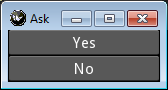
Display\_Name..

Computer Programming Using Kivy 1.9.0 - IGUI 1 - Windows and Buttons

GOAL: Make a window with a Box layout containing two buttons and with a custom title:



Kivy is a framework that allows you to program Apps for a desktop computer (Windows or Apple) or smart mobile device (Android or iOS). Because this framework is modern & flexible, it is a good way to see how to program a GUI (graphical user interface), so you can begin to program windows & buttons. When you are programming GUI, you will notice that there is certain repetitive code that is in all of your applications—the “boilerplate” code below is to load Kivy and to create windows. All of this code is imperative—that means it uses python language and no window file containing kv language. Boilerplate code means code that is ok to copy & paste because it is always needed, is common knowledge, & is not owned by anyone. NOTE: “pass” keyword means you will fill in the class later (such as in the build method below)

* If you are using a printed version of this, click Start, This PC or Computer, Resources, Computer Programming, Unit 2 (Imperative versions), then open **IGUI 1 (this document)**
* Open Geany
* File, **New File**
* Copy the following code (**all text in bold** monospaced font below) and paste it into the file:

**from** kivy.uix.boxlayout **import** BoxLayout

**from** kivy.app **import** App

**from** kivy.factory **import** Factory

**class** **MainForm**(BoxLayout):

**pass**

**class** **MyApp**(App):

**def** **build**(self):

form = MainForm()

form.cols = 1

form.orientation = "vertical"

form.okButton = Factory.Button(text="OK", id="okButton")

form.add\_widget(form.okButton)

**return** form

**if** \_\_name\_\_ == '\_\_main\_\_':

MyApp().run()

* File, Save As,Desktop, your home drive, **igui-boxlayout.py**

-Now forever, you can use that file and copy it as much as you want as a starting point to make kivy programs with a box layout. It is a blank form like a template where you can later type whatever you want. Now that you have a file that is only boilerplate, save again to start making your own unique program:

* File, Save As,your home drive, **igui1.py**

How to use kivy to create a form:

You use kivy’s Builder to load a form from a text file (declarative kv file), but above we have created the window using methods (imperative). If \_\_name\_\_ == ‘\_\_main\_\_’ will check to see if your module is running as the main module—this always true if you have the file open and press execute. This simply means that whatever is indented under that will happen immediately, in this case, we call the run method of the app. After the app initialization is complete, kivy calls your build method. The build method we customized adds a boxlayout with 1 column, with 1 button inside. In order to change how the form looks, you only need to change what widgets are added in the build method.

* Try changing the form to have a Yes and No button instead of one OK button. All you have to do is retype or **copy and paste the two lines that define the button** (“Factory.Button” line and the “add\_widget” line below it) so that those lines appear twice, then for the first one, **change OK to Yes; also change the names of the variables (lowercase ok to yes).** For the 2nd one **change OK to No; also change the names of the variables (lowercase ok to no)**
* Next, change the App name. **Replace** MyApp with AskApp **both** times it is used in the code.
* Project, Run File (IF IT HAS ERRORS THAT YOU FIXED, it may be running old file—close NINJA & reopen)

**NOTE: Make sure you don’t make any file named kivy, otherwise import will say something “not found in kivy”**