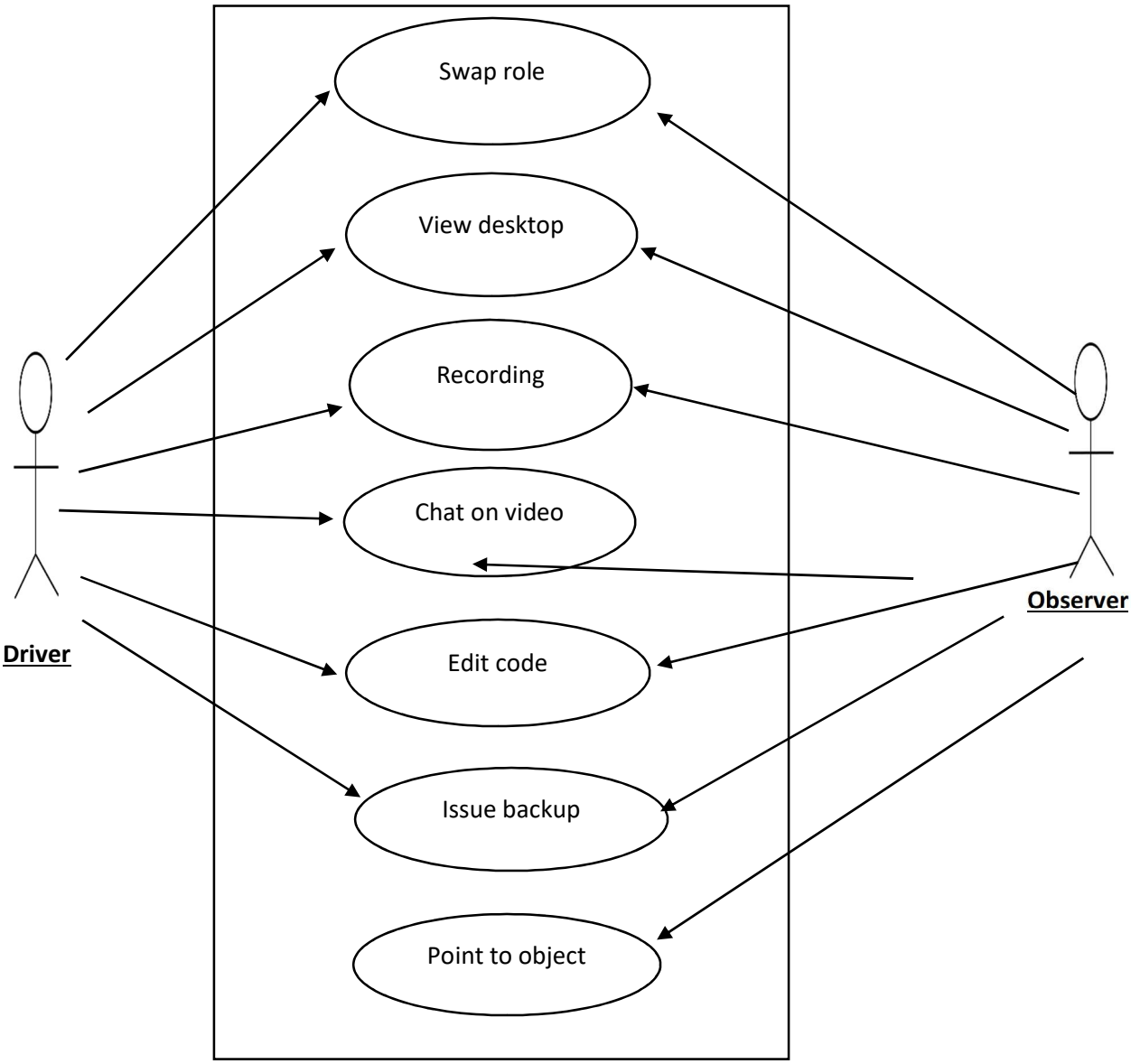
Name: Abdullah **Id:12406**

Q) Draw a use case diagram to show all the functionality of the system.



Remote pair programming system usecase

Q) Describe in detail four non-functional requirements for the system.

