# CS 144 Advanced C++ Programming Spring 2019

Instructor: Ron Mak

## Assignment #8

Assigned: Tuesday, March 26
Due: Tuesday, April 9 at 8:30 AM
Canvas: Assignment 8. Install wxWidgets
Points: 100

## Install wxWidgets

For Assignment #9, you will write a GUI-based program in C++. Therefore, for this Assignment #8, you will download, configure, and install the cross-platform **wxWidgets** package for developing programs with graphical user interfaces.

You will also install the **VirtualBox** virtual machine manager, and then the **Ubuntu** variant of the Linux operating system in a virtual machine managed by VirtualBox. Your host machine operating system can be either Windows 10 or MacOS X. Then you will install wxWidgets on top of Ubuntu.

- VirtualBox: <u>https://www.virtualbox.org/</u>
- Ubuntu: <u>https://www.ubuntu.com/download/desktop</u>
- wxWidgets: <u>https://www.wxwidgets.org/</u>

Note: Windows 10 has a new option to install Linux as a subsystem. That won't work for this assignment because the subsystem is only text-based.

If you already have Ubuntu on your computer (such as via dual booting), then you don't need to install VirtualBox.

#### Sample wxWidgets programs

After you've installed wxWidgets, build all the sample and demo programs. Make sure you can run the **minimal** sample program. Make a screen shot:

	Minimal wxWidgets App		
File Help			
Welcome to wx	Widgets!		///

Then run the **widgets** sample program which includes all the widget controls. Make a screen shot, for example:

		wxGTK widgets demo	×
Widget Text Page			
widget     Text     Page       Image: Native     Image: BitmapCombobox       Image: BitmapCombobox       Image: BitmapCombobox       Image: Choice       Image: Combobox       Image: Combobox       Image: FileCtrl       Image: Combobox       Image: FileCtrl       Image: Combobox       Image: FileCtrl       Image: Combobox       Image: Spin       Image: Spin	Set style Major specifies rows count Numbering: default left to right top to bottom Major dimension: 3 Number of buttons: 12 Update Reset	Change parameters Current selection: Change selection: Label for box: I'm a radiobox Label for buttons: Item Jisable 2nd item Hide 2nd item	I'm a radiobox item 1 item 2 item 3 item 4 item 5 item 6 item 7 item 8 item 9 item 10 item 11 item 12
Log window 12:36:42: Test - Append some	e items with data, one by one:		
12:36:42:passed	event:	2:	
			Clear log Exit

## **Tutorials**

See http://www.cs.sjsu.edu/~mak/tutorials/index.html. The pertinent ones are

- <u>InstallVirtualBox.pdf</u> Install the VirtualBox virtual machine manager on a Windows 10 platform, which will allow us to run the Ubuntu operating system in a virtual machine.
- InstallUbuntu.pdf

Install Ubuntu 18.10 in a virtual machine managed by VirtualBox. Ubuntu is a popular variant of the Linux operating system.

InstallwxWidgets.pdf

Install the wxWidgets on the Ubuntu platform to allow us to build and deploy interactive GUI applications. Ubuntu can be running directly on physical hardware or in a virtual machine.

## Rubric

Your program will be graded according to these criteria:

Criteria	Max points
Screen shot of sample program <b>minimal</b> running on Ubuntu.	50
Screen shot of sample program widgets running on Ubuntu.	50