DATA COMMUNICATION AND NETWORKING II

COURSE CODE: 512

NEHA NOOR

B21110006101

SEMESTER: 6TH

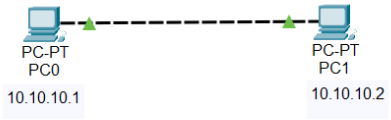
BSCS-III

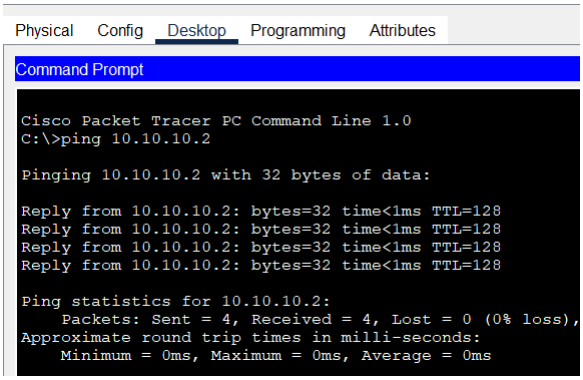
SUBMITTED BY : MISS ATTIA AGHA

Computer Science Department
University Of Karachi

LAB 1

Connecting Two PC

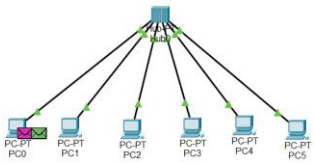


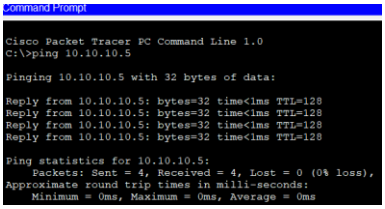


Devices:

- 2 PC
- Crossover cable

HUB

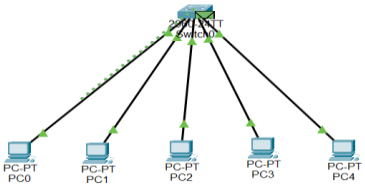




Devices:

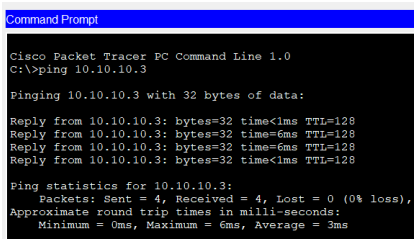
- 1 Hub
- 6 PC

Switch

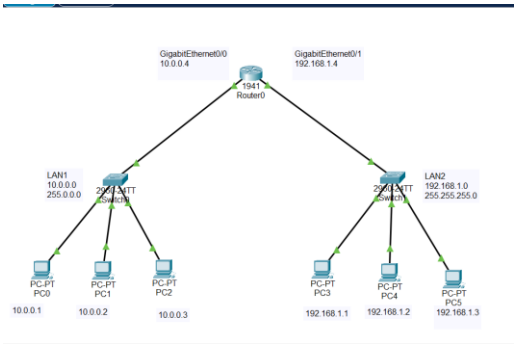


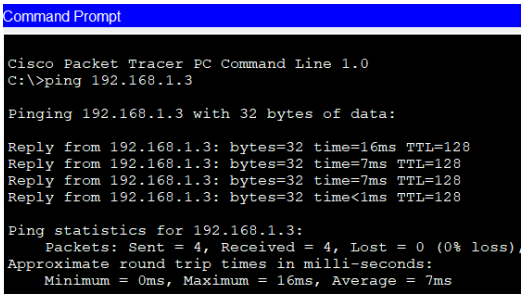
Devices:

- 1 Switch
- 5 PC



Router

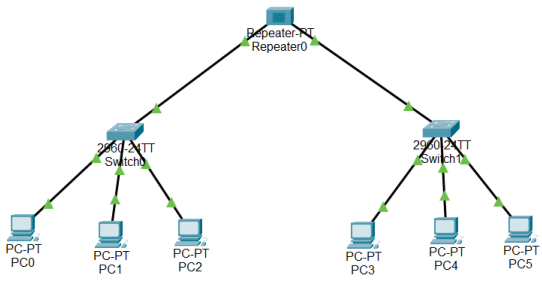




Devices:

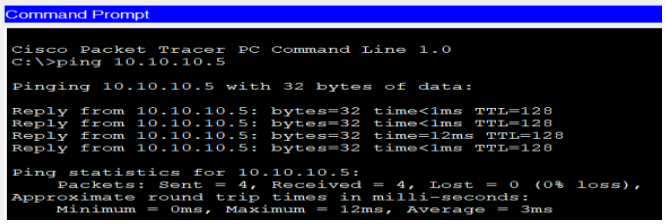
- 1 Routcer
- 2 Switch
- 6 PC

Repeater

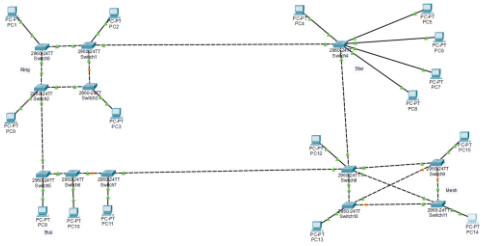


Devices:

- 1 Repeater
- 2 Switch
- 6 PC



Topology



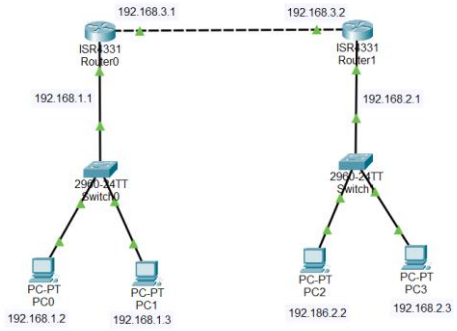
-

```
Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.4

Pinging 192.168.0.4 with 32 bytes of data:

Reply from 192.168.0.4: bytes=32 time=1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Devices:

- 12 Switch
- 16 PC

Static Routing



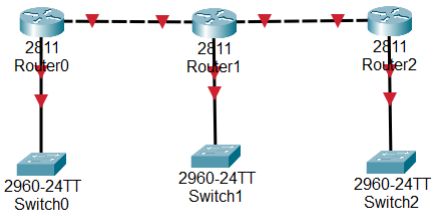
Devices:

- 2 Switch
- 2 router
- 4 PC

```
Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>ping  192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time=10ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 4ms
```

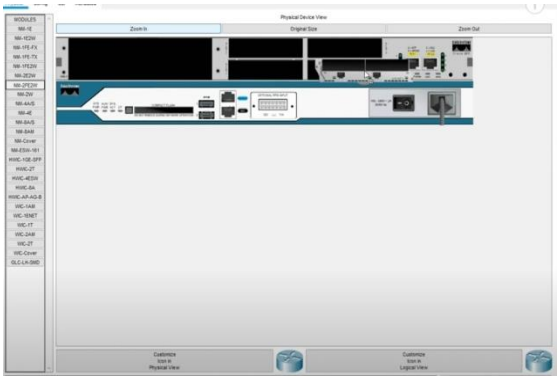
LAB 2

Add port in router

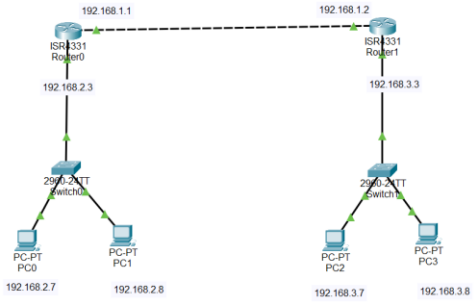


Devices:

- 3 Switch
- 3 router

- 

Dynamic Routing with CLI



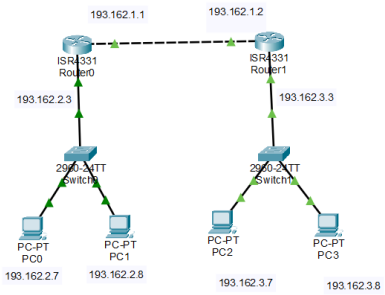
Devices:

- 2 Switch
- 2 router

- 4 PC

```
C:\>ping 192.168.3.7

Pinging 192.168.3.7 with 32 bytes of data:

Reply from 192.168.3.7: bytes=32 time<1ms TTL=126
Reply from 192.168.3.7: bytes=32 time<1ms TTL=126
Reply from 192.168.3.7: bytes=32 time<1ms TTL=126
Reply from 192.168.3.7: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.3.7:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Static routing using CLI



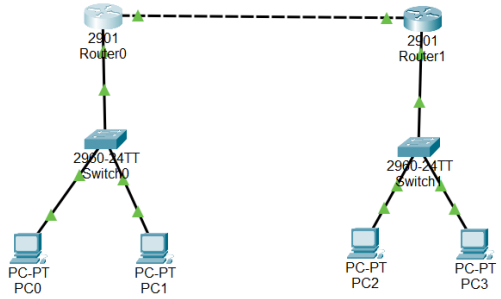
Devices:

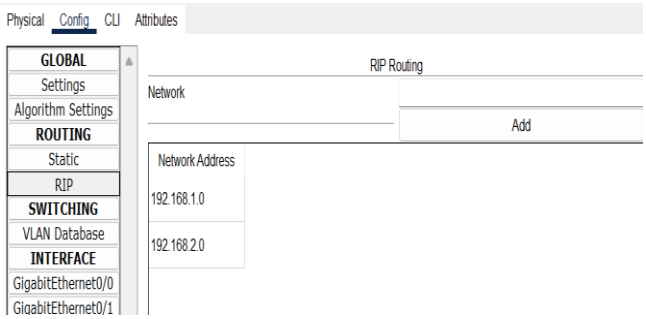
- 2 Switch
- 2 router

- 4 PC

```
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version 12.4
(fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

Press RETURN to get started!


Router>en
Router>enable
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
```

Dynamic Routing RIP





Devices:

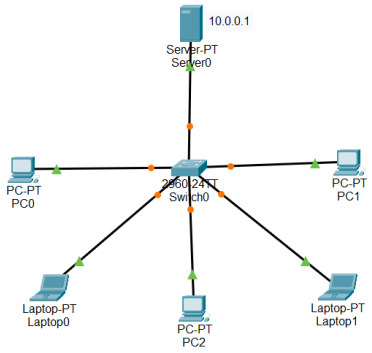
- 2 Switch
- 2 Router
- 4 PC

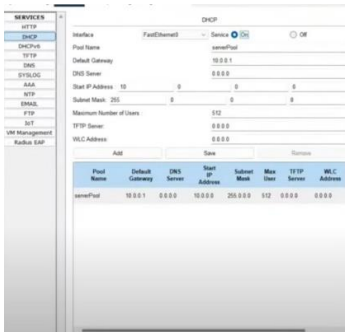
LAB 3

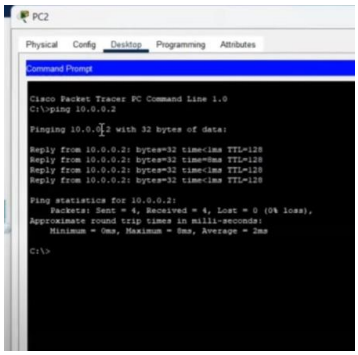
DHCP server :

Devices:

- 1 Switch , 1 Server, 3 PC, 2 Laptop



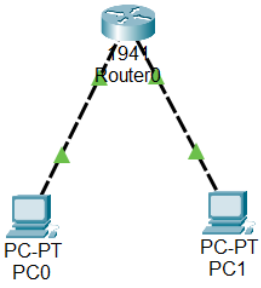


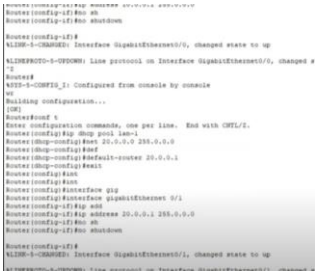


DHCP router

Devices:

