Install Python 3.6 on Android and Chromebook

discussion posted 5 months ago by **kiwitrader** (Community TA)

Three solutions should enable you to use an Android tablet for this course.

1. Install Linux which will support everything in 6.00.1x and the tkinter Robots PSET in 6.00.2x (best)
2. Install PyDroid3 which will probably provide everything you need for .1x and .2x (easiest)
3. Install Termux & use it with IPython Notebook, which will also do everything except the robots (my favourite).

I'll detail option 3 in this post but most people might find option 2 right for them (download & go).

Termux provides a Linux like environment to run python 3.6, numpy and matplotlib which will let you complete all exercises in 6.00.1x. It will also let you complete all exercises but PSET 2 in 6.00.2x. PSET 2 uses tkinter for the robot exercise (not to be missed) and needs a Linux, OSX or Windows desktop.

The primary IDE is IPython Notebook which is very well supported by the Scientific Computing Community and has some great tutorials. You can also use my favourite lite ide, ptipython and I'll include instructions to load it.

The solution is based Leonardo Uieda's tutorial with some additions to fix problems I experienced. Termux uses 400 Mbytes when fully loaded with Python and its modules.

Can someone try this on a chromebook and let me know what works - it would be quicker & easier than a full linux install Current list of Android supporting Chromebooks .

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3 responses

kiwitrader (Community TA)
5 months ago

Installation Process

Install Termux from Google Play.

Open Termux and run:

```
apt update && apt upgrade
apt install clang python python-dev fftw libzmq
apt install libzmq-dev freetype freetype-dev
apt install libpng libpng-dev pkg-config curl

curl -L https://its-pointless.github.io/setup-pointless-repo.sh | sh

pkg install scipy # ignore error, fixed when install numpy
pkg install numpy

LDFLAGS=" -lm -lcompiler_rt" pip install ptpython jupyter matplotlib
```

Test the installation by running the first exercise for IPython Notebook below.

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kiwitrader (Community TA)
5 months ago

Extra Details

Getting edX files

So that you can download files from edX and use them on your tablet you need to enable termux to setup a storage directory. You do this with the command:

```
termux-setup-storage
```

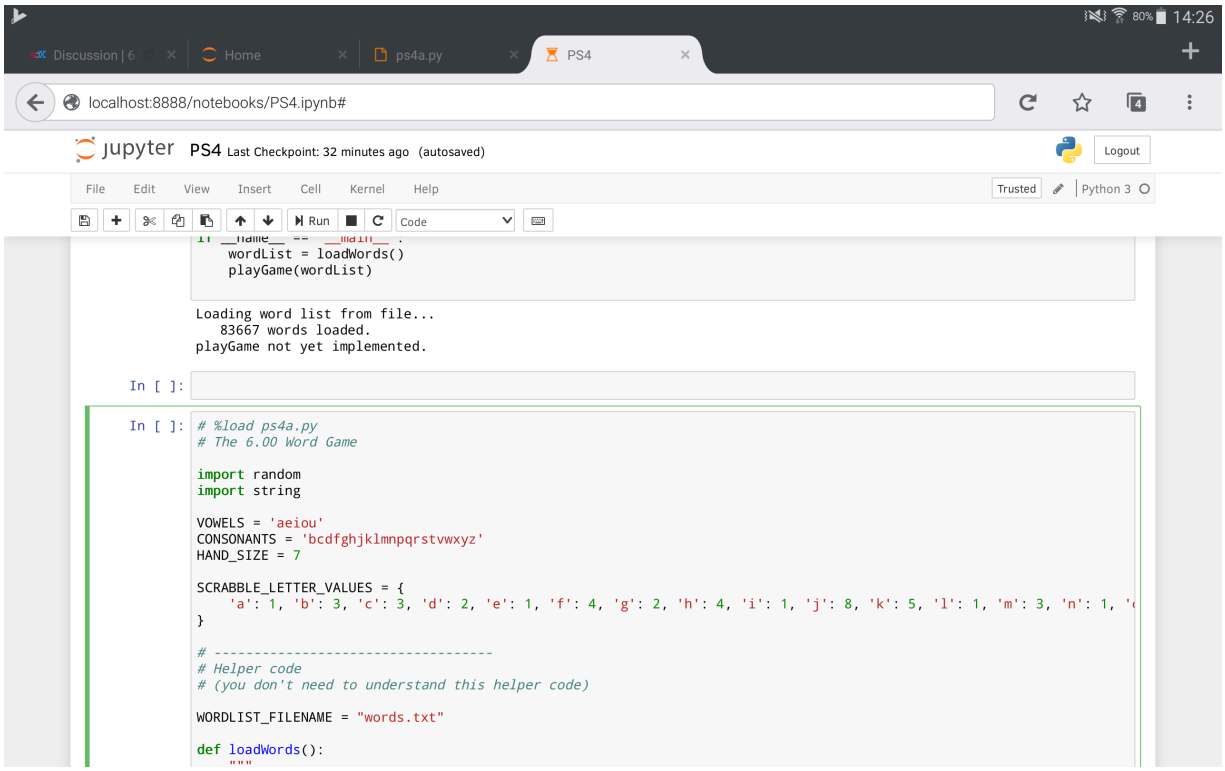
This creates a directory called storage which has symlinks to some of your android directories including downloads (where you will normally download and unpack edX files). Once you have unpacked them you can copy them to termux using the copy command like

this (I downloaded problem set 4s file and unpacked it into a directory ProblemSet4):

```
cp storage/downloads/ProblemSet4/* ./
```

Opening a .py file in an IPython Cell

Put `%load ps4a.py` into the cell and run it. It'll load the text of the file into your cell so you can run the code (and it leaves the load command commented in case you want to reuse it).



