

PROJECT ANALYSIS – TERM 1 PRESENTATION

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Project Title : Wi-Fi Hacking With A Raspberry
Pi

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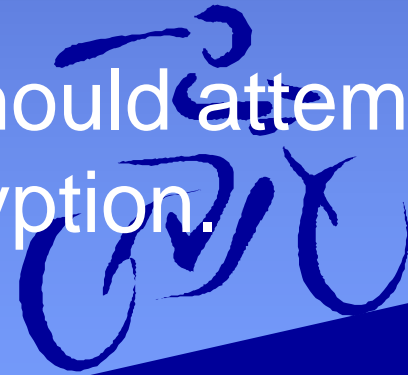
Background

- The project is under cyber security, cyber security is the practice of protecting systems, networks and programs from digital attacks.
- And since the number of connected devices has increased chances of digital attacks also increased.



OVERVIEW

- The project is to build a prototype on a Raspberry Pi that will retrieve hardware and software information about Wi-Fi network, devices connected to the network etc.
- Objective of the project is create cyber security awareness on campus.
- Where possible, the prototype should attempt to connect to Wi-Fi network with weak encryption.



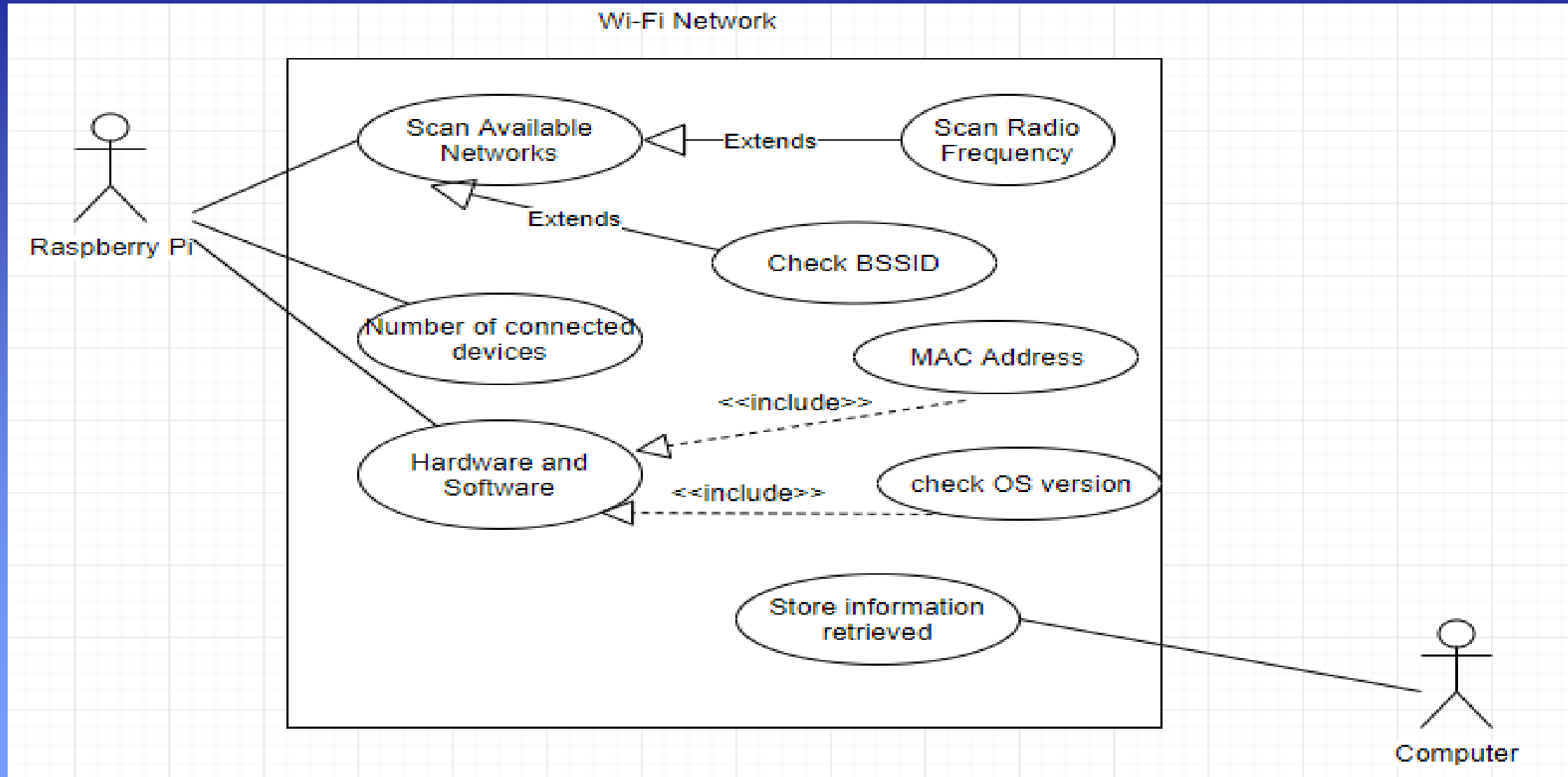
Requirements and Requirements Analysis

REQUIREMENTS

- Retrieve information about Wi-Fi network (Radio Frequency 2.4/5.0 GHz, Number of connected devices etc.).
- Check hardware and software information of the devices connected to each Wi-Fi network (Mac address, Vendor, check OS etc.).
- Where possible the prototype should connect to Wi-Fi network with weak encryption.



REQUIREMENTS – USE CASE



User Interface Specification

- According to stakeholders(CSIR team) user interface should on command prompt or terminal display.

```
num  ESSID          CH  ENCR  Power  WPS?  CLIENT
---  -
1    eduroam          1   WPA2  43db   no
2    UoC-CAMPUS      1   WPA2  43db   no
3    UoC-CAMPUS      11  WPA2  37db   no  client
4    eduroam          11  WPA2  36db   no
5    eduroam          6   WPA2  27db   no
6    Samba           6   WPA   27db   no
7    UoC-CAMPUS      6   WPA2  26db   no