- 2 PC, 1 Router



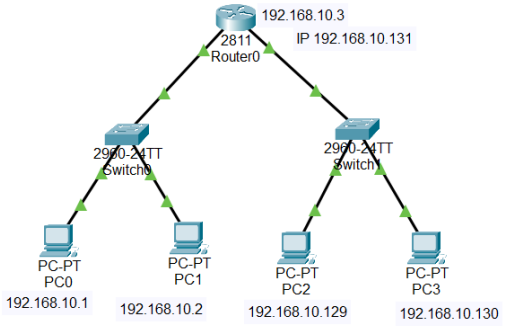


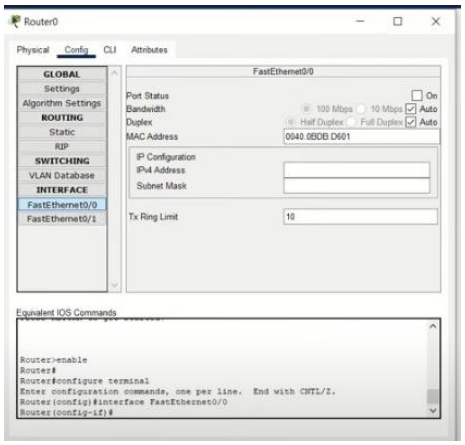
LAB 4

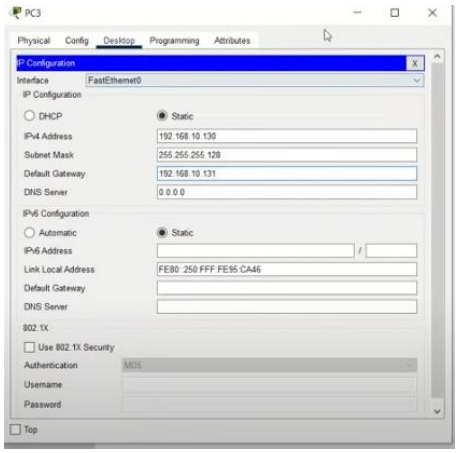
Subnetting

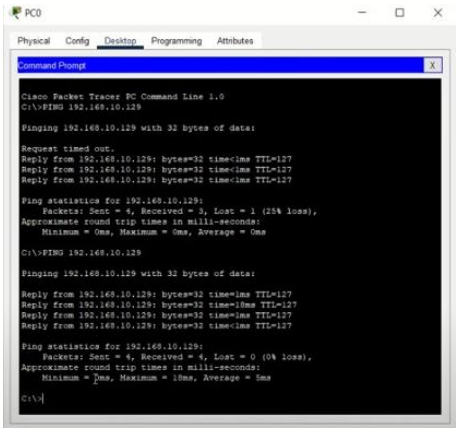
Devices:

- 1 Router , 2 Switch , 4 PC









LAB 5

Setting password on switches and routers

Devices:

- 2 Router

Switch 0

```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#enablw password 12345
                 ^
% Invalid input detected at '^' marker.

Switch(config)#enabl password 12345
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show running-conig
                     ^
% Invalid input detected at '^' marker.

Switch#show running-config
Building configuration...

Current configuration : 1104 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
enable password 12345
```

switch 1

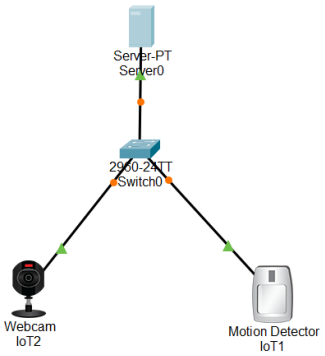
```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z
Switch(config)#enable secret 12345
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show running-config
Building configuration...

Current configuration : 1129 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
enable secret 5 $1$mERr$/Q/mbs3O9oHsKR7rNG4e81
!
!
!
!
!
```

