

*Syed zulfiqar hasan*  
*14937*  
*Data communication lab*

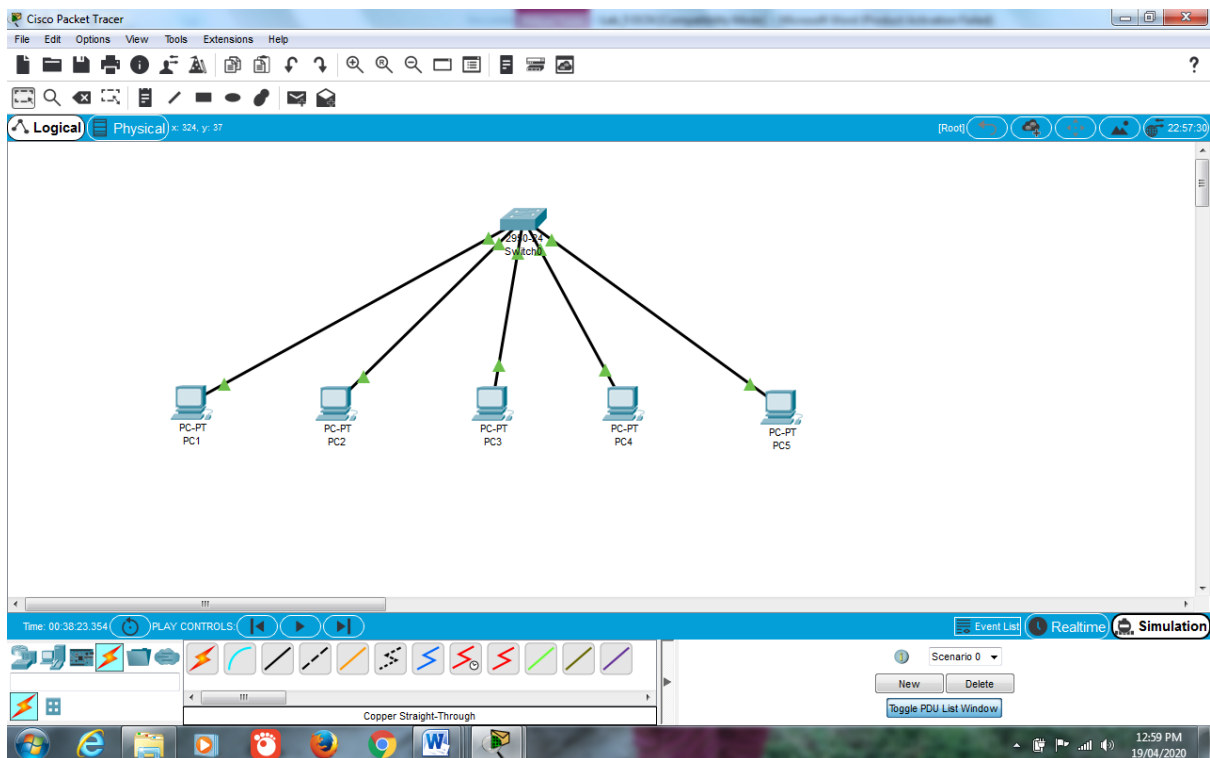
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**Task 1:**

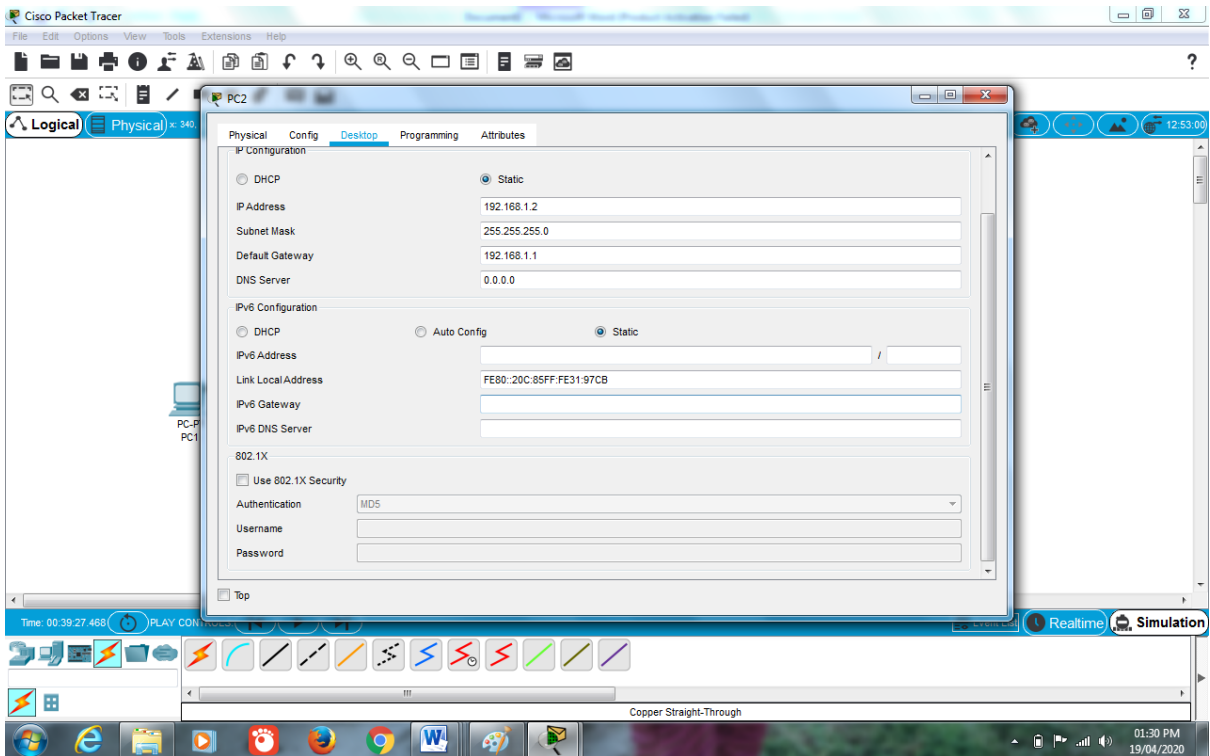
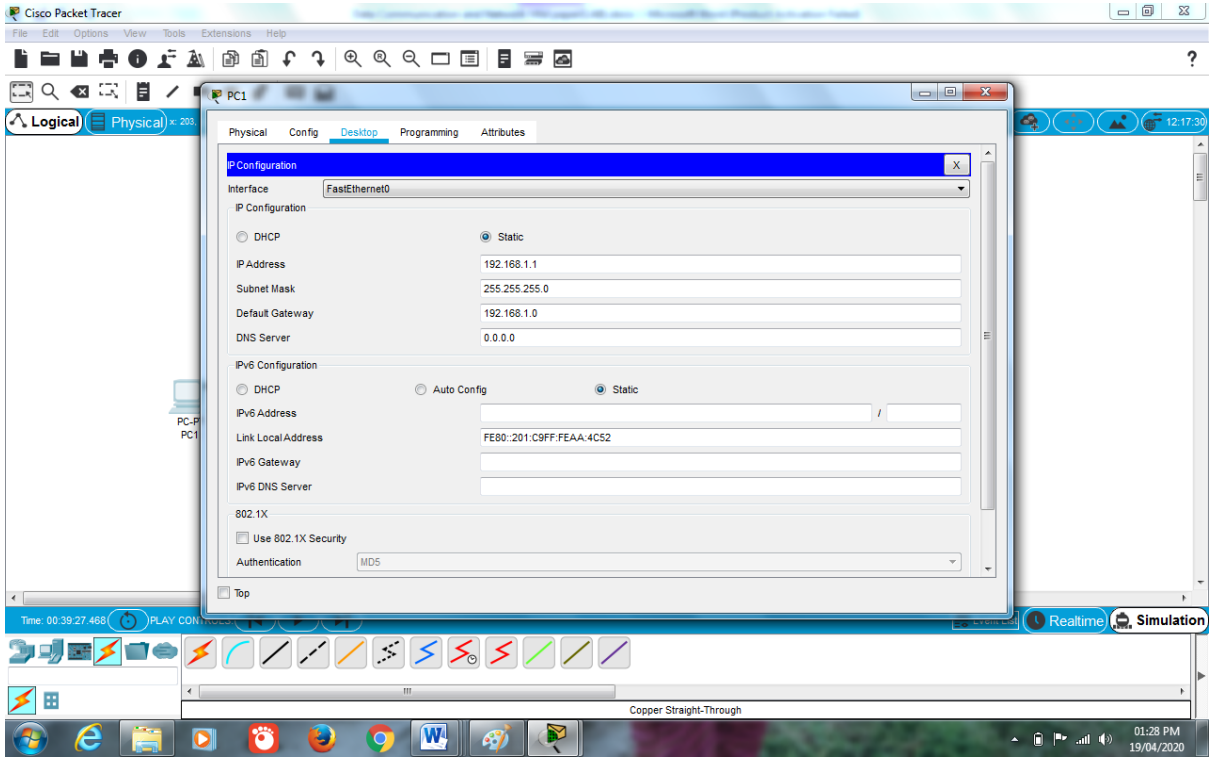
Construct a network topology having one switch with connected with 5 PC's with Fast Ethernet Cable, assign them proper IP addresses, subnet mask and default gateways and send message from PC5 to PC1 and demonstrate the simulation.

