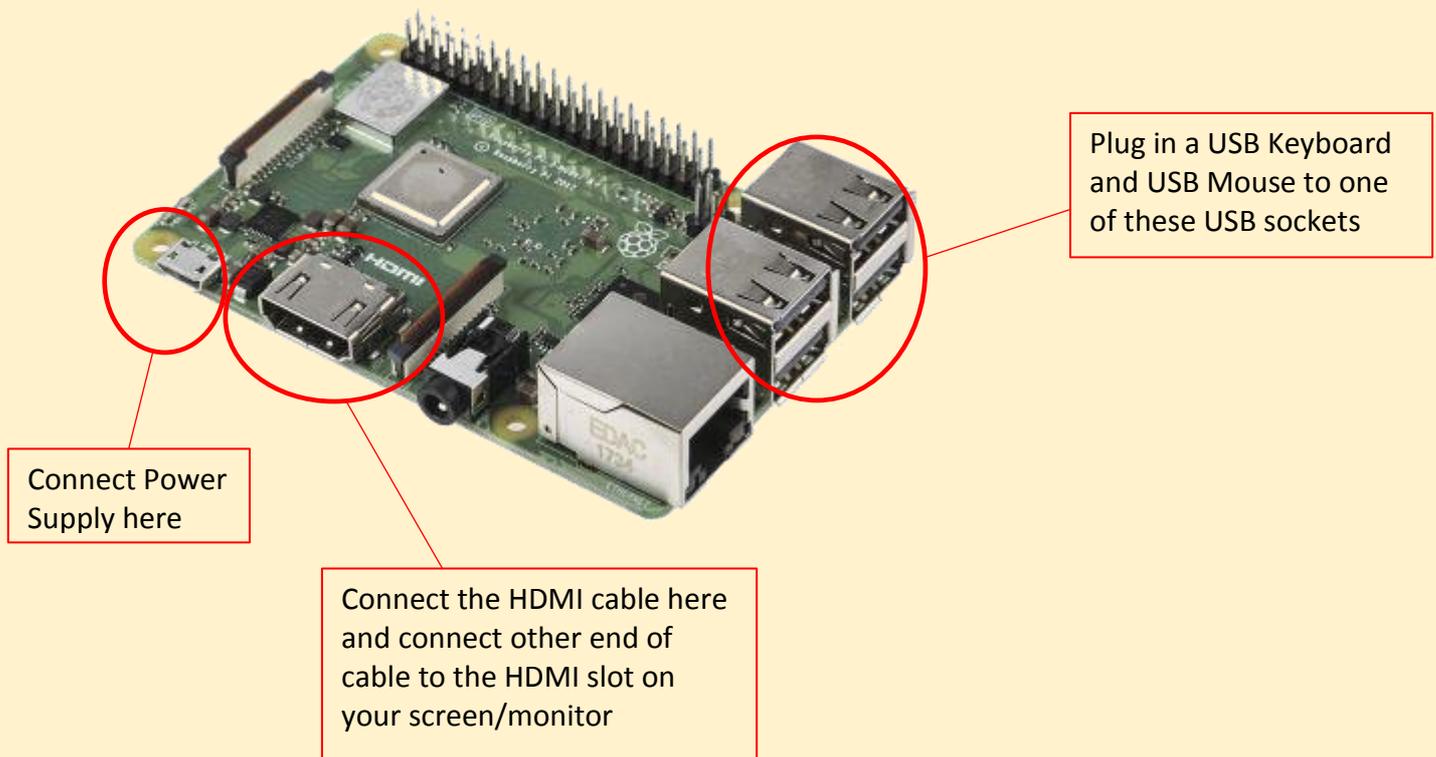


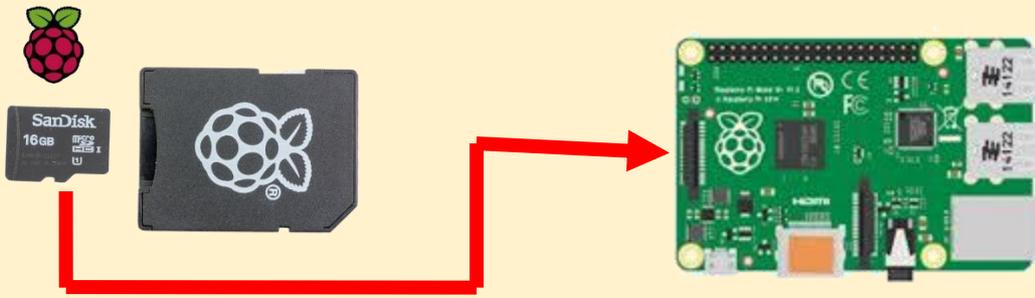
## Raspberry Pi Computing Challenge

### Task 1 – Familiarisation with your Raspberry Pi

The quickest way to start enjoying to work on your Pi is to dive straight in; set-up and begin experimenting with the various features. Connect the leads that came with your Raspberry Pi (HDMI cable and Power Supply) as shown plus a USB keyboard and USB Mouse, which you need to supply:



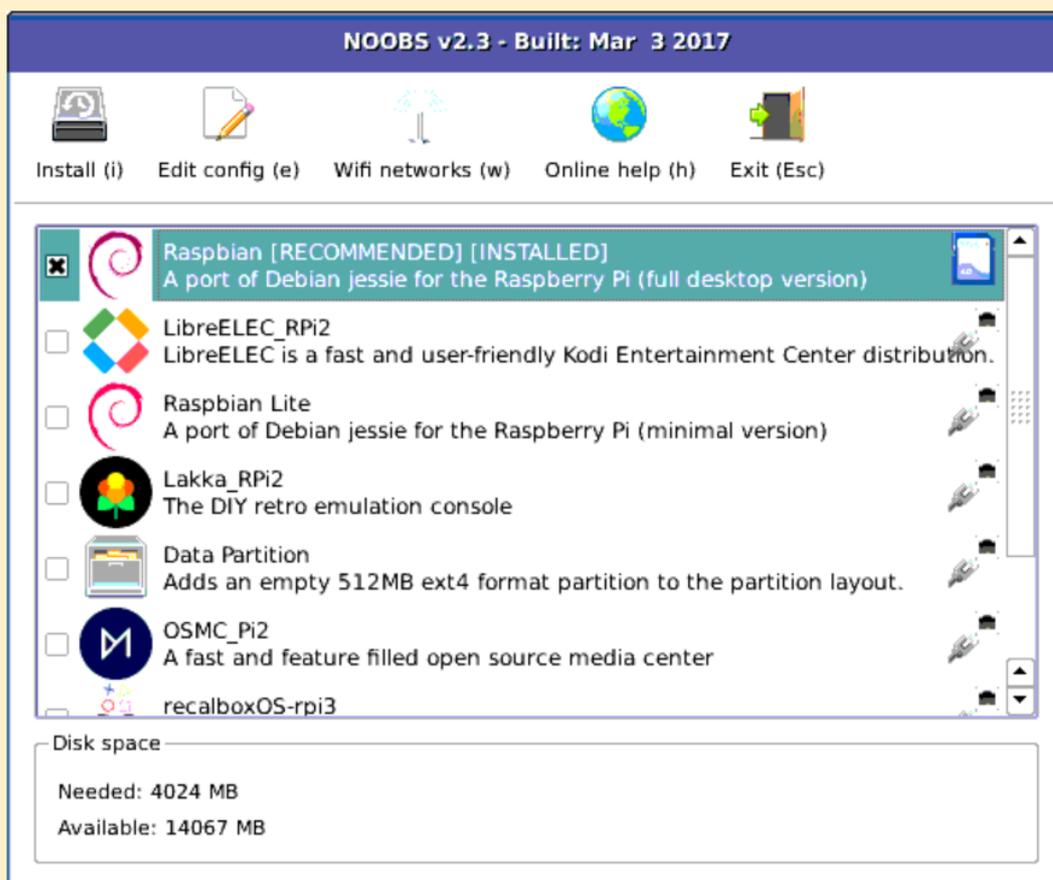
Finally, the micro SD card needs to be inserted. This card comes in an SD converter and needs to be removed to fit into the micro SD card socket on the underside of your Pi:



You are now ready to start the software set-up.