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5 months ago

Using IPython Notebook

Have a good read of Leo's blog page. Once you've done that use terminux to create an ipython notebook server by entering:

```
jupyter notebook
```

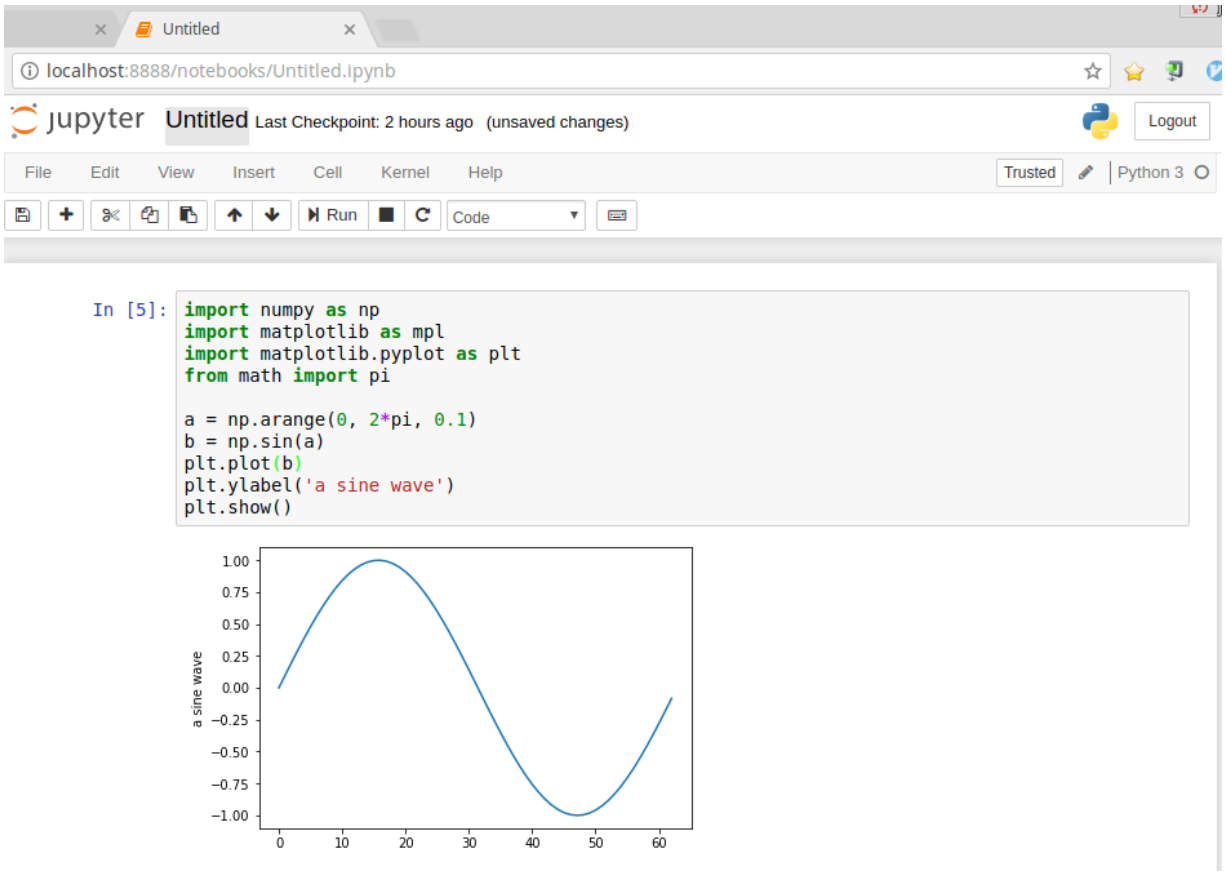
It will respond with a url and a key .... you cut and paste them into a browser on your tablet (firefox or chrome say). This will open an ipython notebook home page. On the top right select **New** and then Python 3, which will open a new notebook in a new tab.

You can give the new notebook a name by selecting the word Untitled and replacing it with a name of your choice.

Then paste this code into the first cell in your notebook. The press the run button and after a little processing you should get a plot like this proving that everything goes!!

```
import numpy as np
import matplotlib as mpl
import matplotlib.pyplot as plt
from math import pi

a = np.arange(0, 2*pi, 0.1)
b = np.sin(a)
plt.plot(b)
plt.ylabel('a sine wave')
plt.show()
```



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