PUSL3119 Computing Individual Project

Project Proposal

Network Management System

Supervisor: Mr. Chamara Dissanayake

Name: Galappaththi Madubhashitha
Plymouth Index Number: 10749058
Degree Program: BSc(hons) Computer Network

- **Problem statement**

  Nowadays, its getting extend network infrastructures and increasing networking devices in a network also. Data warehouses, severs farms are examples. So these kind of companies looking for some smooth and easy going work stations(management systems) to control or manage the networks. Unless network engineers must spend lot of time to figure out issues. And we also know there are some industrial networking tools to monitoring networks, but the thing is those tool are not open source to use and have to spend some money on that. And if a network infrastructure getting large, there will be a headache to find out the physical locations of some network devices. So if a device got a failure, it will be so hard to find out. And another thing is, its complex to configure network devices in a network and its take some to configure.

- **Project description**

  In my project, the main scope is to develop a simple network management system by using network automation. This system is not only based on network monitoring but also I hope to develop a tool to detect and find the physical locations of networking devices and hope to develop a tool to detect devices which are connected to a Wi-Fi and hope to develop a tool for troubleshooting by using this system without going to the CMD or I hope to develop a tool to configure network devices. So this project is a system that connected some simple tools which are helping to mange a network. In this case mainly I'm using Python language.

- **Project keywords**

  Network management, Network automation, Python language, Pycharm, Network managing tools, Network monitoring and testing, Location detector.

- **Requirements**

  I have to do researchers and self-study about python language, python libraries deeply and also I should focus on network automation methods. Also have to work with actual network devices, so should have to use network lab in the university or I should looking for a proper simulation to implement.

- **Finance**

  There will be not any cost involving to develop my project. Am using free open source software and tools. And also I wont have to spend any cost to network devices because I can use university network lab.

- **External organizations**

  I wont actually deal with external organizations because am trying to do something new with the knowledge that I have got and the knowledge that am going to absorb.

- **Time Frame**

ID	Title		Nov					Dec				Jan				Feb				Mar			
		30 - 05	06 - 12	13 - 19	20 - 26	27 - 03	04 - 10	11 - 17	18 - 24	25 - 31	01 - 07	08 - 14	15 - 21	22 - 28	29 - 04	05 - 11	12 - 18	19 - 25	26 - 04	05 - 11	12 - 18	19 - 25	26 - 01	02 - 08
1	Learn bout Python l...																							
2	Create Network Mo...																							
3	Create Device Locati...																							
4	Create IP detection ...																							
5	Create Configuratio...																							
6	Testing																							
7	Connect the tools a...																							