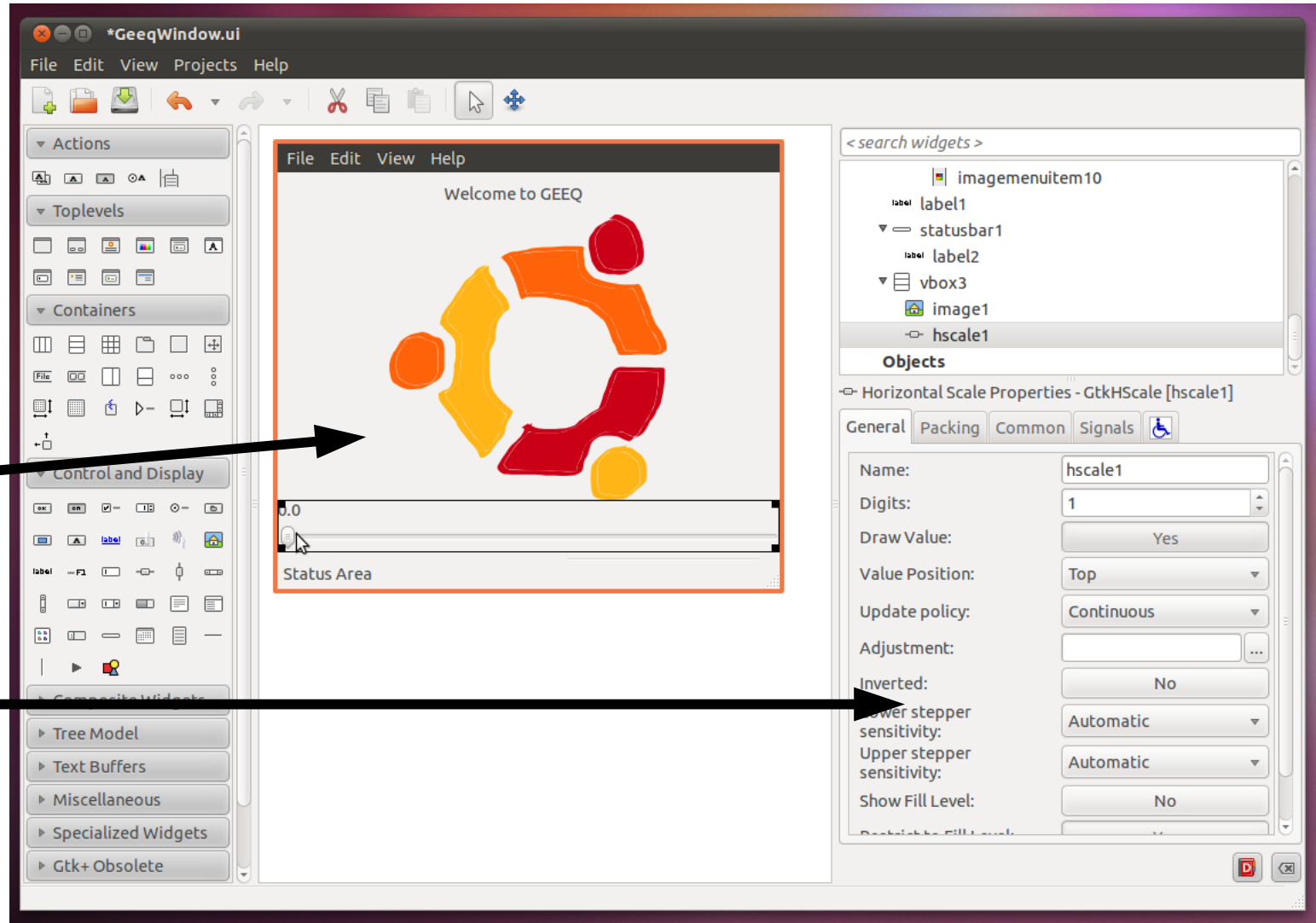
- In the same directory type “quickly run”