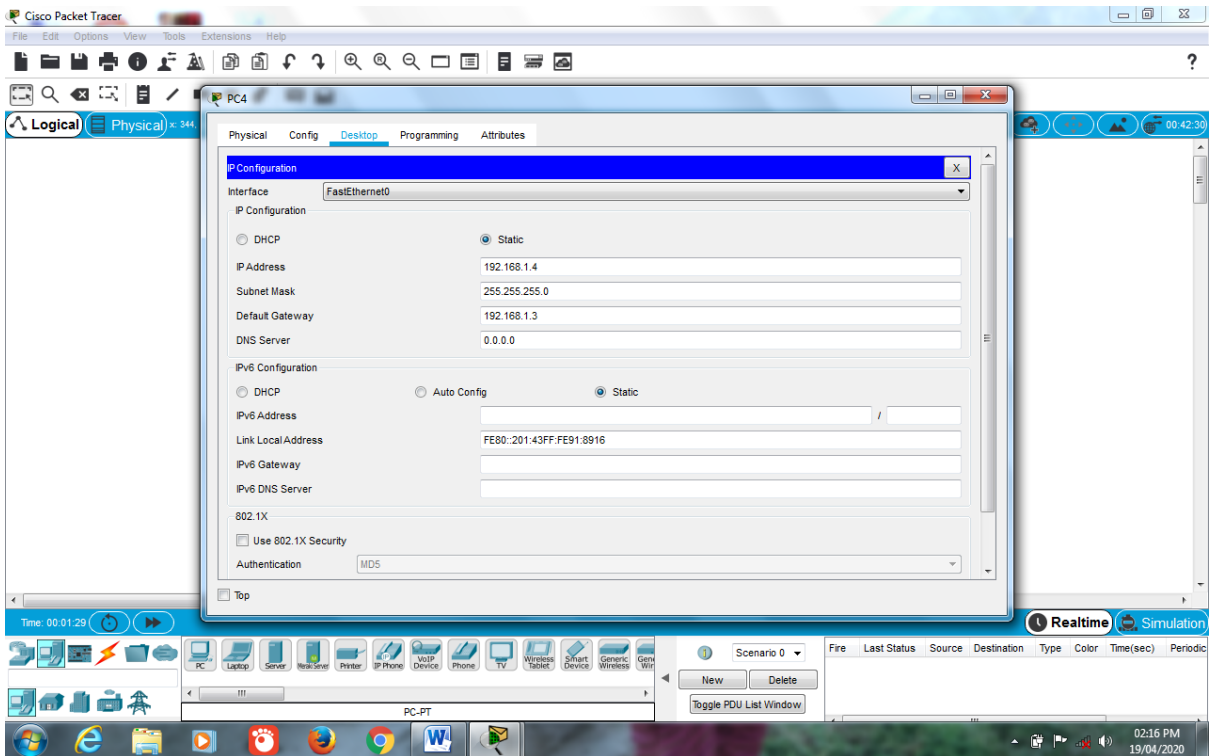
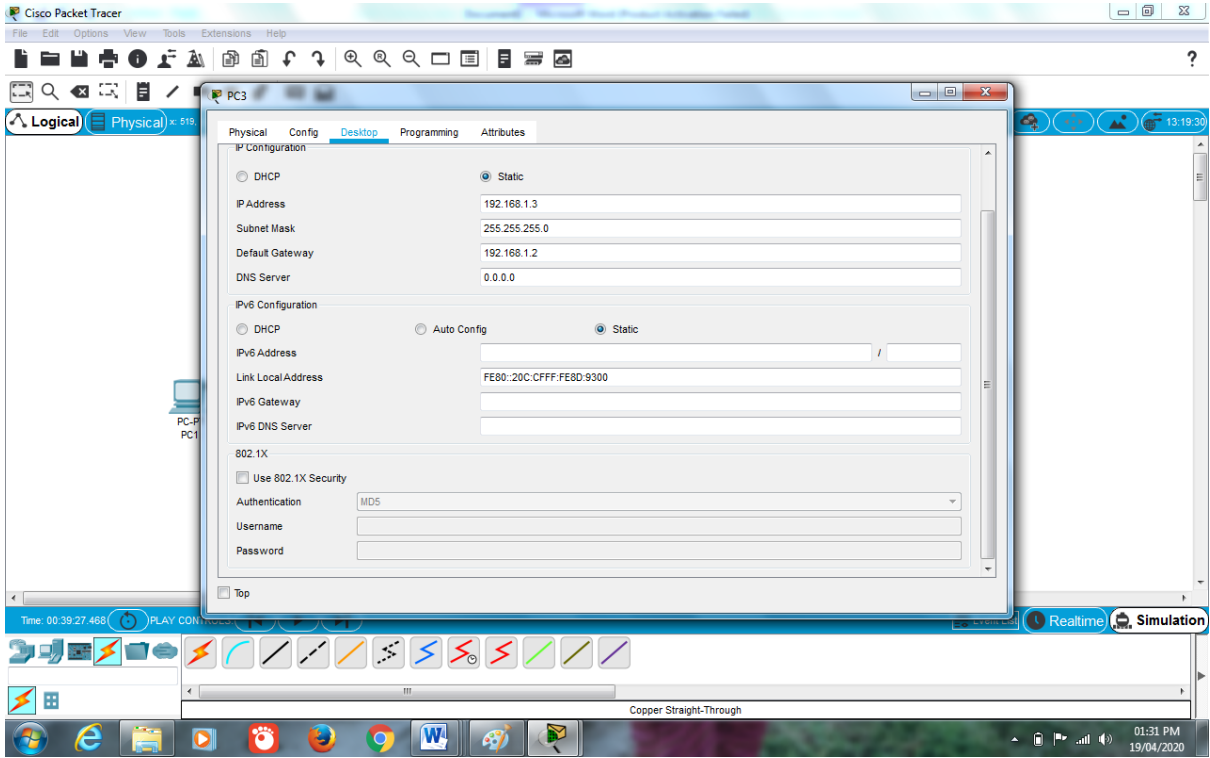
**Ans:**

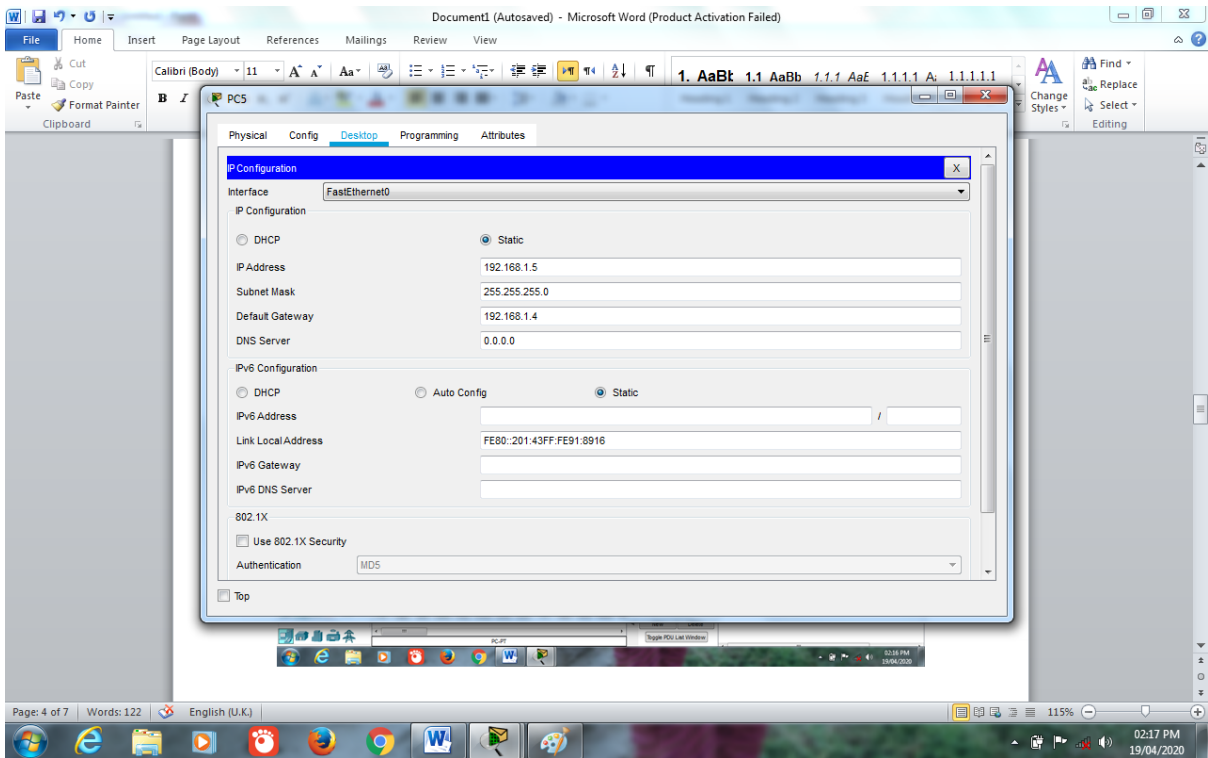
Construction:



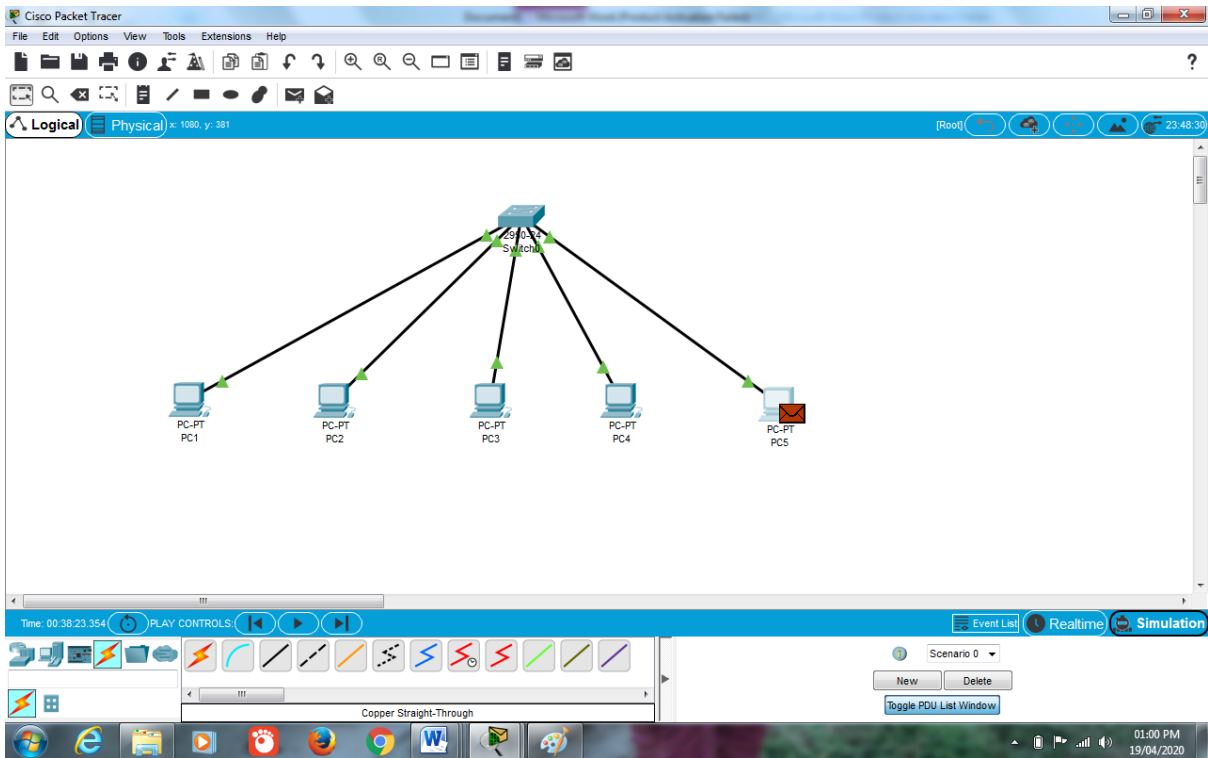
IP Addresses, Subnet Mask, Default Gateways:







Send message and Simulation:



Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x: 747, y: 220

Simulation Panel

| Vis. | Time(sec) | Last Device | At Device | Type |
|------|-----------|-------------|-----------|------|
|      | 0.000     | --          | PC5       | ICMP |
|      | 0.001     | PC5         | Switch0   | ICMP |
|      | 0.002     | Switch0     | PC1       | ICMP |
|      | 0.002     | Switch0     | PC2       | ICMP |
|      | 0.002     | Switch0     | PC3       | ICMP |
|      | 0.002     | Switch0     | PC4       | ICMP |
|      | 0.003     | PC1         | Switch0   | ICMP |
|      | 0.004     | Switch0     | PC5       | ICMP |

Reset Simulation  Constant Delay Captured to: 12.209 s

Play Controls

Event List Filters - Visible Events  
 ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDR, USB, VTP

Time: 00:38:59.612 PLAY CONTROLS: Realtime Simulation

Copper Straight-Through

01:16 PM 19/04/2020

Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x: 850, y: 183

Simulation Panel

| Vis. | Time(sec) | Last Device | At Device | Type |
|------|-----------|-------------|-----------|------|
|      | 0.000     | --          | PC5       | ICMP |
|      | 0.001     | PC5         | Switch0   | ICMP |
|      | 0.002     | Switch0     | PC1       | ICMP |
|      | 0.002     | Switch0     | PC2       | ICMP |
|      | 0.002     | Switch0     | PC3       | ICMP |
|      | 0.002     | Switch0     | PC4       | ICMP |
|      | 0.003     | PC1         | Switch0   | ICMP |
|      | 0.004     | Switch0     | PC5       | ICMP |

Reset Simulation  Constant Delay Captured to: 14.208 s

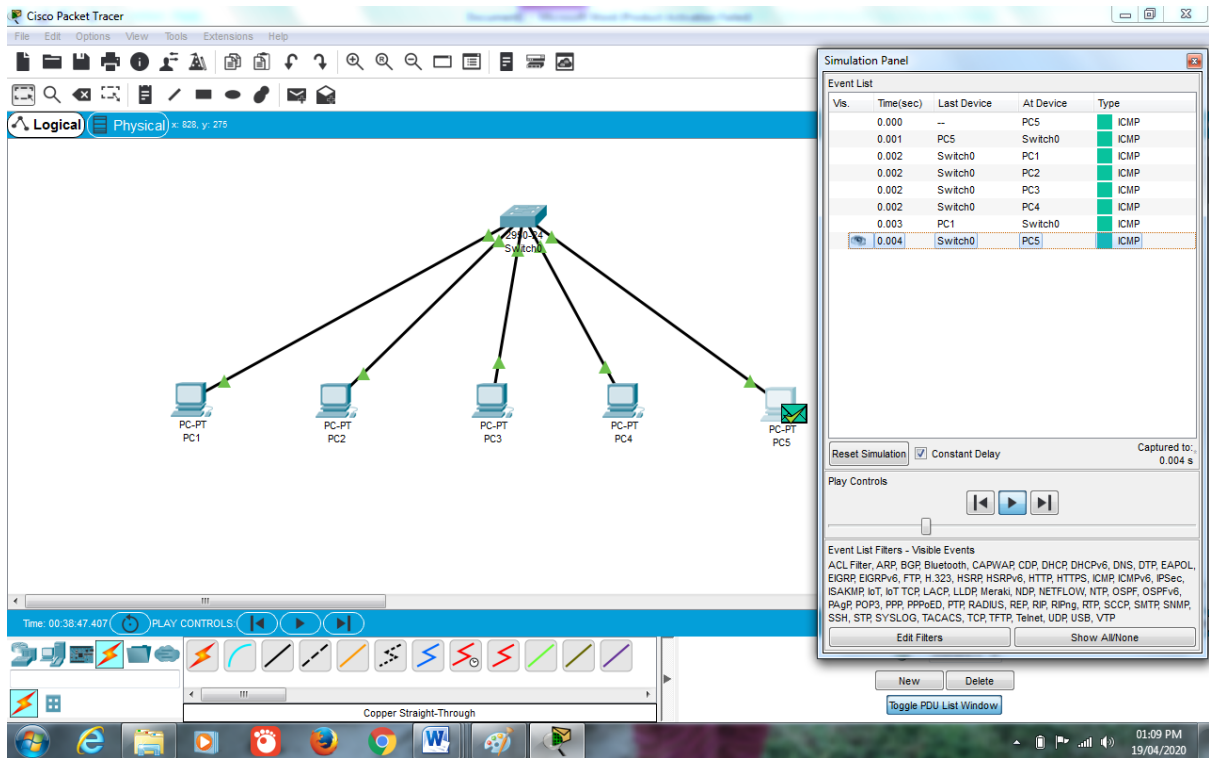
Play Controls

Event List Filters - Visible Events  
 ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDR, USB, VTP

Time: 00:39:01.611 PLAY CONTROLS: Realtime Simulation

Copper Straight-Through

01:20 PM 19/04/2020

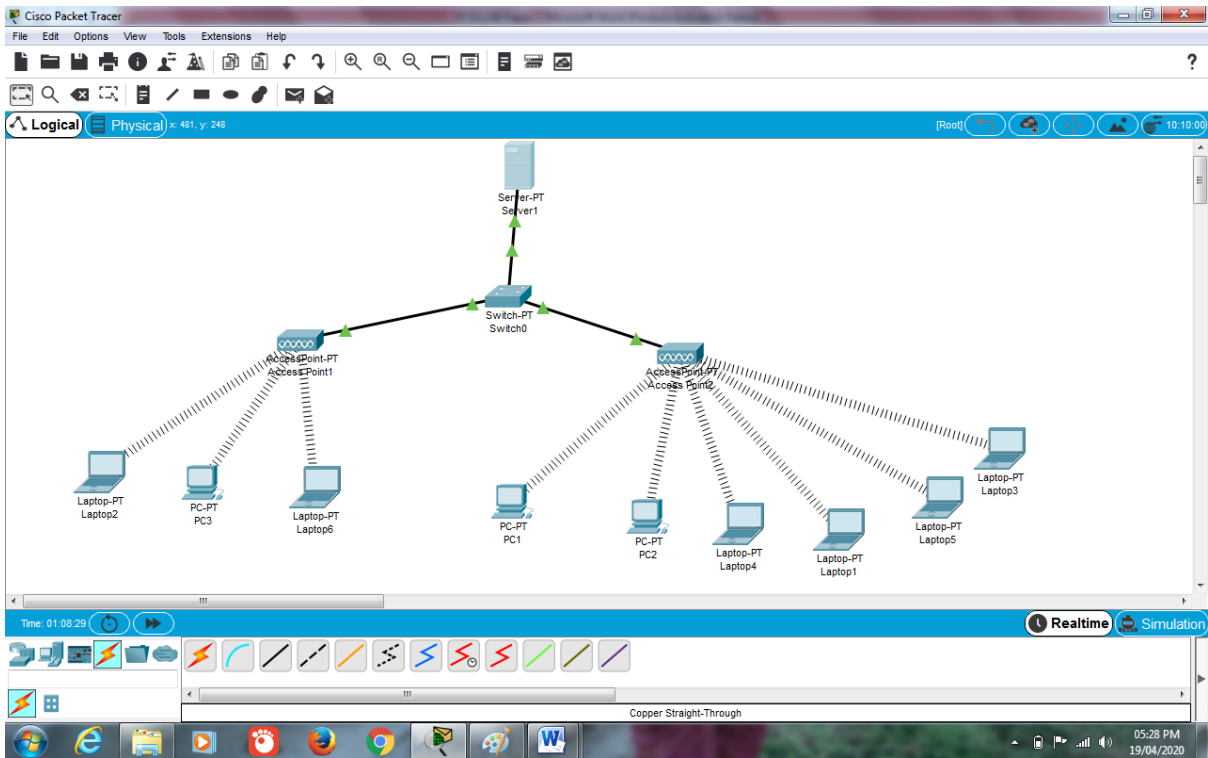


## Task 2:

Construct a client server model that have 9 hosts, three of them are computers, and other six hosts will be laptops, in which further connected to 2 access points through wireless channel, as three of them will be connected to access point 1 and other through access point 2, assign them IP address and subnet masks dynamically from the server. Moreover, access the HTTP server from the client and show the results.

Ans:

Construction:

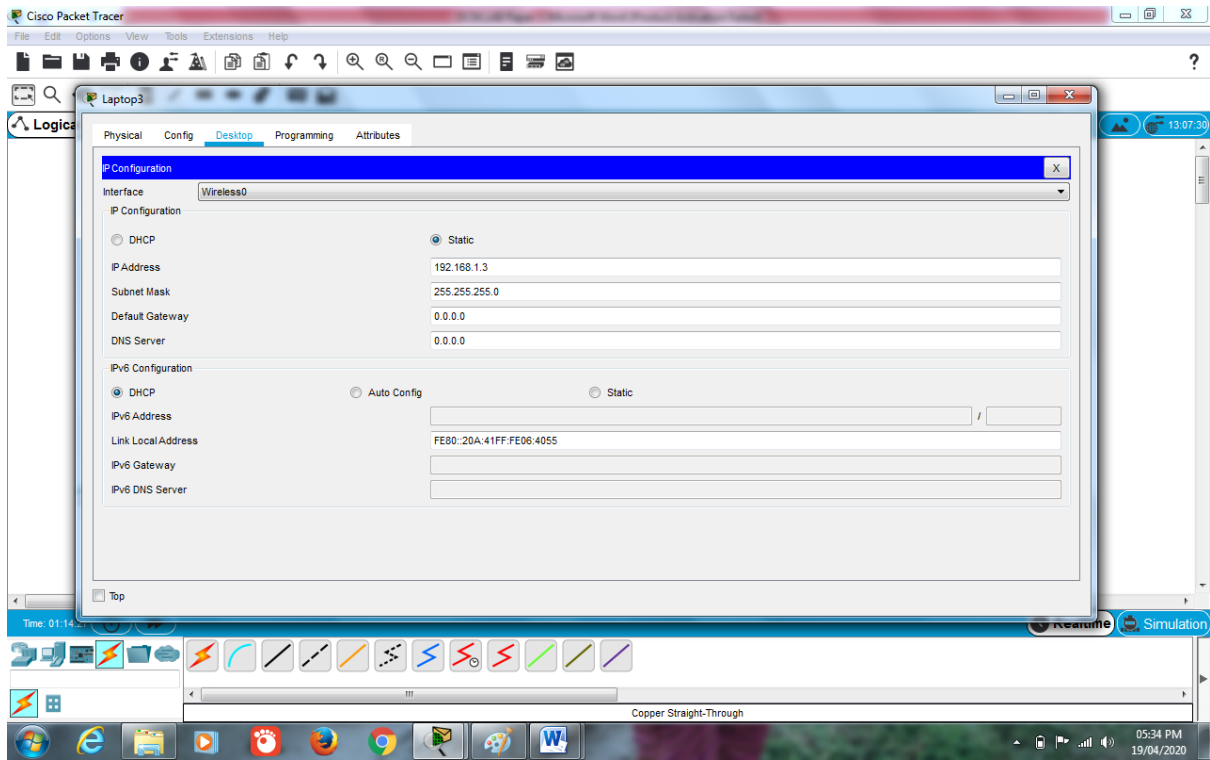
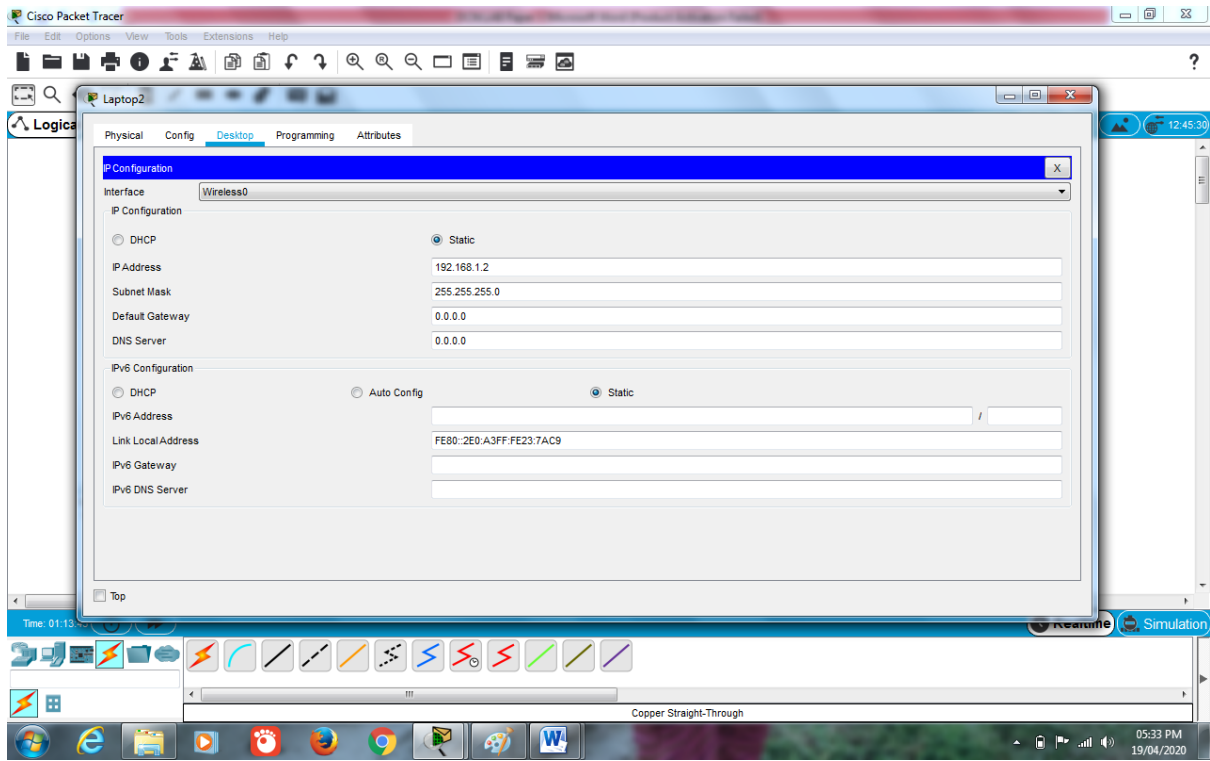


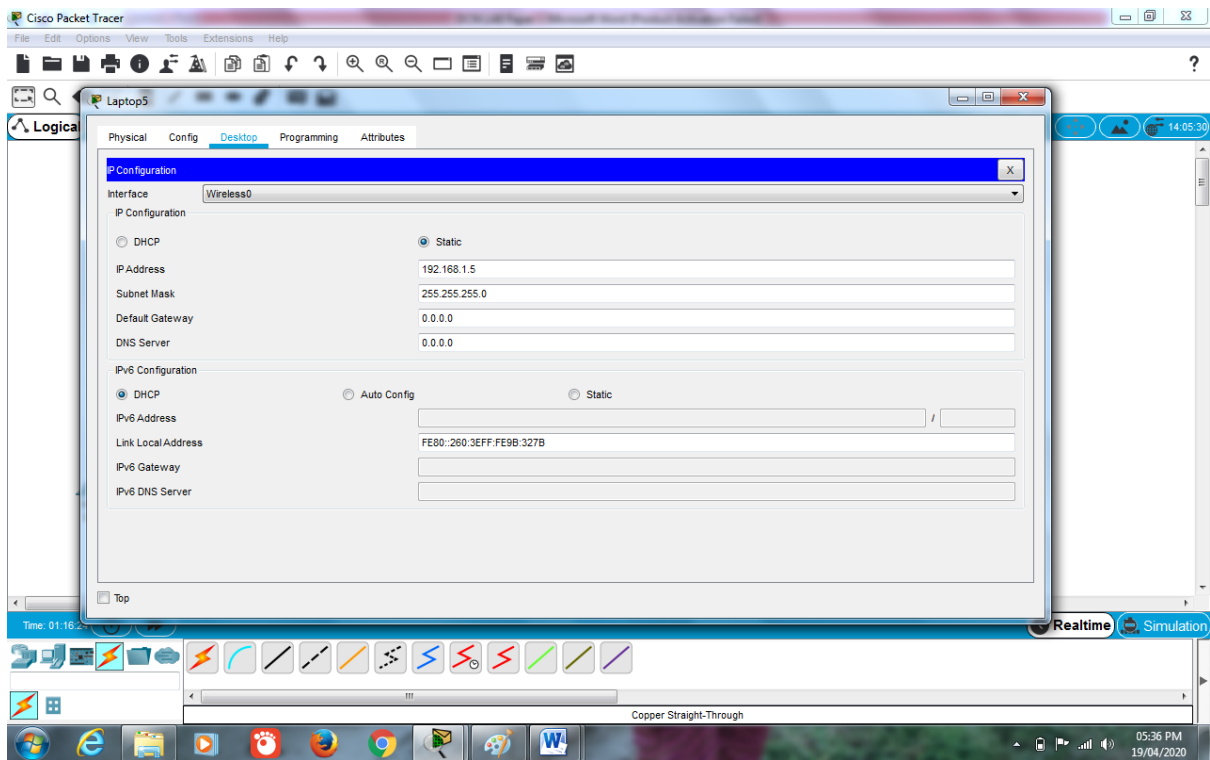
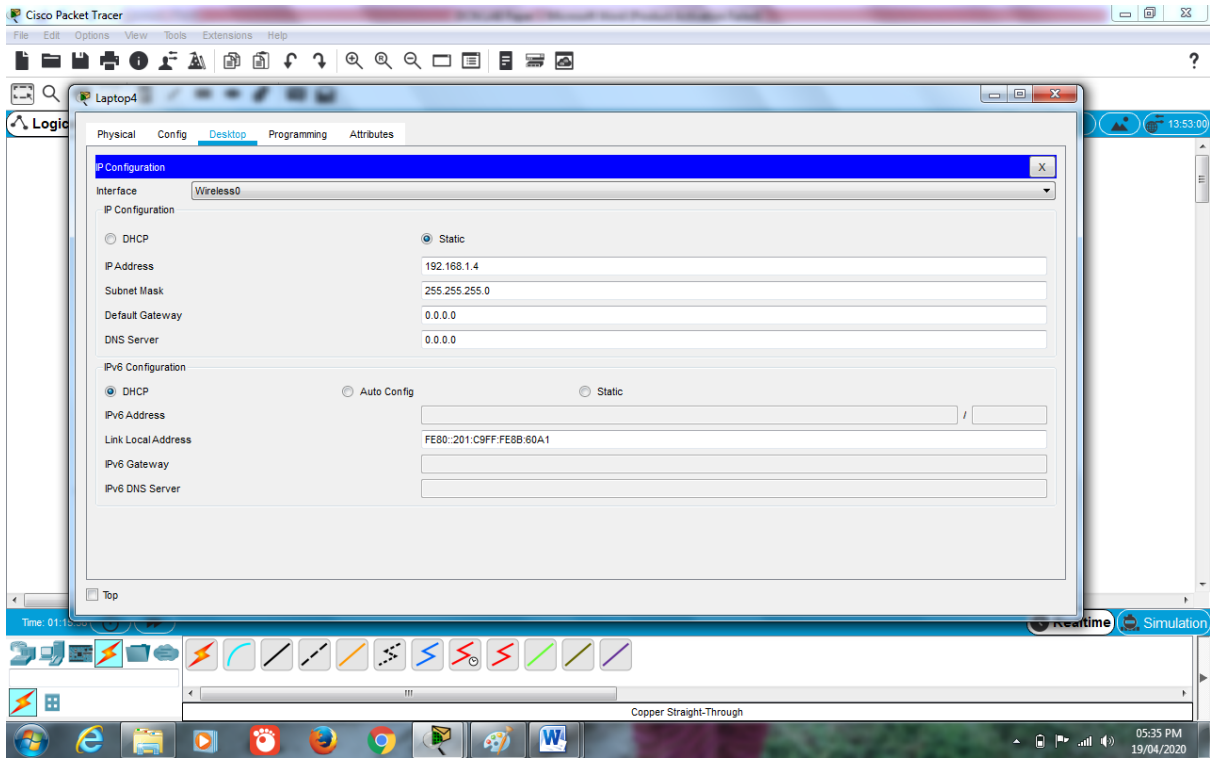
### IP Addresses and Subnet Masks:

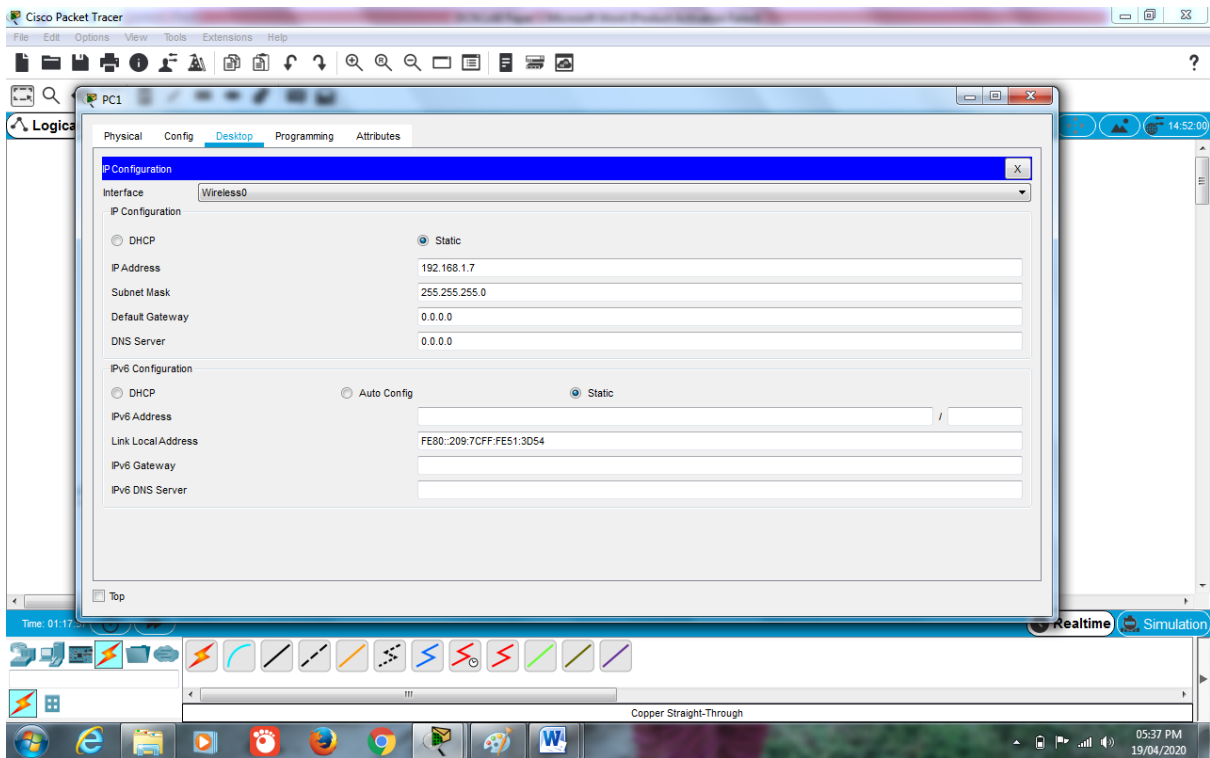
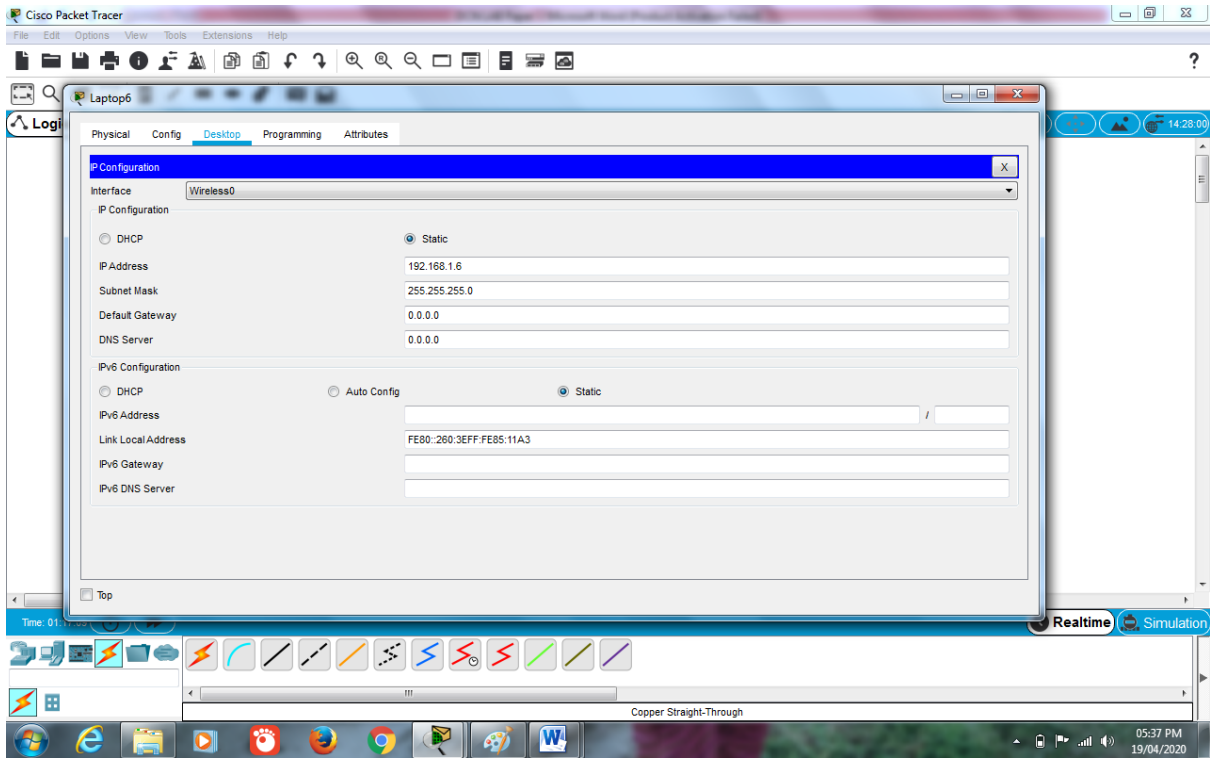
The configuration window for 'Laptop1' is open, showing the 'Desktop' tab. The 'IP Configuration' section is active for the 'Wireless0' interface. The configuration is as follows:

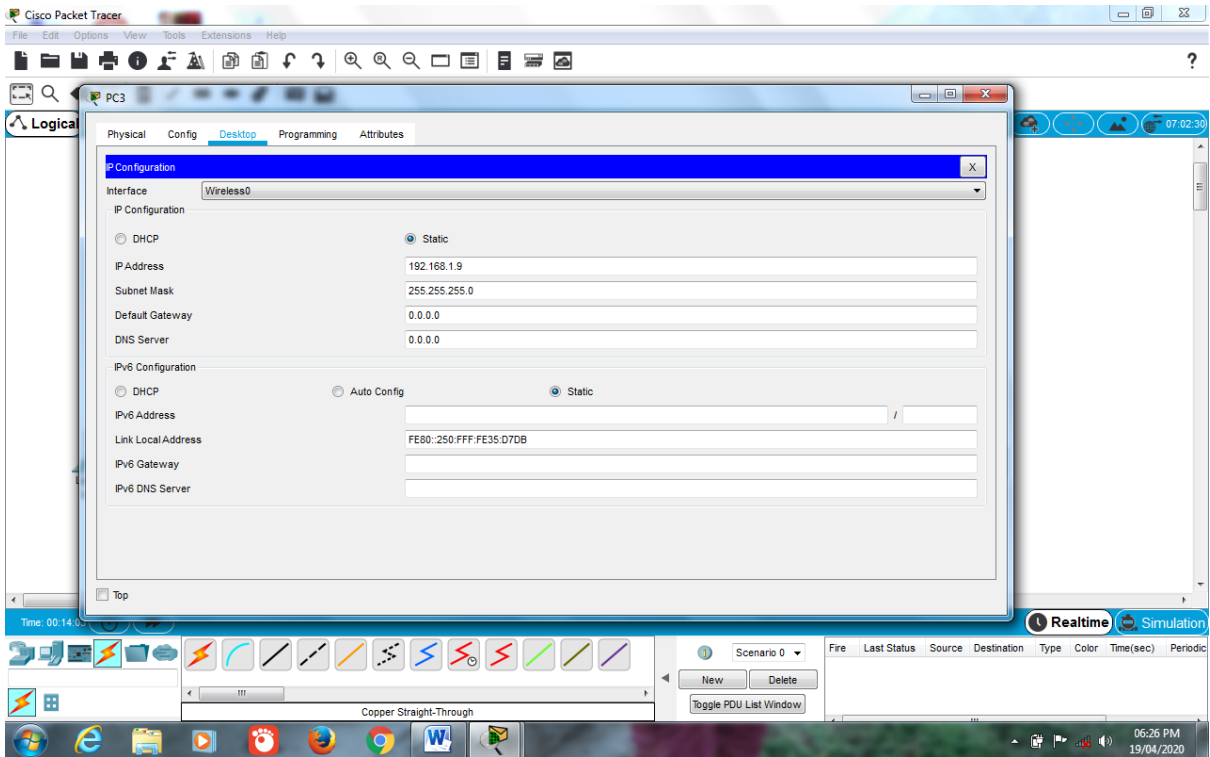
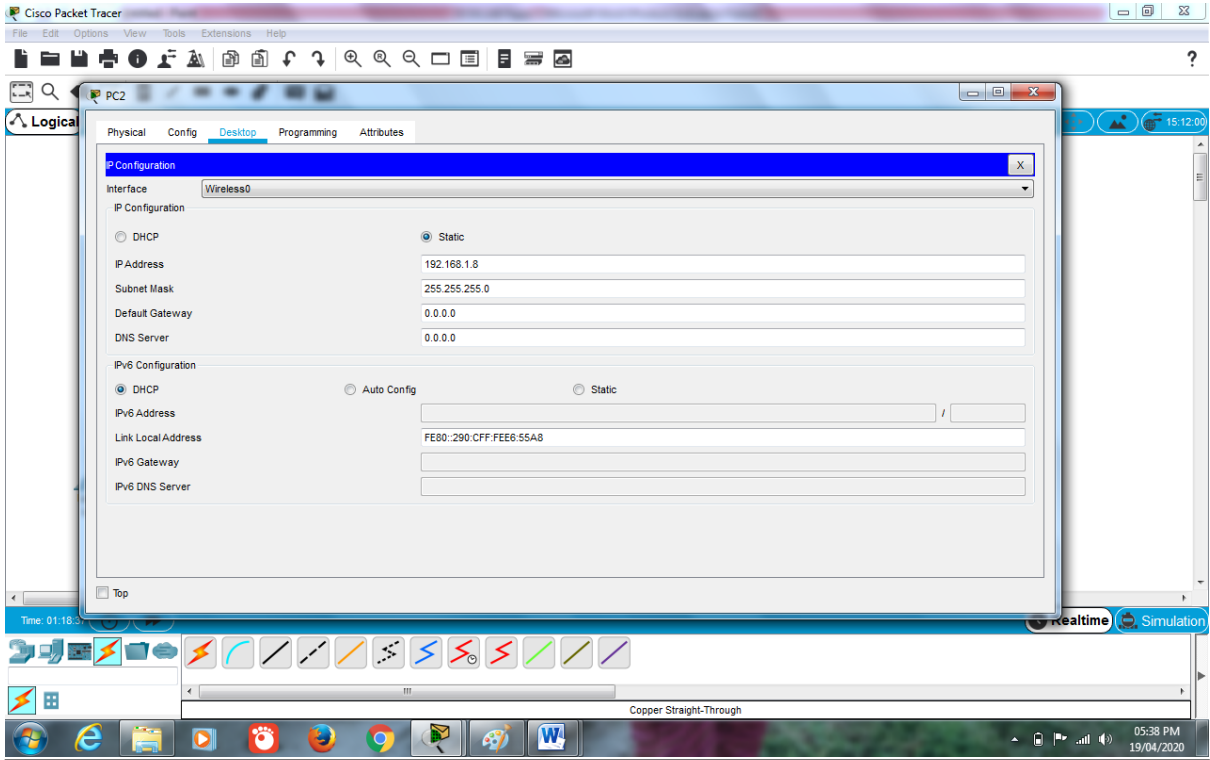
| Field              | Value                    |
|--------------------|--------------------------|
| Interface          | Wireless0                |
| IP Configuration   | Static                   |
| IP Address         | 192.168.1.1              |
| Subnet Mask        | 255.255.255.0            |
| Default Gateway    | 0.0.0.0                  |
| DNS Server         | 0.0.0.0                  |
| IPv6 Configuration | Static                   |
| IPv6 Address       |                          |
| Link Local Address | FE80::260:47FF:FEA4:5D4B |
| IPv6 Gateway       |                          |
| IPv6 DNS Server    |                          |