Ans) 1: swap role

2: view desktop

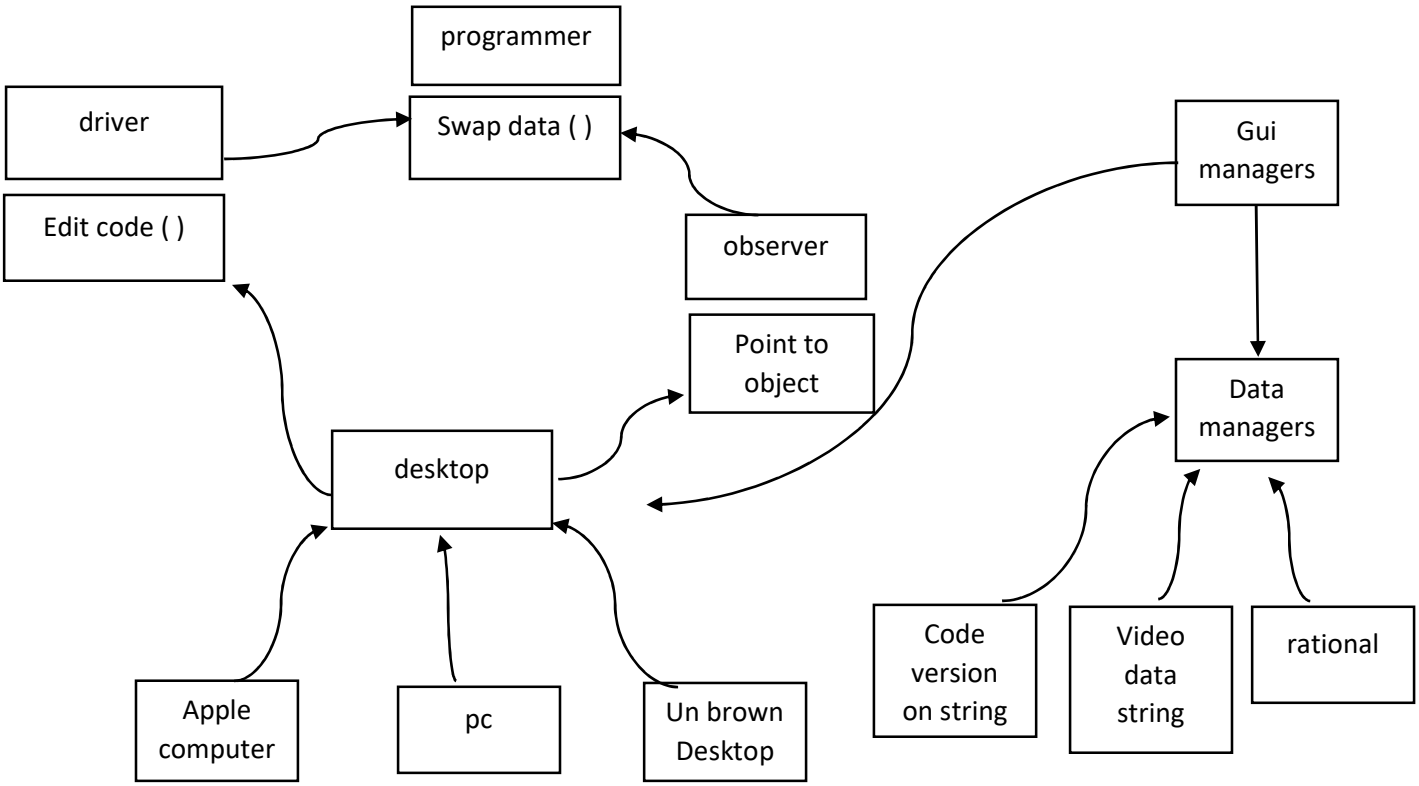
3: point to object

Q) Give a prioritized list of design constraints for the system and justify your list and the ordering?