## GLADE

Add  
UI Elements

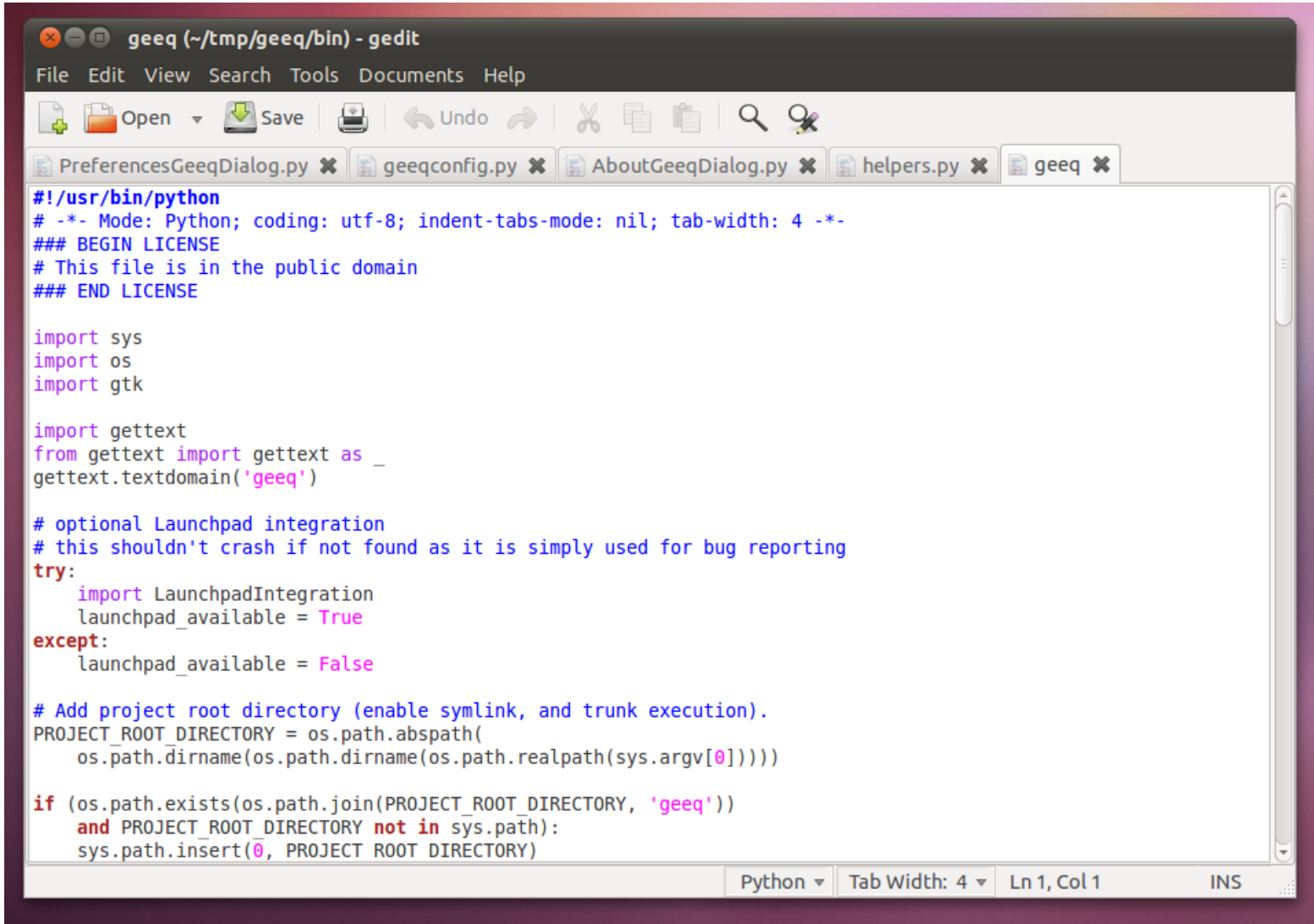
Current UI

Selected  
Element  
Properties



# The Code - Callbacks

- In the same directory type “quickly edit”