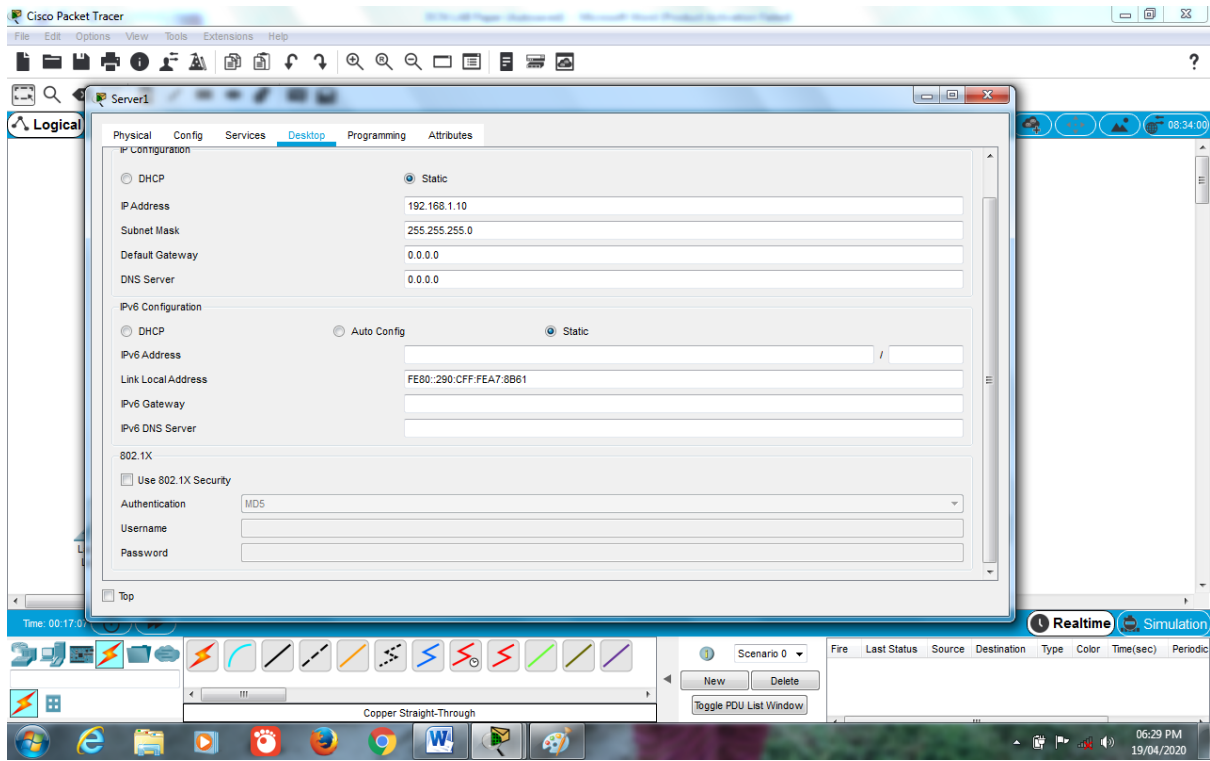




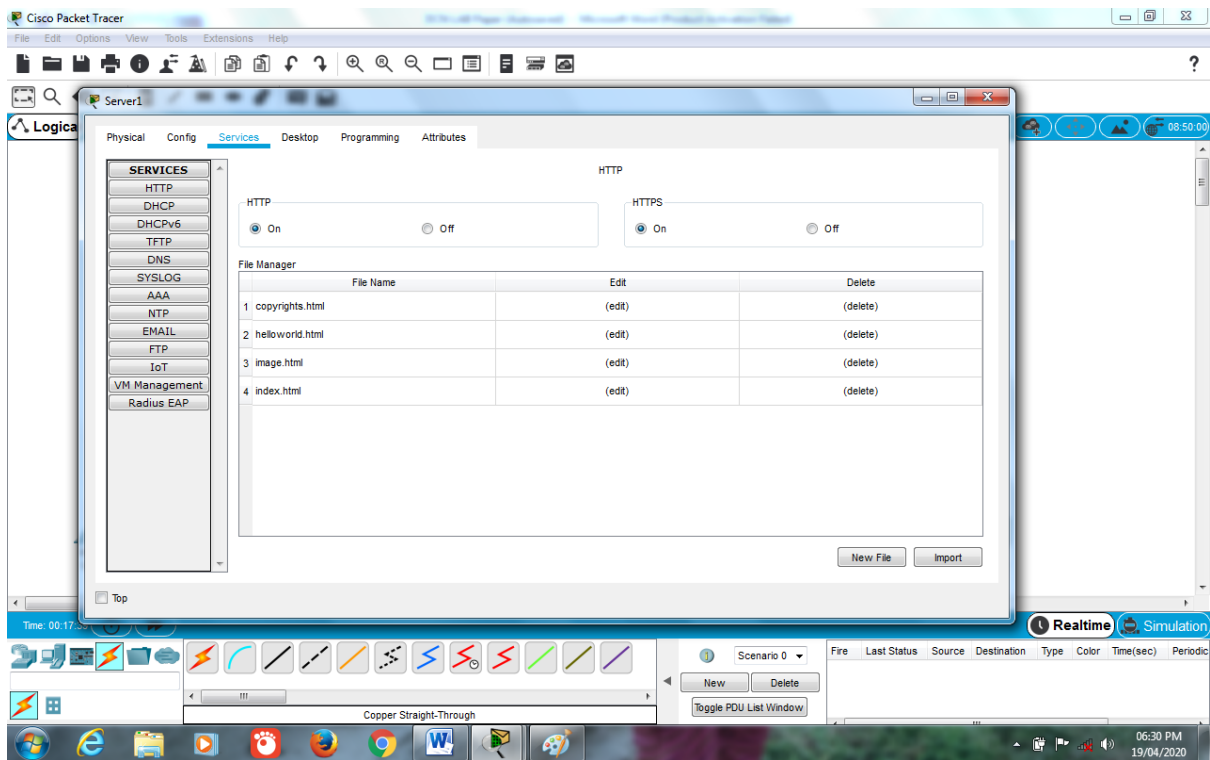




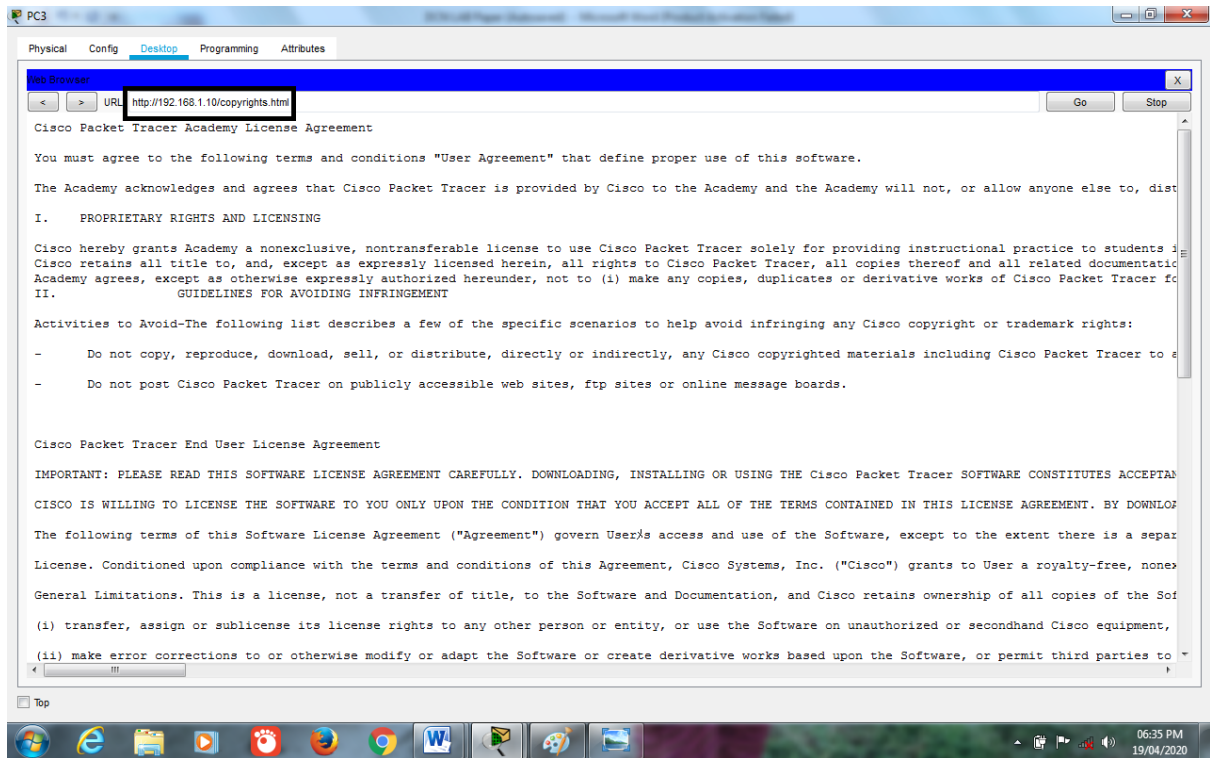
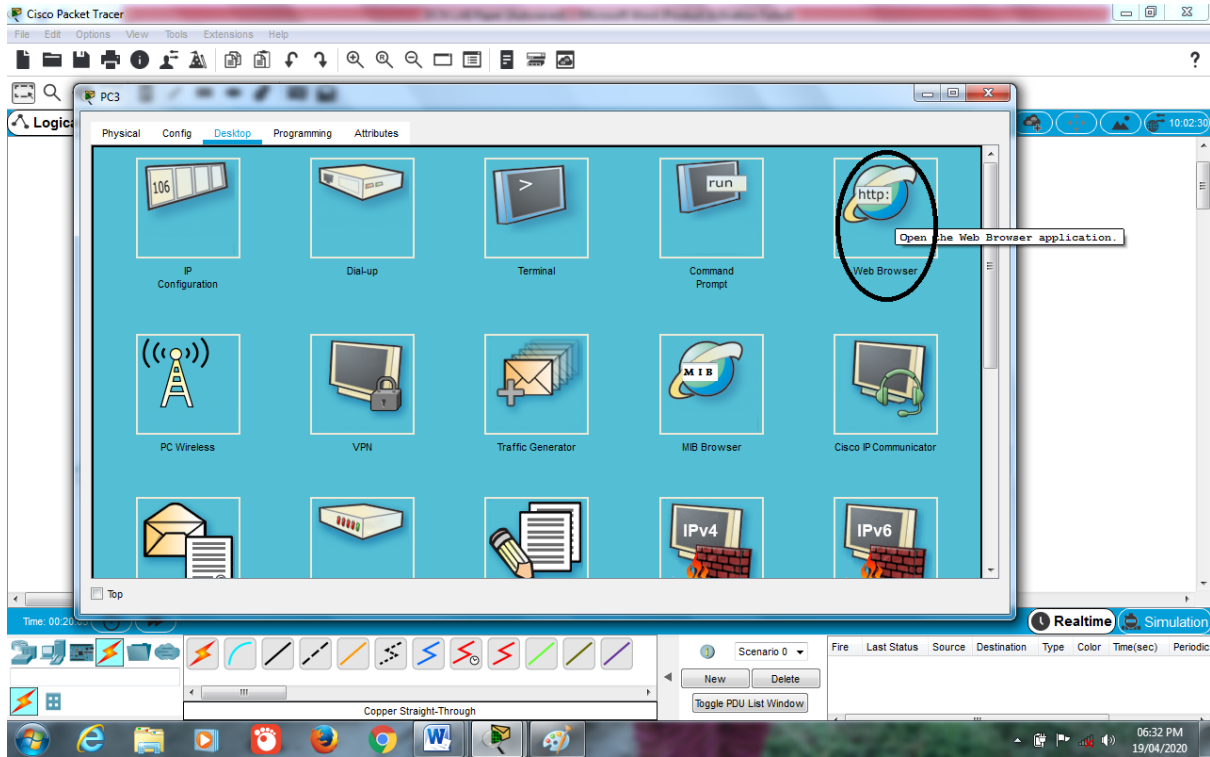


