**Raspberry Pi – Python programming & Thonny IDE**

1. Set up your Pi:

There are several different ways to install an OS:

A - Using the raspberry pi imager – More efficient way

[Raspberry Pi OS – Raspberry Pi](https://www.raspberrypi.com/software/)

* Insert the SD card into a laptop and run the imager

B - Preparing a USB stick with the software **rufus** with the .iso file for Raspbian OS

* [Rufus - Create bootable USB drives the easy way](http://rufus.ie/en/)
* [Operating system images – Raspberry Pi](https://www.raspberrypi.com/software/operating-systems/)
  1. Insert the SD card into the Pi, along with the USB stick
  2. Install Raspbian OS

1. Thonny should be in the image: open Thonny and you can start programming!
   1. Explore the debugging
2. **Pip, pip3**: These commands will be useful for when you need to install certain libraries and modules in the *virtual environment* ([What is a virtualenv, and why would I use one? | PythonAnywhere help](https://help.pythonanywhere.com/pages/VirtualenvsExplained/)) “A virtualenv, or "virtual environment", is a separate directory in your home directory that contains non-system packages that you've chosen to install into the virtualenv. When you run some Python code (or in your website setup) you can say "use the virtualenv called X", and then that code will have access to the standard library and the virtualenv's packages -- nothing else.”