The screenshot shows a gedit window titled "gee (~/tmp/geeq/bin) - gedit". The window contains the following Python code:

```
#!/usr/bin/python
# -*- Mode: Python; coding: utf-8; indent-tabs-mode: nil; tab-width: 4 -*-
### BEGIN LICENSE
# This file is in the public domain
### END LICENSE

import sys
import os
import gtk

import gettext
from gettext import gettext as _
gettext.textdomain('gee')

# optional Launchpad integration
# this shouldn't crash if not found as it is simply used for bug reporting
try:
    import LaunchpadIntegration
    launchpad_available = True
except:
    launchpad_available = False

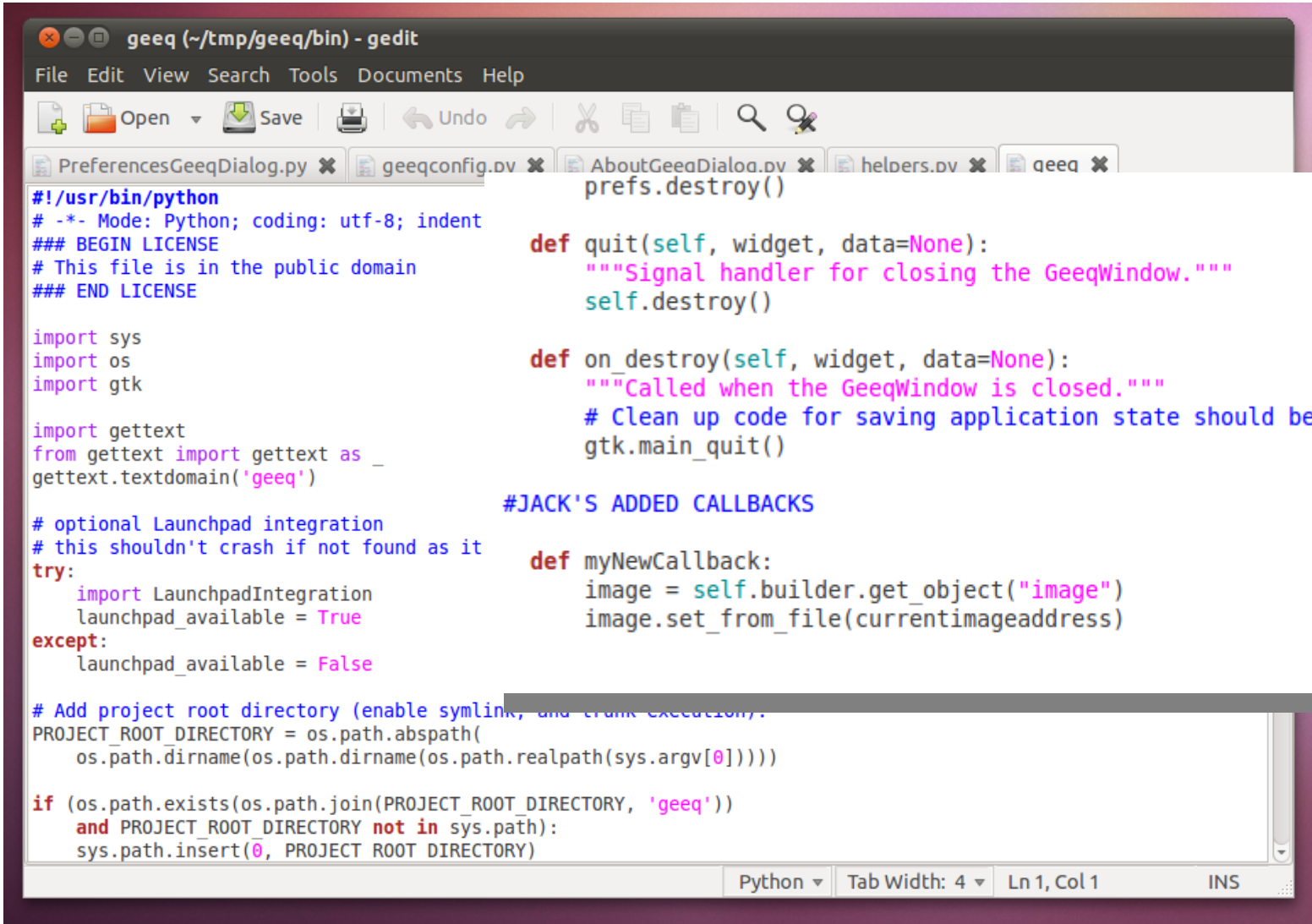
# Add project root directory (enable symlink, and trunk execution).
PROJECT_ROOT_DIRECTORY = os.path.abspath(
    os.path.dirname(os.path.dirname(os.path.realpath(sys.argv[0])))
)

if (os.path.exists(os.path.join(PROJECT_ROOT_DIRECTORY, 'gee'))
    and PROJECT_ROOT_DIRECTORY not in sys.path):
    sys.path.insert(0, PROJECT_ROOT_DIRECTORY)
```

