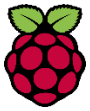
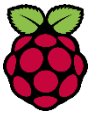
TAFE NSW Higher Education

ITICT202A Wireless Networks

Individual Project



Raspberry Pi Individual Project



The main focus of this assignment is to discover the capabilities of Wireless Single Board Computing devices SBC and what kinds of challenges or issues may occur when you implement them in the Internet of Things projects. The total weight for this project is 15 marks.

Stage 1:

Basic Implementation: (5 marks)
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Configuring Raspberry Pi as an Access Point AP **OR** cracking a wireless AP.
"I highly recommend for students to do both".

Configuring the Raspberry Pi as an access point AP.
There are many ways to achieve this task. My recommendation is to follow these steps:

- Make sure to get familiar with Linux. You can check Netacad Linux Essential course or free EDX Introduction to Linux course from Linux Foundation.
- Configure the Raspberry Pi as DHCP server
- Configure the Raspberry Pi as a router and make sure to change the **iptables** to allow forwarding traffic.
- Configure the WLAN **hostapd** which would enable your Raspberry Pi to advertise SSIDs.

Cracking WLAN SSIDs by using Raspberry Pi.

- Make sure to get familiar with Linux. You can check Netacad Linux Essential course or free EDX Introduction to Linux course from Linux Foundation.
- There are many tools and tutorials on cracking APs. I recommend using Aircrack or Kismet to achieve this task.

To get a full mark in stage 1, you should finish the configuration successfully for Raspberry Pi as AP or cracking AP by week 6. Week 8 is the last week to submit this section.
You should show your instructor these steps in class. The instructor might ask you a few questions related to your configuration, so be prepared to answer them.