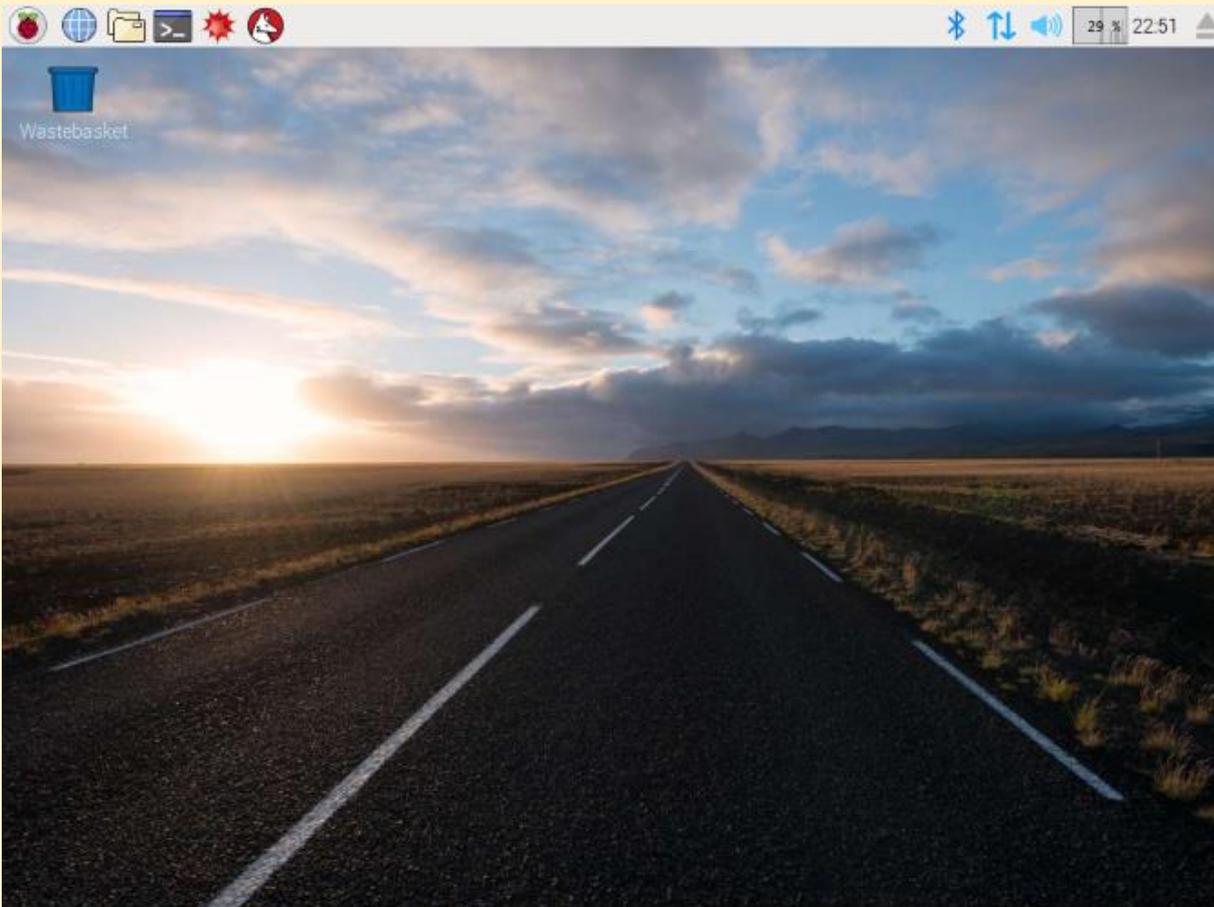
As with any computer you need an operating system (OS) to allow you to interact with the machine. The micro SD card you inserted into your Pi comes preinstalled with NOOBS, a program to guide you through the OS installation procedure.

On powering up your Pi and switching to the HDMI source you are connected to on your screen or monitor you should see this screen:



Firstly, click on Wifi networks (w) and connect to your WiFi. Next check the box next to Raspbian (Recommended) and click the install button. The Raspbian Operating System will now be installed. This may take a little while.

Eventually you will be presented with the Home Screen:



It is now time for you to start investigating your machine and its software to become completely familiar with operating your Raspberry Pi. Your first point of access is the Raspberry button in the top left hand corner of the screen, start investigating interacting with the various features and installed software on your Pi via this Graphical User Interface (GUI). When you are comfortable navigating and interacting with the various software you could try interacting with your machine at a lower level. At a very low level, computers work by interpreting ON and OFF signals as 0's and 1's; each digit is a bit of data. This would be extremely tedious and time consuming to read and write. It is for this reason an interface is used to convert this binary into something easier to read from and write to. The GUI you have used so far is a higher level way to interact. At a lower level a shell can be used interact with your operating system. As Raspbian (the OS) is based on an Operating System called Linux you interact with it through a Linux or Terminal Shell. To open a terminal shell, click on the 4th icon along from the left on the top bar of your screen. To see a full list of commands, you can use here, type help. Now experiment interacting with your Pi using a Terminal Shell. A list of commands can also be found at:

<https://www.raspberrypi.org/documentation/linux/usage/commands.md>

In the next task we will start writing simple programs to run on your Raspberry Pi.