The status bar at the bottom of the window indicates "Python", "Tab Width: 4", "Ln 1, Col 1", and "INS".

# The Code - Callbacks

- In the same directory type “quickly edit”



```
gee (~/.tmp/geeq/bin) - gedit
File Edit View Search Tools Documents Help
Open Save Undo
PreferencesGeeqDialog.py x geeqconfig.py x AboutGeeqDialog.py x helpers.py x geeq x
#!/usr/bin/python
# -*- Mode: Python; coding: utf-8; indent
### BEGIN LICENSE
# This file is in the public domain
### END LICENSE

import sys
import os
import gtk

import gettext
from gettext import gettext as _
gettext.textdomain('geeq')

# optional Launchpad integration
# this shouldn't crash if not found as it
try:
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# Add project root directory (enable symlink, and trunk execution).
PROJECT_ROOT_DIRECTORY = os.path.abspath(
    os.path.dirname(os.path.dirname(os.path.realpath(sys.argv[0])))
)

if (os.path.exists(os.path.join(PROJECT_ROOT_DIRECTORY, 'geeq'))
    and PROJECT_ROOT_DIRECTORY not in sys.path):
    sys.path.insert(0, PROJECT_ROOT_DIRECTORY)

prefs.destroy()

def quit(self, widget, data=None):
    """Signal handler for closing the GeeqWindow."""
    self.destroy()

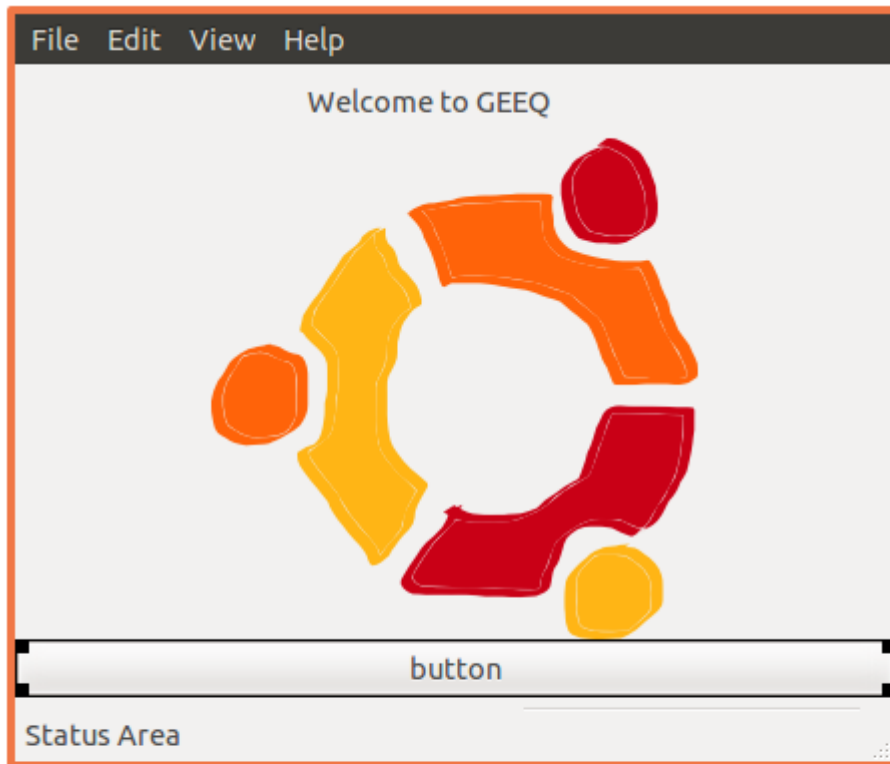
def on_destroy(self, widget, data=None):
    """Called when the GeeqWindow is closed."""
    # Clean up code for saving application state should be added here.
    gtk.main_quit()

#JACK'S ADDED CALLBACKS

def myNewCallback:
    image = self.builder.get_object("image")
    image.set_from_file(currentimageaddress)
```