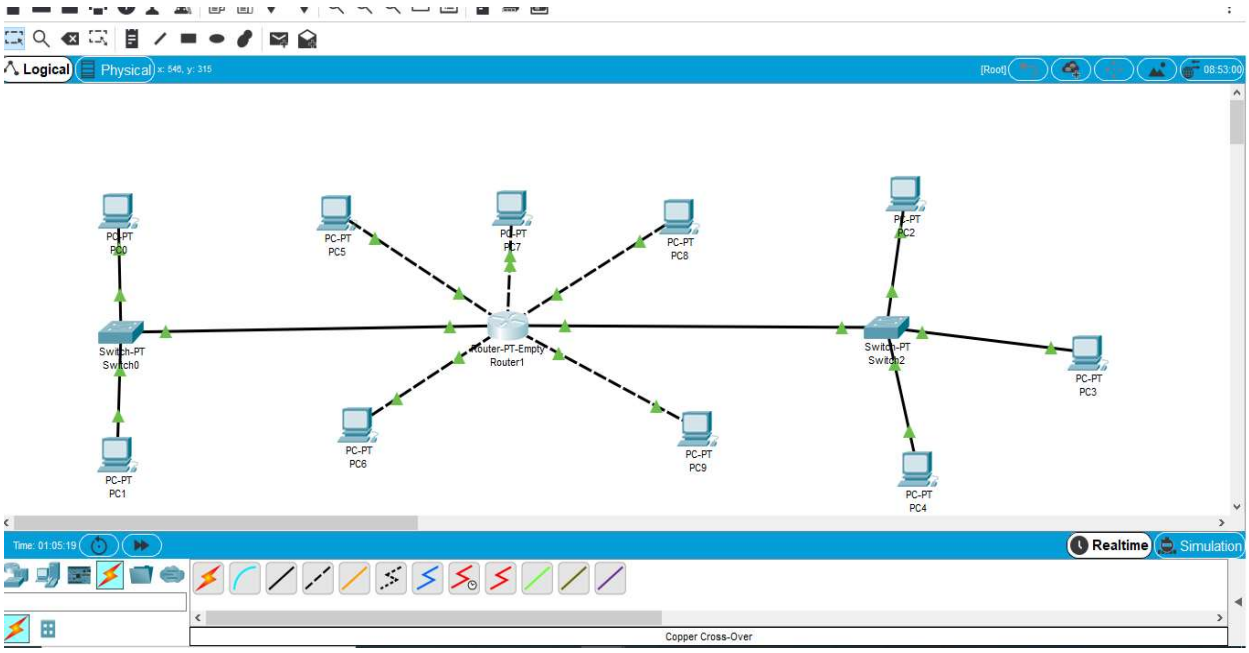
- video distraction
- system hardware problems
- fast response
- miscommunication on network fault

Q) Propose a set of classes that could be used in your system and present them in a class diagram.

Ans) **Diagram:**



Q) Construct a network topology which have one router.



2. Give hostname to the router with your name like “Muhammad ALI”

```
X.25 software, Version 3.0.0.
9 FastEthernet/IEEE 802.3 interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)


          --- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: n


Press RETURN to get started!



Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#hostname abdullah
abdullah(config)#
```

Ctrl+F6 to exit CLI focus

3. Apply login password as your roll number e.g. “12345” on the router

```
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Wed 27-Apr-04 19:01 by miwang

PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
.
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
9 FastEthernet/IEEE 802.3 interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)


         --- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: n


Press RETURN to get started!



Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#hostname abdullah
abdullah(config)#line console 0
abdullah(config-line)#password 12406
abdullah(config-line)#login
abdullah(config-line)#exit
abdullah(config)#exit
abdullah#
%SYS-5-CONFIG_I: Configured from console by console
```

```
abdullah con0 is now available

Press RETURN to get started.

User Access Verification
```

4. Enable secret password to it.

```
User Access Verification

Password:
% Password:  timeout expired!









Press RETURN to get started!


User Access Verification

Password:

abdullah>en
abdullah#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
abdullah(config)#enable password pakistan
abdullah(config)#exit
abdullah#
%SYS-5-CONFIG_I: Configured from console by console
```

Ctrl+F6 to exit CLI focus Copy Paste

5. Show banner of “NO ACCESS” before login on the router and show the results.

```
User Access Verification

Password:

abdullah>en
Password:
abdullah#en
abdullah#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
abdullah(config)#banner login x
Enter TEXT message.  End with the character 'x'.

  "No Access"x
```

