Computer Science G10 at The Dragon Academy
Unit: Introduction to the Raspberry PI

Wed 21 Nov 2018 - Thu 22 Nov 2018

You can see a more detailed discussion of what we did by reading the first section of the document "RaspberryPi3-Intro.pdf" available at `http://msantos.sdf.org/G10/Material/RPI`.

The following is a summary:

- Goal:
  1. Connect the Raspberry Pi (RP) to your laptop
  2. Access the RP by establishing a secure connection to it from your Laptop.
- Step by step:
  1. Build/set up a local network: by sharing the Wifi connection with Ethernet. : Network & Sharing Center; Device settings; Wifi enable sharing with ethernet
  2. Identify all network devices on our laptop : ipconfig
  3. Connect RP to ethernet and boot it
  4. Check networks devices: a new ethernet device in our has been set, i.e., it got a valid IP address. It's an address starting by 192.168.x.1 and ending in 1. That's is our own laptop's IP within our private network.
  5. Find the RP IP address: using nmap -sS 192.168.x.1/24
  6. Identify RP IP from the output of nmap
     (a) We saw it's IP has that same pattern namely 192.168.x.y but the last number is different: y instead of 1.
     (b) We saw the ports open on each device present in the local network. In particular, the RP has port 22 open and it's offering the ssh service there. So we know now how and where we can connect to our RP.
  7. We established an ssh connection to our RP: issuing 'ssh pi@192.168.x.y" . In Windows, using `Putty` this requires 3 steps: ssh 192.168.x.y then entering username "pi" then password "raspberry"
  8. We shut down our raspberry by issuing on it the command "sudo shutdown -h now"