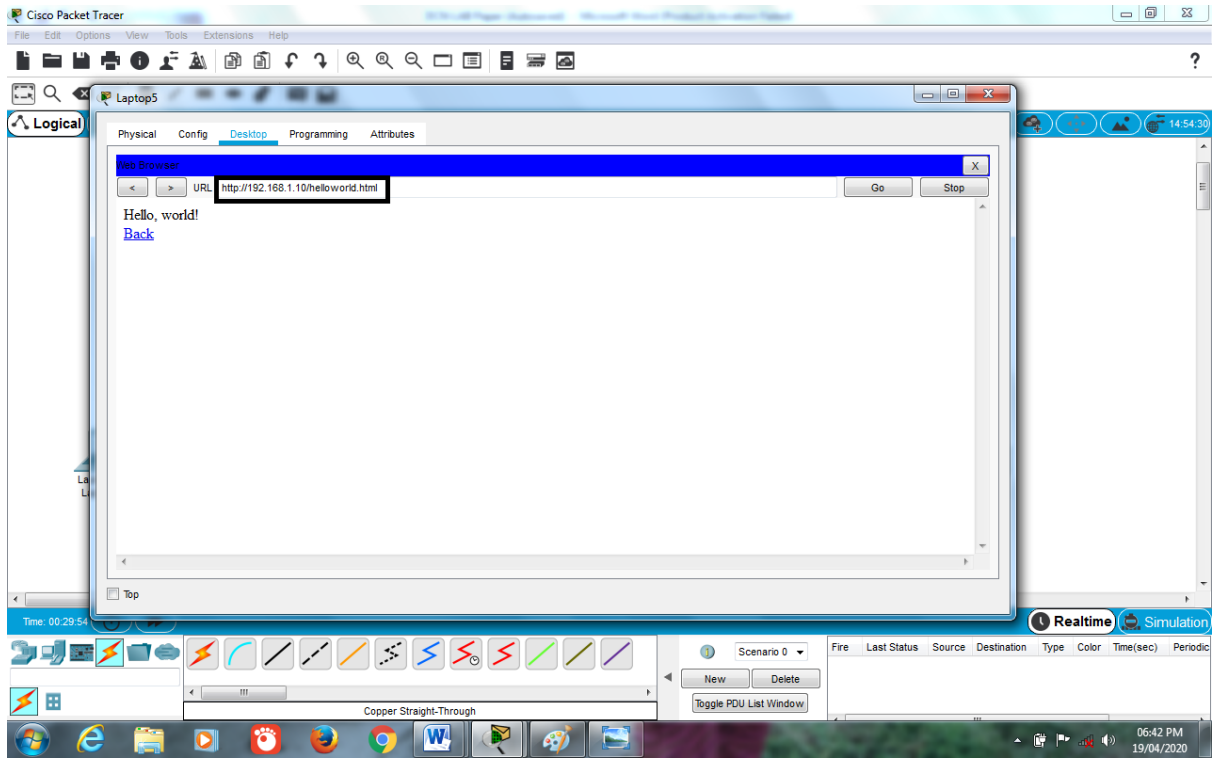
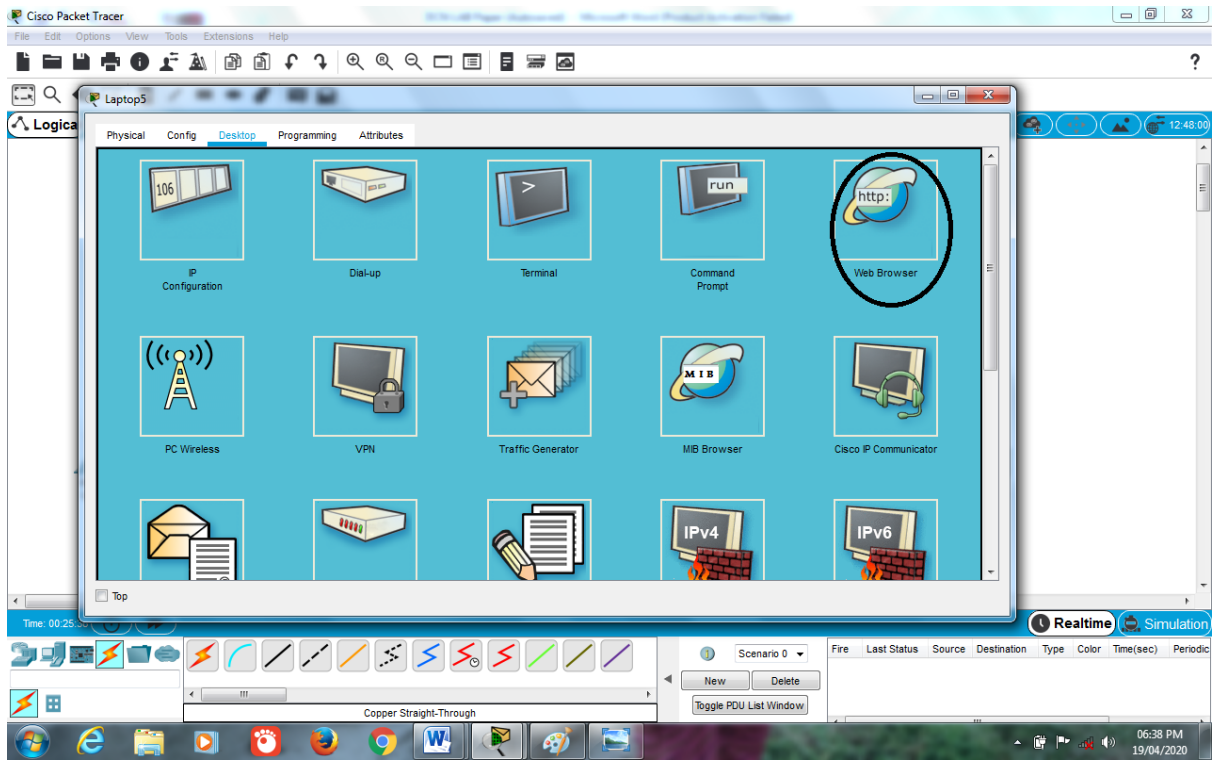