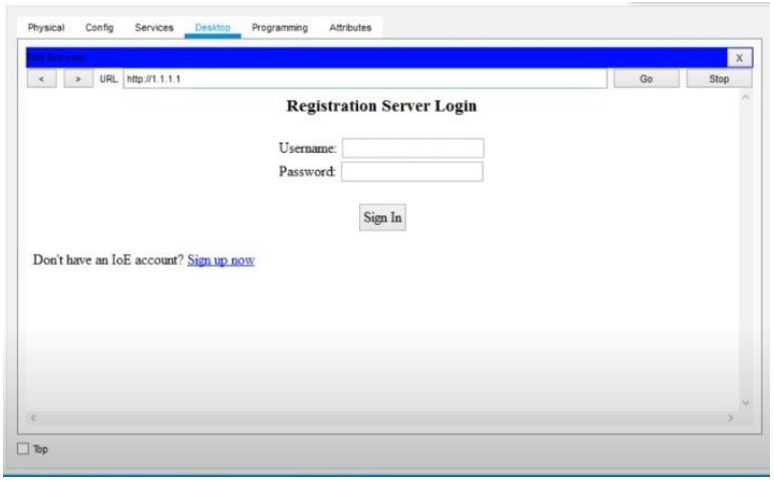
LAB 6

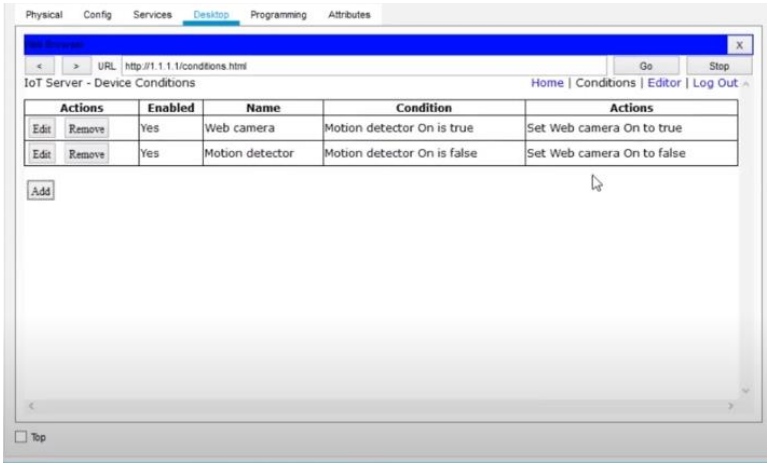
Implementation of Smart Home

Devices:

- 1 server
- 1 switch
- 1 Motion detector
- 1 webcam





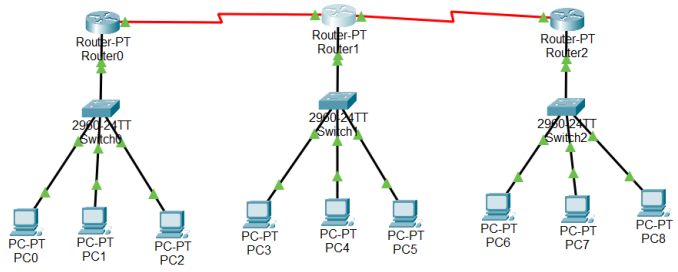


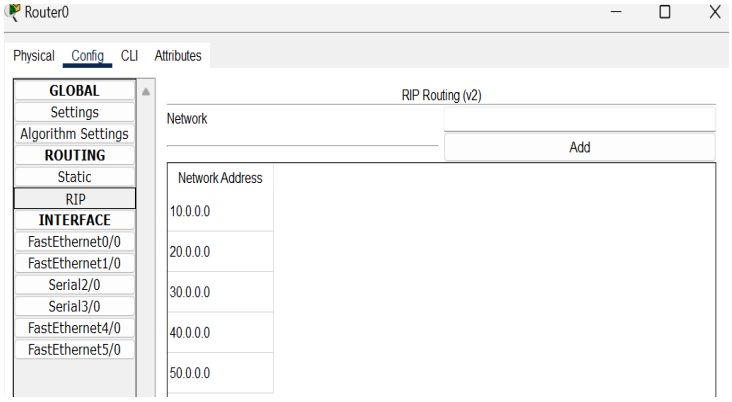
LAB 7

RIPv2

Devices:

- 6 PC, 3 Router, 3 switch

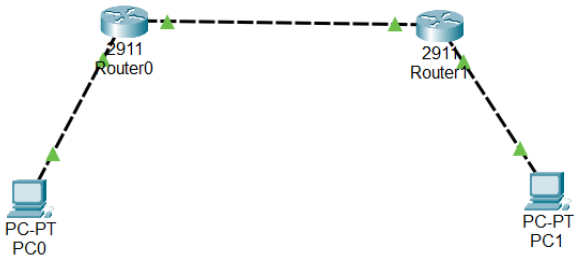




Configuring RIPv2

Devices:

- 2 PC, 2 Router



LAB 8

OSPF

Devices:

- 6 PC, 3 Router, 3 switch