# Connect the Callback to the UI

- In the same directory type “quickly design”



A screenshot of the "quickly design" tool interface. The top part shows a widget hierarchy tree with the following structure:

- < search widgets >
  - imagemenuitem10
    - label label1
    - vbox3
      - image1
      - button1**
      - statusbar1
        - label label2

The "Objects" panel shows the selected widget, "button1". Below it, the "Button Properties - GtkButton [button1]" panel is open, showing tabs for "General", "Packing", "Common", "Signals", and "Accessibility". The "Signals" tab is active, displaying a table of signals and their handlers:

Signal	Handler	User data
activate	<Type here>	<Type here>
clicked	<Type here>	<Type here>
enter	<Type here>	<Type here>
leave	<Type here>	<Type here>
<b>pressed</b>	<b>myCallback</b>	<Type here>
released	<Type here>	<Type here>
▶ GtkContainer		
▶ GtkWidget		

The "pressed" signal row is circled in red, indicating that the callback "myCallback" is connected to this signal.



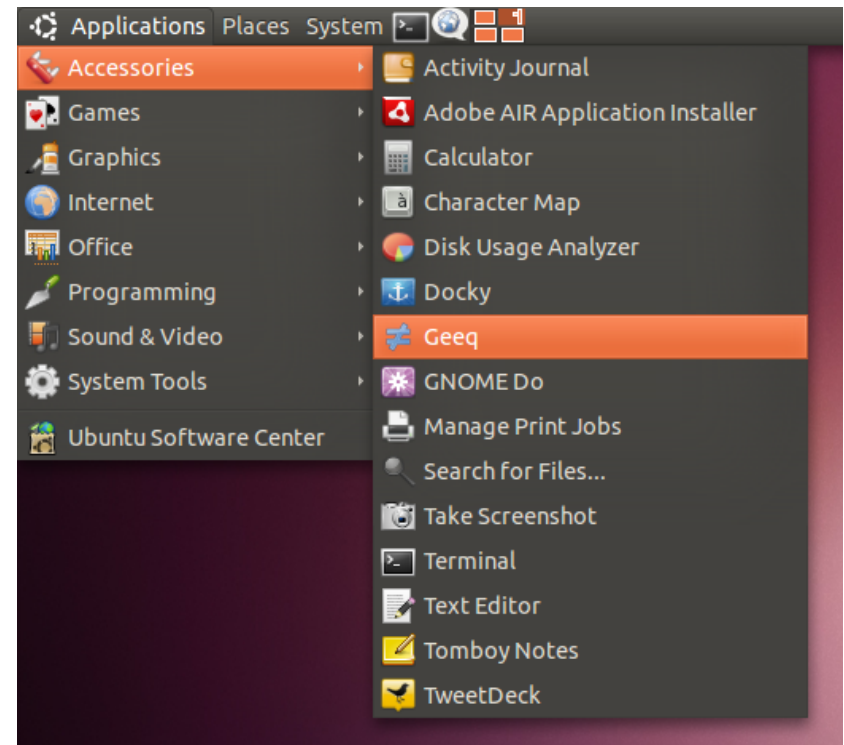
# A Couple Hours Work

- At any point, type “**quickly run**” to test you app

The screenshot shows the Ubuntu desktop environment. The top panel displays system information: Applications, Places, System, network status, volume, and date/time (Thu Oct 7, 9:46 AM). The desktop background is a purple gradient. On the left, there is a home icon labeled 'jdeslip's Home' and a terminal icon labeled 'Terminal'. The main window is titled 'Geeq' and contains the mathematical equation  $\int x^2 dx = \frac{x^3}{3}$ . Below the equation, a terminal window shows the command `\int x^2 dx = \frac{x^3}{3}`. At the bottom of the window, there is a control panel with an 'Update Equation' button, a 'PNG size' slider set to 54.0, and dropdown menus for 'pslatex' and 'svg'. The bottom of the desktop features a dock with icons for various applications.

# Packaging your App

- In the same directory type “**quickly package**” - this command will automatically – with no extra input on your part at all – create **.deb** package that you can send to all your friends.
- If you type “**quickly share**” - a .deb package will be created and the file will be uploaded to your **PPA** repository at **Launchpad**.