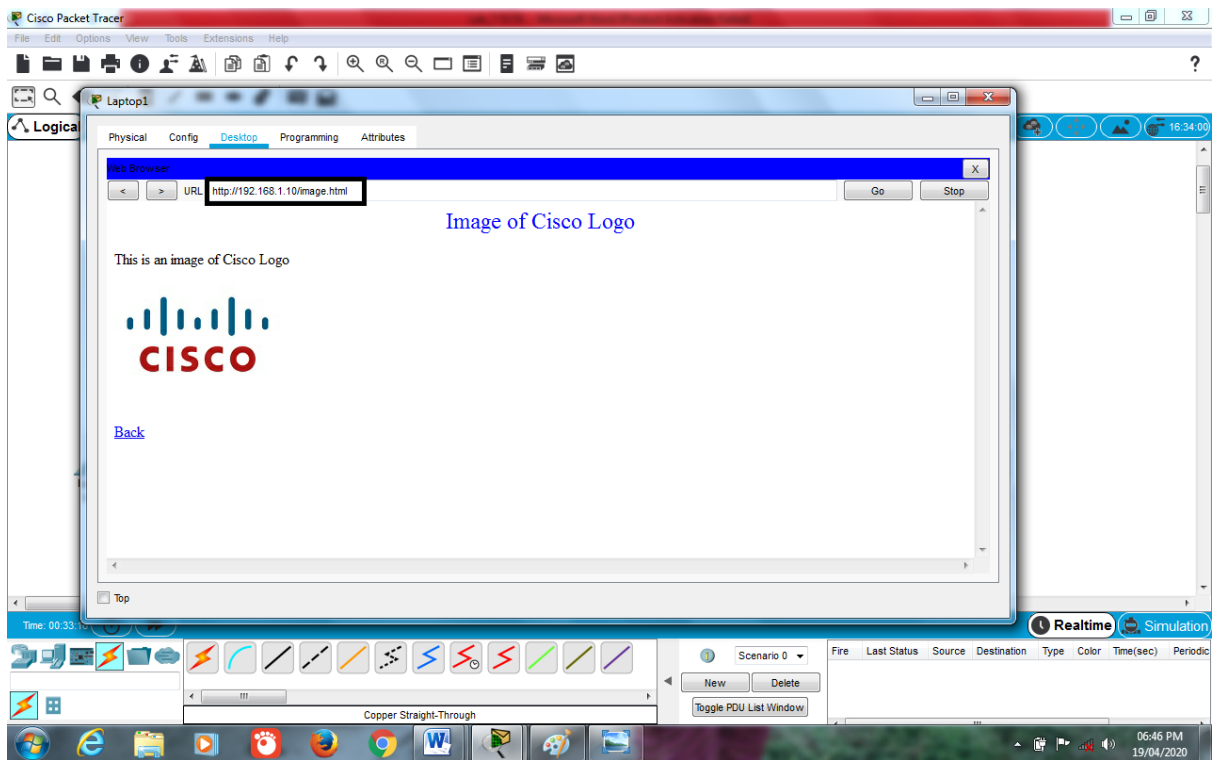
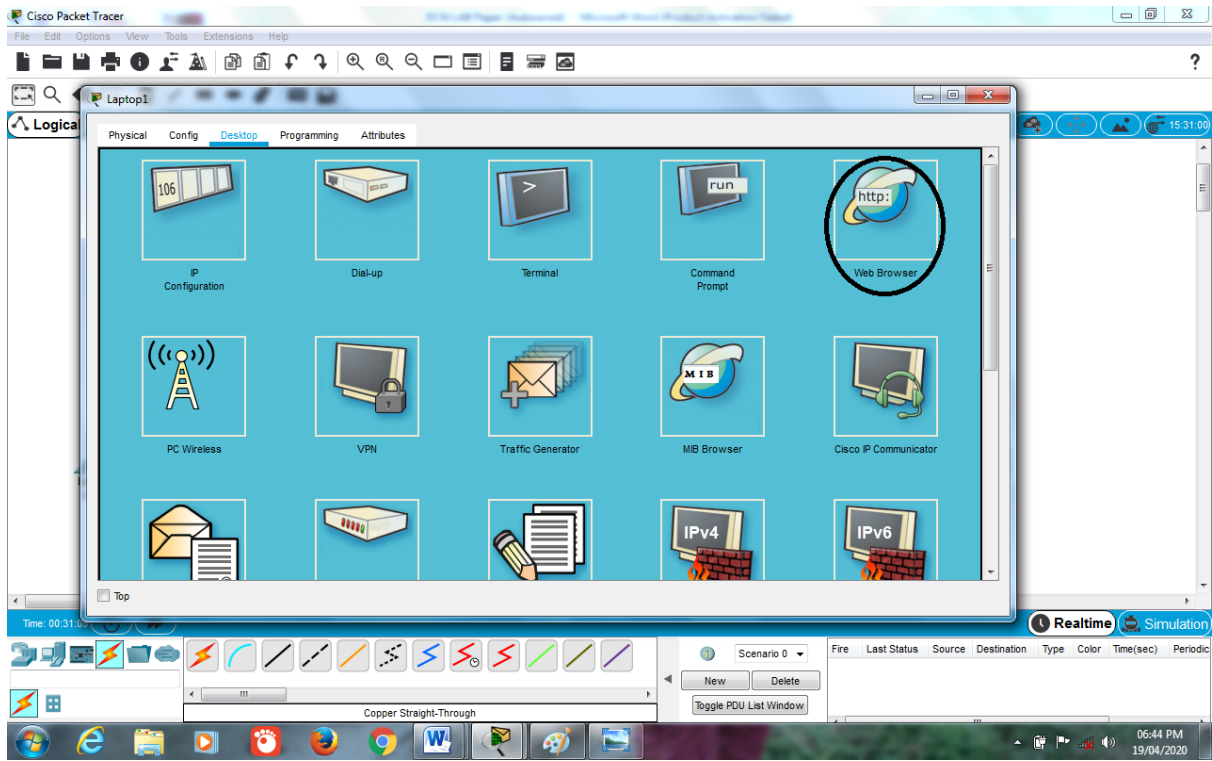
### HTTP in Server1:



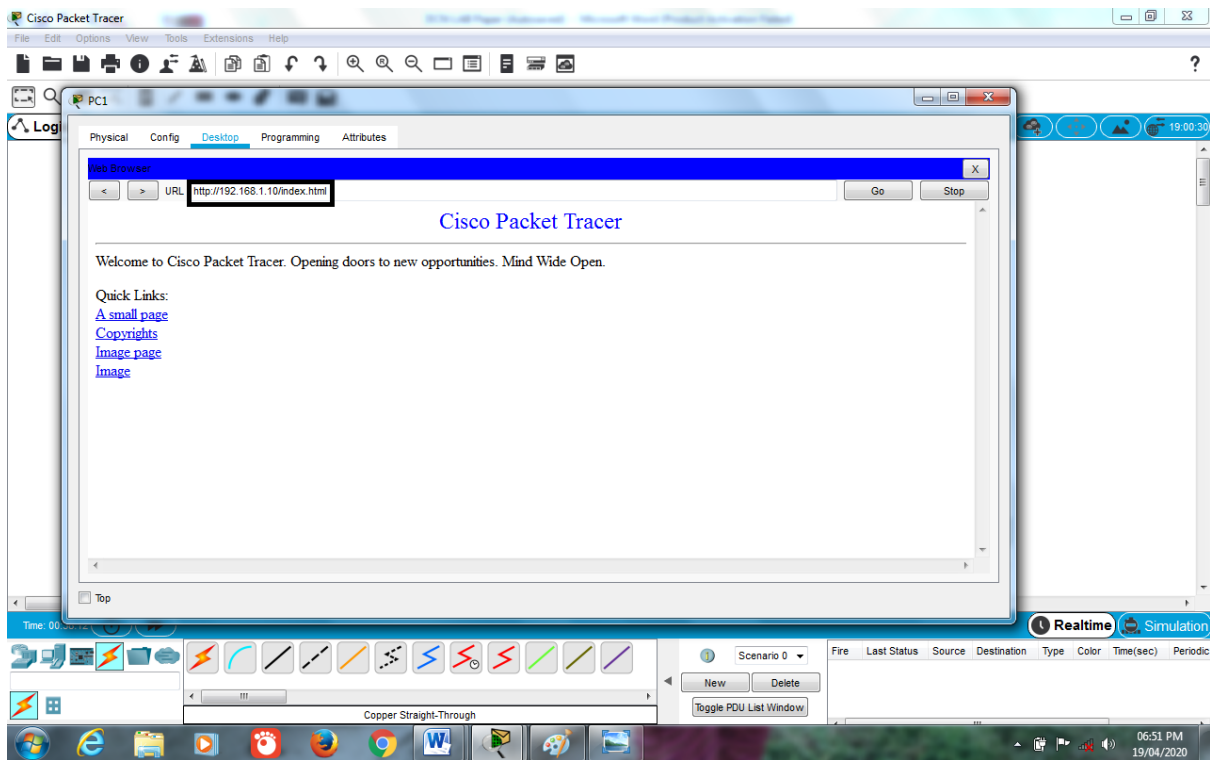
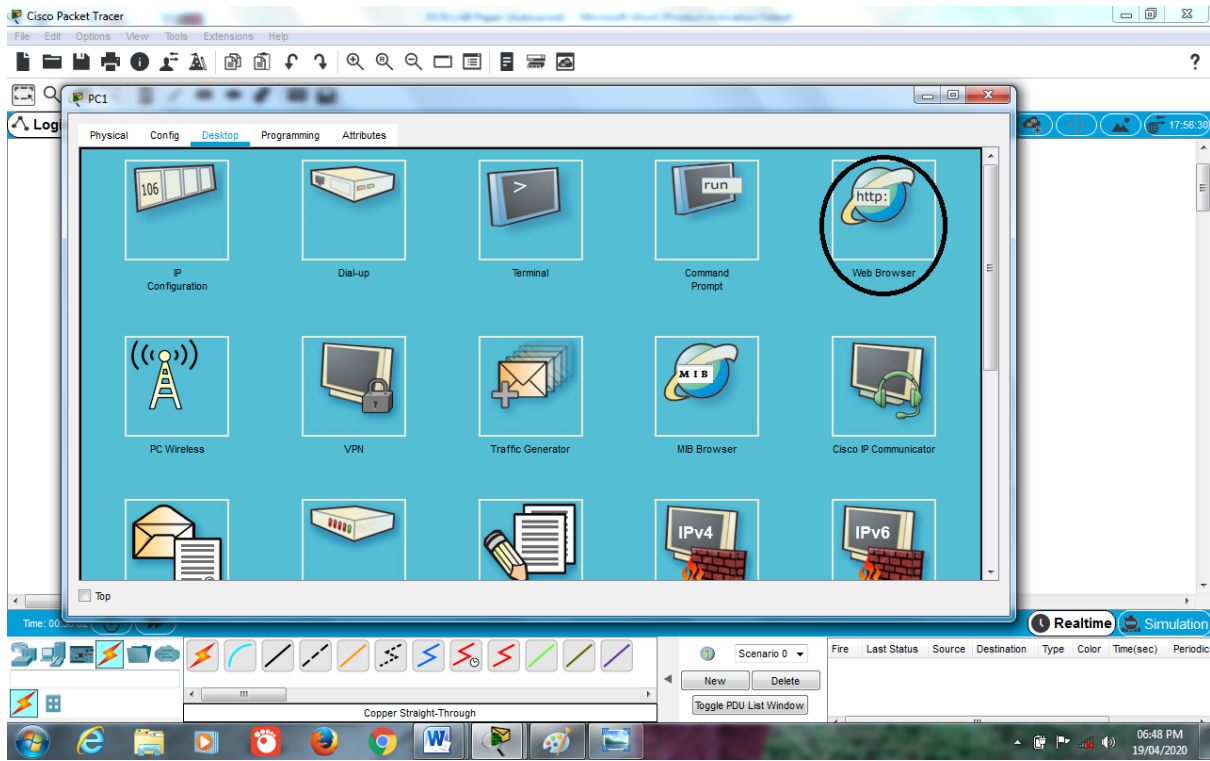
## HTTP Server from the Client and Results:











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