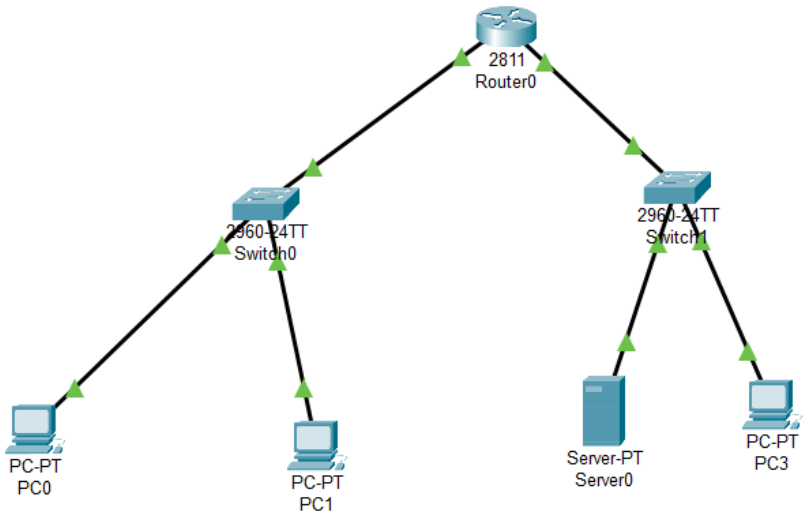
Q11) Implement ACLs to restrict traffic based on source and destination ports. Test rules by simulating legitimate and unauthorized traffic.



