Name	Rohit Ashiwal
Enr. No.	17114064
Dept	CSE
Batch	CS 2
Class	B. Tech. 3rd yr

Lab Assignment 4

This assignment aims to make us familiar with the hardware and software aspects of computer networking and extracting information related to computer networking using TCL programs.

Problem Statement 1

Q: *Use CISCO packet tracer to create a network topology as shown in Fig. 1, and configure the network with Open Shortest Path First (OSPF) protocol.*

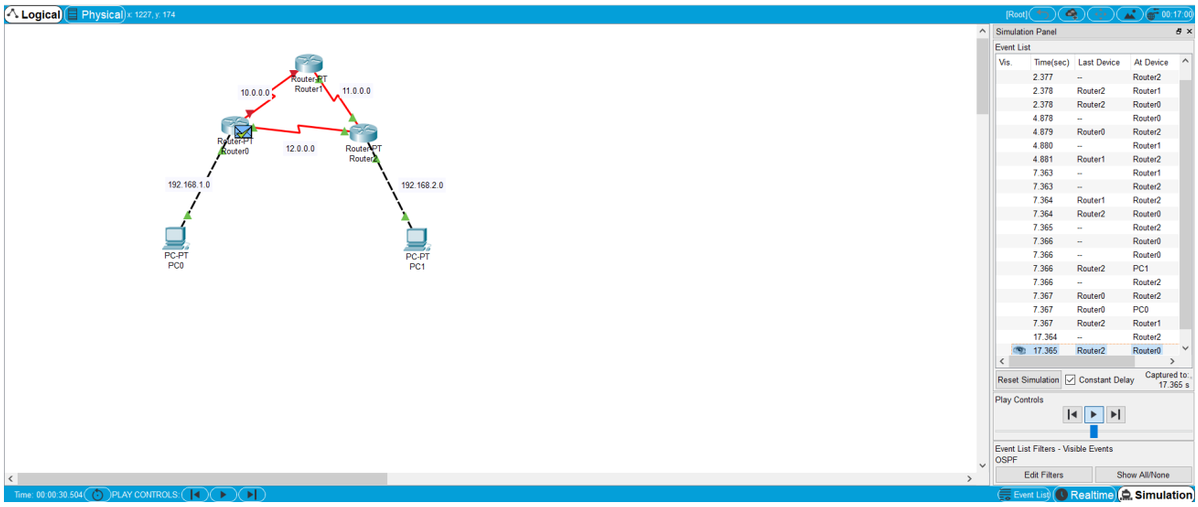

Fig 1. OSPF protocol simulation

No special data structures were used.

Algorithm:

1. We create 3 generic routers and 2 generic PCs
2. Then we setup connection between routers and PC-routers as in fig.
3. Setup the PC's IP configuration and subnet
4. Configure the routers IP ans connection information using CLI
5. Use command $ router ospf 1 to tell that network will work on ospf model
6. During simulation edit fields and set only OSPF on
7. Run the simulation

Problem Statement 2

Q: *Use CISCO packet tracer to demostrate Address Resolution Protocol (ARP) in a ring topology as shown in Fig 2.*

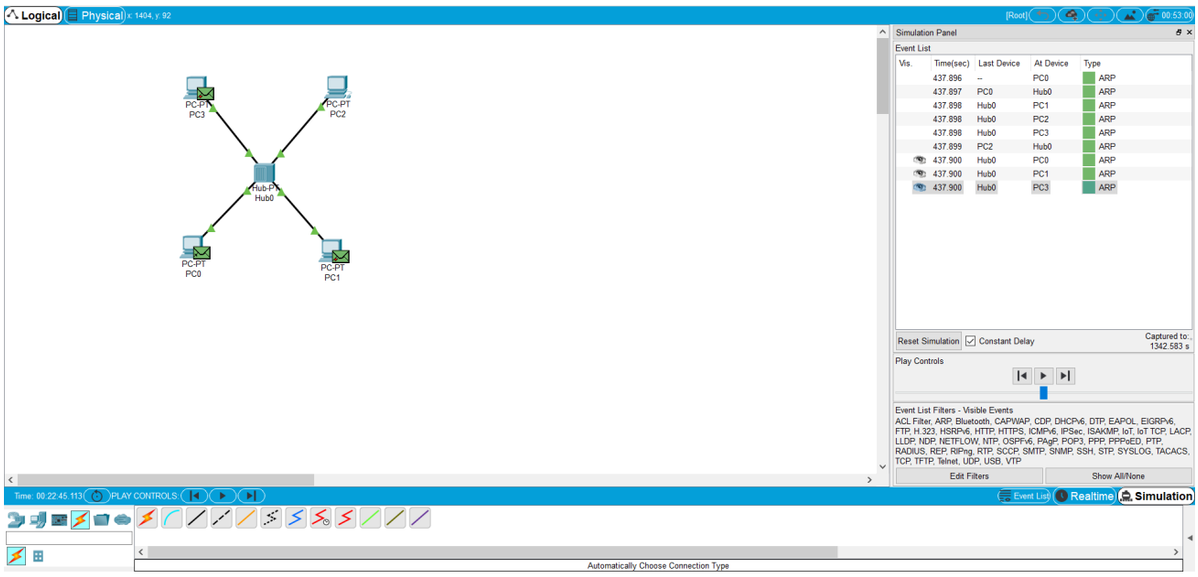

Fig 2. ARP protocol simulation

No special algorithms or data structures were used.

Algorithm:

1. We create 4 generic PCs and a hub that connects all of them in star topology
2. We setup connection between each PC and central hub
3. Then we configure IP for PC and central hub
4. Configure HUB accordingly as well
5. Setup network using CLI or using GUI
6. During simulation edit fields and set only ARP field on
7. Run the simulation