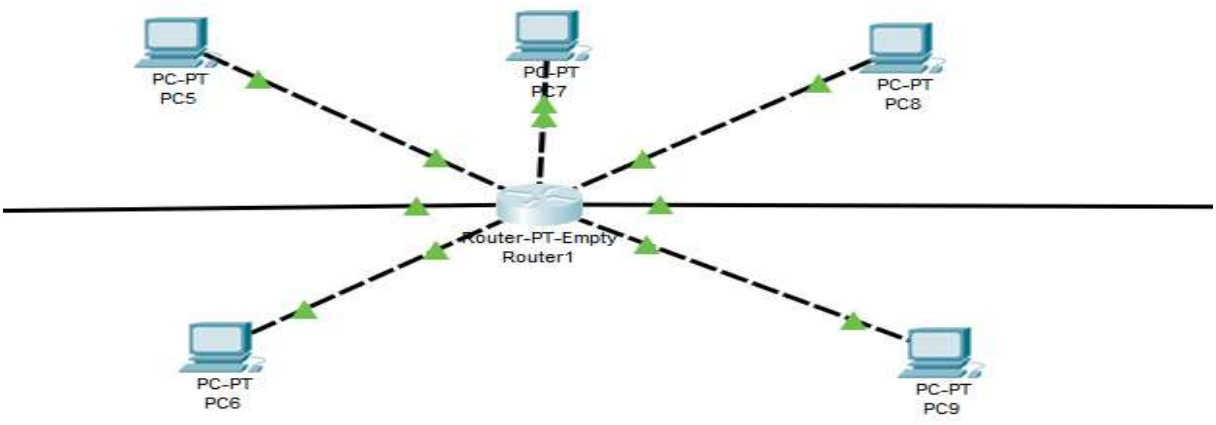
```
%SYS-5-CONFIG_I: Configured from console by console
exit



abdullah con0 is now available



Press RETURN to get started.









  "No Access"

User Access Verification

Password:
```