- If you type “**quickly release**” - a .deb is created, your PPA is updated and a project page at Launchpad is updated with a released source.



# Launchpad Interaction

- Quickly makes it easy to host your project at Launchpad.

- Publish Source
- Version Control
- Roadmaps
- Bug Reporting
- Branches/Patches

The screenshot shows the Launchpad page for the project "GEEQ - The Gtk Editor of EQUATIONS". The browser address bar shows the URL "https://launchpad.net/geeq". The page features a navigation menu with "Overview", "Code", "Bugs", "Blueprints", "Translations", and "Answers". The main content area includes a description of the project as a universal GTK latex based equation editor for Linux/Ubuntu, a "Series and milestones" section with a timeline showing versions 0.7, 0.7.2, 0.7.3, 0.7.4, 0.7.5, and 10.09.1, and a "Downloads" section with a button to download "gee\_q\_10...rce.changes". The right sidebar contains a "Get Involved" section with links for "Report a bug", "Ask a question", "Help translate", and "Submit code".

**GEEQ - The Gtk Editor of EQUATIONS**

Overview Code Bugs Blueprints Translations Answers

Registered 2010-05-13 by Jack Deslippe

A universal GTK latex based equation editor for Linux/Ubuntu.

GEEQ is a GTK latex based editor of linux allowing dragging and dropping of equations into folders, openoffice documents etc. It based loosely on the EKEE ruby editor that is no longer supported.

Packages available: <https://launchpad.net/~jdeslip/+archive/ppa>

[Home page](#) [External downloads](#)

**Project information**

**Maintainer:** Jack Deslippe

**Driver:** Jack Deslippe

**Uses Launchpad for:** Answers, Bug Tracking, Branches, and Translations.

**Development focus:** trunk series

**Programming Languages:** Python

**Licenses:** GNU GPL v2

[RDf metadata](#)

**Series and milestones** [View full history](#)

0.7 0.7.2 0.7.3 0.7.4 0.7.5 10.09.1

**Downloads**

Latest version is 10.09.1

gee\_q\_10...rce.changes

released on 2010-09-24

[All downloads](#)

GEEQ trunk series is the current focus of development

[View milestones](#)

Latest bugs reported [All bugs](#)