8    AndriodAP7961  11  WPA2  18db   no

[+] select target numbers (1-8) separated by commas, or "all": 3
[+] 3 target selected.

[0:00:20] starting wpa handshake capture on "UoC-CAMPUS"
[0:05:10] new client found: 78:EF:60:0C:F8:5C
[0:02:51] new client found: 98:9C:57:30:85:58
[0:00:31] new client found: 98:9C:57:55:FA:9E
[0:00:09] new client found: 54:EF:92:28:8A:39
[endless] new client found: 8C:26:18:28:C3:12
[0:00:00] unable to capture handshake in time

[+] 3 attack completed:

[+] 0/1 WPA attacks succeeded

[+] disabling monitor mode on wlan0mon... done
[+] quitting

root@kali:~# import Pictures/1snap.png
```

REFERENCES

References

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PROJECT PLAN

2019 Project Plan			
TERM 1	TERM 2	TERM 3	TERM 4
PROJECT ANALYSIS	PROJECT DESIGN AND DEVELOPMENT	PROJECT IMPLEMENTATION	PROJECT TESTING, EVALUATION AND PRESENTATION
MARCH	APRIL - JUNE	JULY - OCTOBER	OCTOBER - DECEMBER
<ol style="list-style-type: none">1. Create Dropbox and upload project description.2. Documentation.3. Supervisor review project document.4. Meet with project stakeholder (CSiR).5. Submit Documentation.5. Create Honours Project website.	<ol style="list-style-type: none">1. Term 1 Presentation.2. Research on Kali Linux penetration tools and tools that would be useful through the project.3. Play around with Raspberry Pi.1. Project Management Session on: 2019-05-23.2. Design.3. Download and install all necessary software and tools.1. Prototyping	<ol style="list-style-type: none">1. Convert tools used in the prototype to a code.2. Implementation.	<ol style="list-style-type: none">1. Testing - within the building.2. Testing - around campus.3. Fix or Debug error encountered during testing.4. Final Presentation.