Ctrl+F6 to exit CLI focus

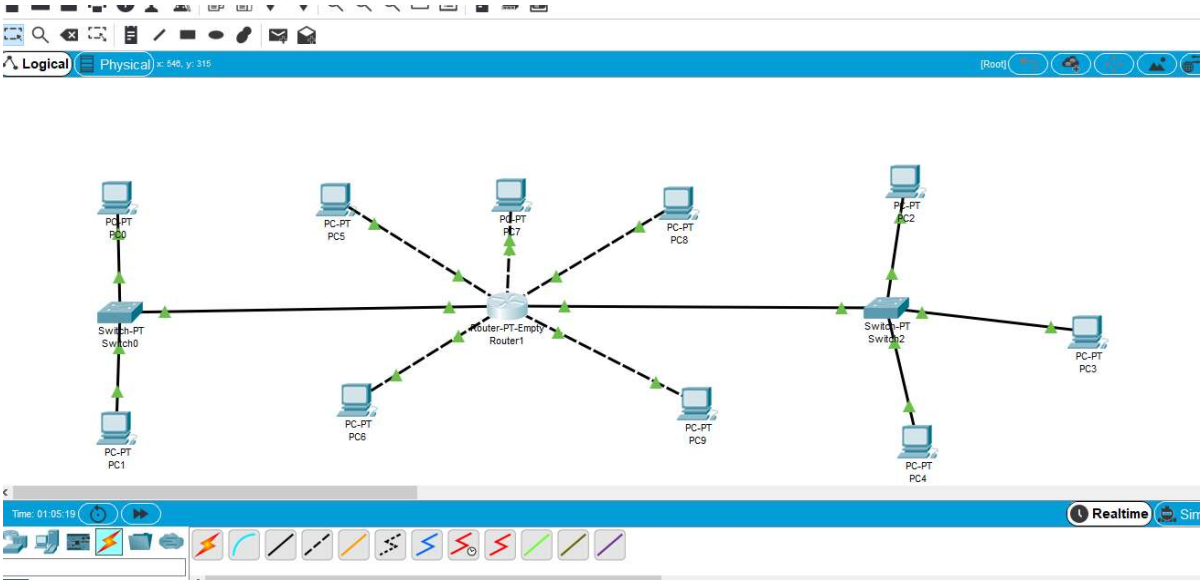
Copy Paste

Top

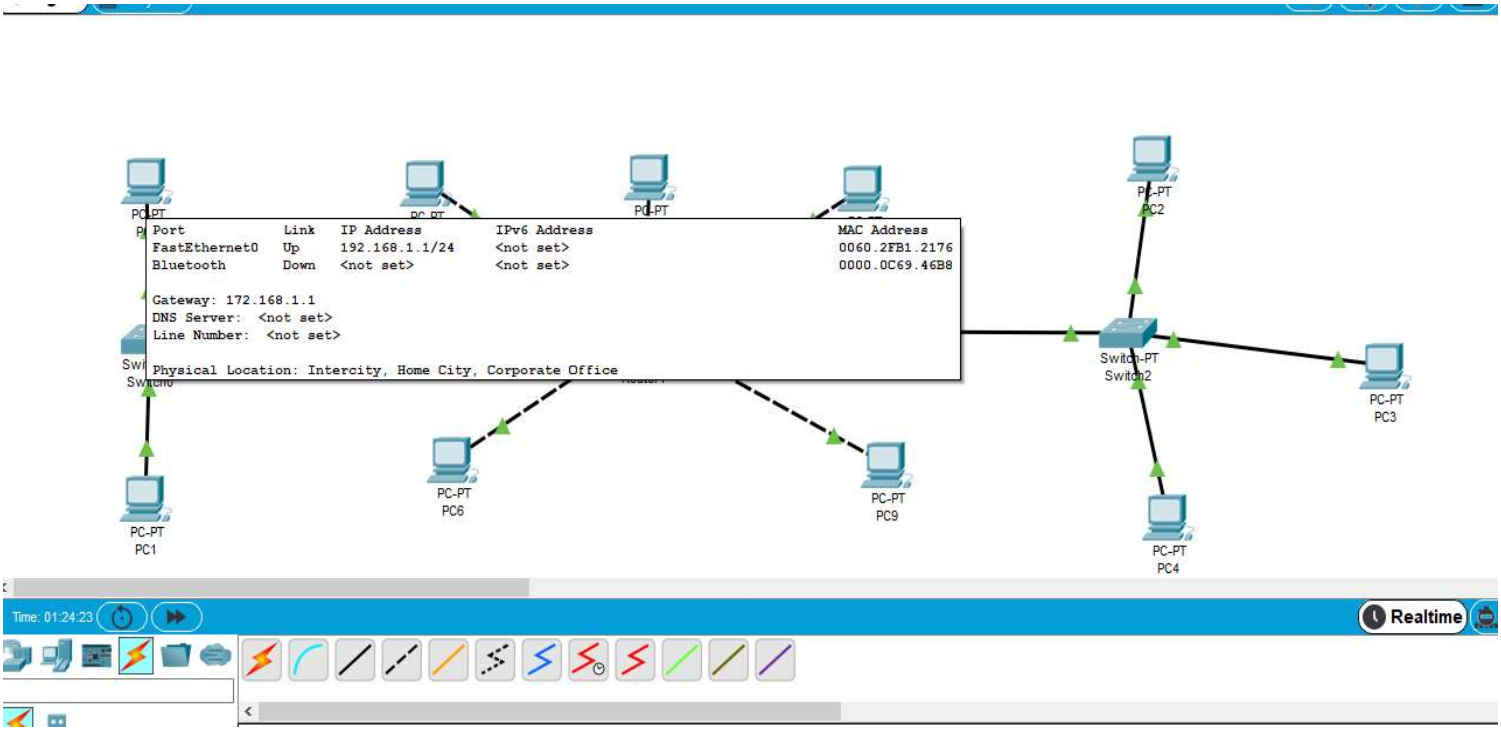
6. Router is connected with 5 computers