Configure IP Address

Router Configuration

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#interface FastEthernet0/0
R1(config-if)#ip address 192.168.1.1 255.255.255.0
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
exit
R1(config)#interface FastEthernet0/1
R1(config-if)#ip address 192.168.2.1 255.255.255.0
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
exit
```

Device IP Configuration:

- PC1: IP 192.168.1.10, Subnet 255.255.255.0, Default Gateway 192.168.1.1

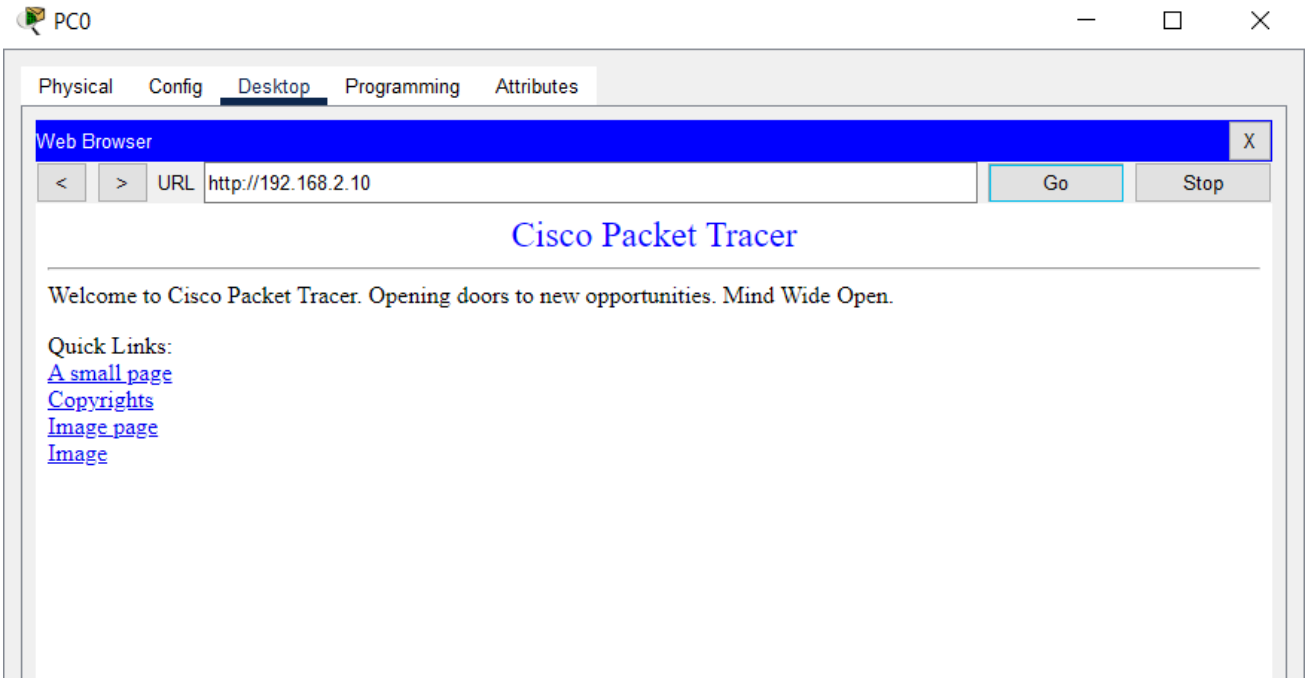
- PC2: IP 192.168.1.20, Subnet 255.255.255.0, Default Gateway 192.168.1.1
- PC3: IP 192.168.2.20, Subnet 255.255.255.0, Default Gateway 192.168.2.1
- Server1: IP 192.168.2.10, Subnet 255.255.255.0, Default Gateway 192.168.2.1

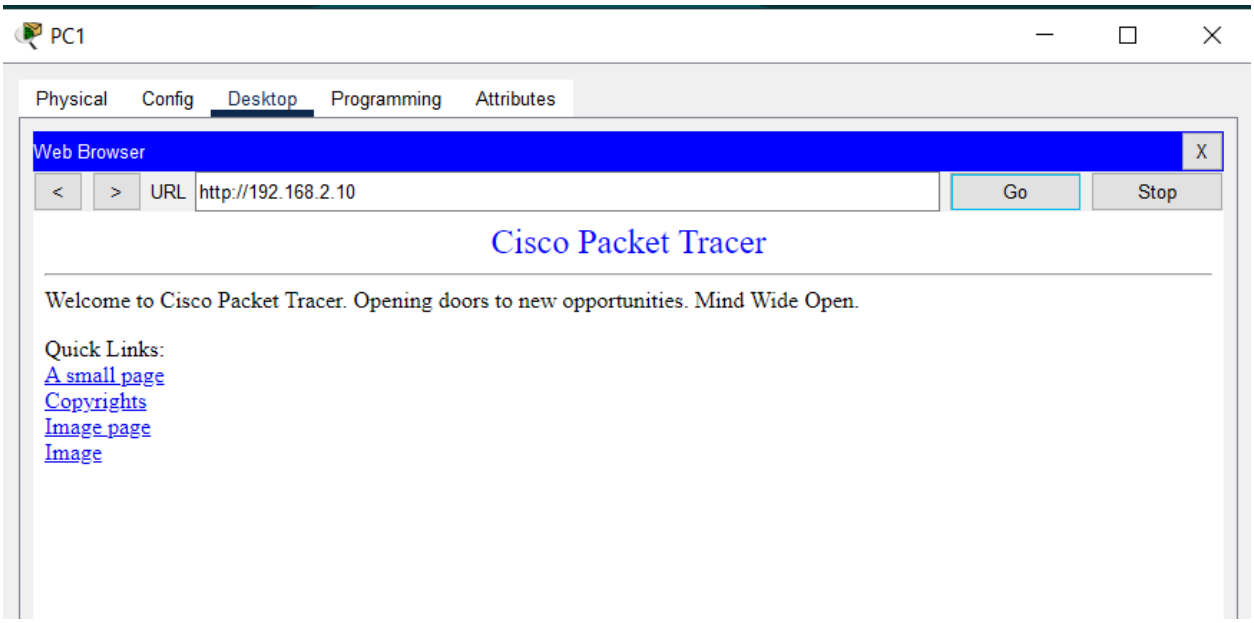
ACL Configuration

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
exit
R1(config)#
R1(config)#ip access-list extended TRAFFIC_FILTER
R1(config-ext-nacl)#permit tcp 192.168.1.0 0.0.0.255 192.168.2.0 0.0.0.255 eq 80
R1(config-ext-nacl)#permit udp host 192.168.1.10 host 192.168.2.10 eq 53
R1(config-ext-nacl)#deny ip 192.168.1.0 0.0.0.255 192.168.2.0 0.0.0.255
R1(config-ext-nacl)#permit ip any any
R1(config-ext-nacl)#exit
R1(config)#interface FastEthernet0/0
R1(config-if)#ip access-group TRAFFIC_FILTER out
R1(config-if)#exit
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#write memory
Building configuration...
[OK]
```

Testing ACL Rules




PC1
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.2.10
Go
Stop
Cisco Packet Tracer
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
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