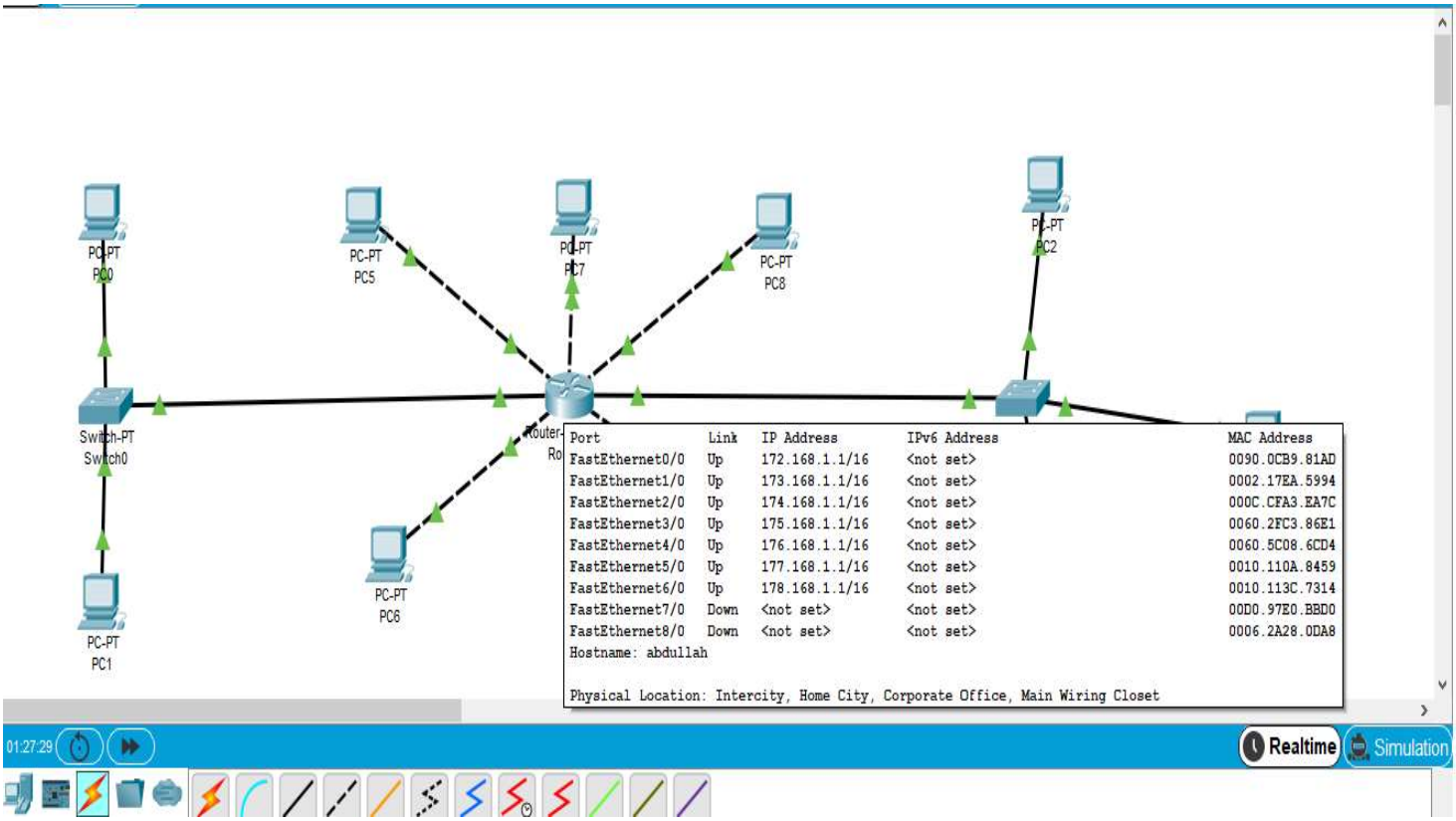


7. Also connect two switches with router which is connected with 2 of the computers from one side and 3 computers with other side

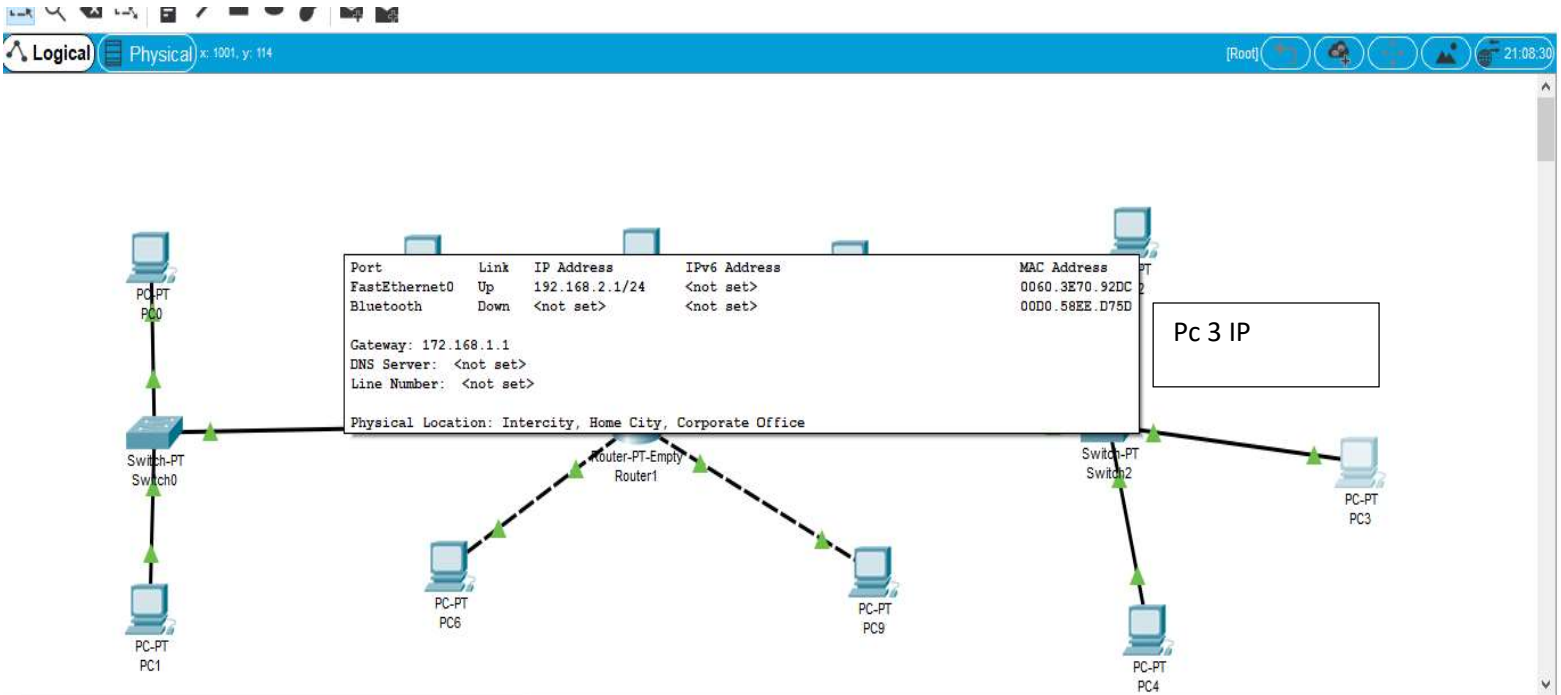


8. Assign the computers, switches and routers proper IP addresses, subnet mask and default gateways




PC-PT PC0
PC-PT PC5
PC-PT PC7
PC-PT PC8
PC-PT PC2
Switch-PT Switch0
PC-PT PC6
PC-PT PC1
Port Link IP Address IPv6 Address MAC Address
FastEthernet0/0 Up 172.168.1.1/16 <not set> 0090.0CB9.81AD
FastEthernet1/0 Up 173.168.1.1/16 <not set> 0002.17EA.5994
FastEthernet2/0 Up 174.168.1.1/16 <not set> 000C.CFA3.EA7C
FastEthernet3/0 Up 175.168.1.1/16 <not set> 0060.2FC3.86E1
FastEthernet4/0 Up 176.168.1.1/16 <not set> 0060.5C08.6CD4
FastEthernet5/0 Up 177.168.1.1/16 <not set> 0010.110A.8459
FastEthernet6/0 Up 178.168.1.1/16 <not set> 0010.113C.7314
FastEthernet7/0 Down <not set> <not set> 00D0.97E0.BBD0
FastEthernet8/0 Down <not set> <not set> 0006.2A28.0DA8
Hostname: abdullah
Physical Location: Intercity, Home City, Corporate Office, Main Wiring Closet
01:27:29
Realtime
Simulation

S


Logical
Physical
x: 1001, y: 114
[Root]
21:08:30
PC-PT PC0
Port Link IP Address IPv6 Address MAC Address
FastEthernet0 Up 192.168.2.1/24 <not set> 0060.3E70.92DC
Bluetooth Down <not set> <not set> 00D0.58EE.D75D
Gateway: 172.168.1.1
DNS Server: <not set>
Line Number: <not set>
Physical Location: Intercity, Home City, Corporate Office
Pc 3 IP
Switch-PT Switch0
Router-PT-Empty Router1
Switch-PT Switch2
PC-PT PC3
PC-PT PC6
PC-PT PC9
PC-PT PC1
PC-PT PC4

9. Configure router using command line interface and ping one PC to other and show the results

10.In the end use “save your configurations” command and show the result.