



## **IQRA NATIONAL UNIVERSITY**

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*Department : BS(CS)*

*Semester : 4th*

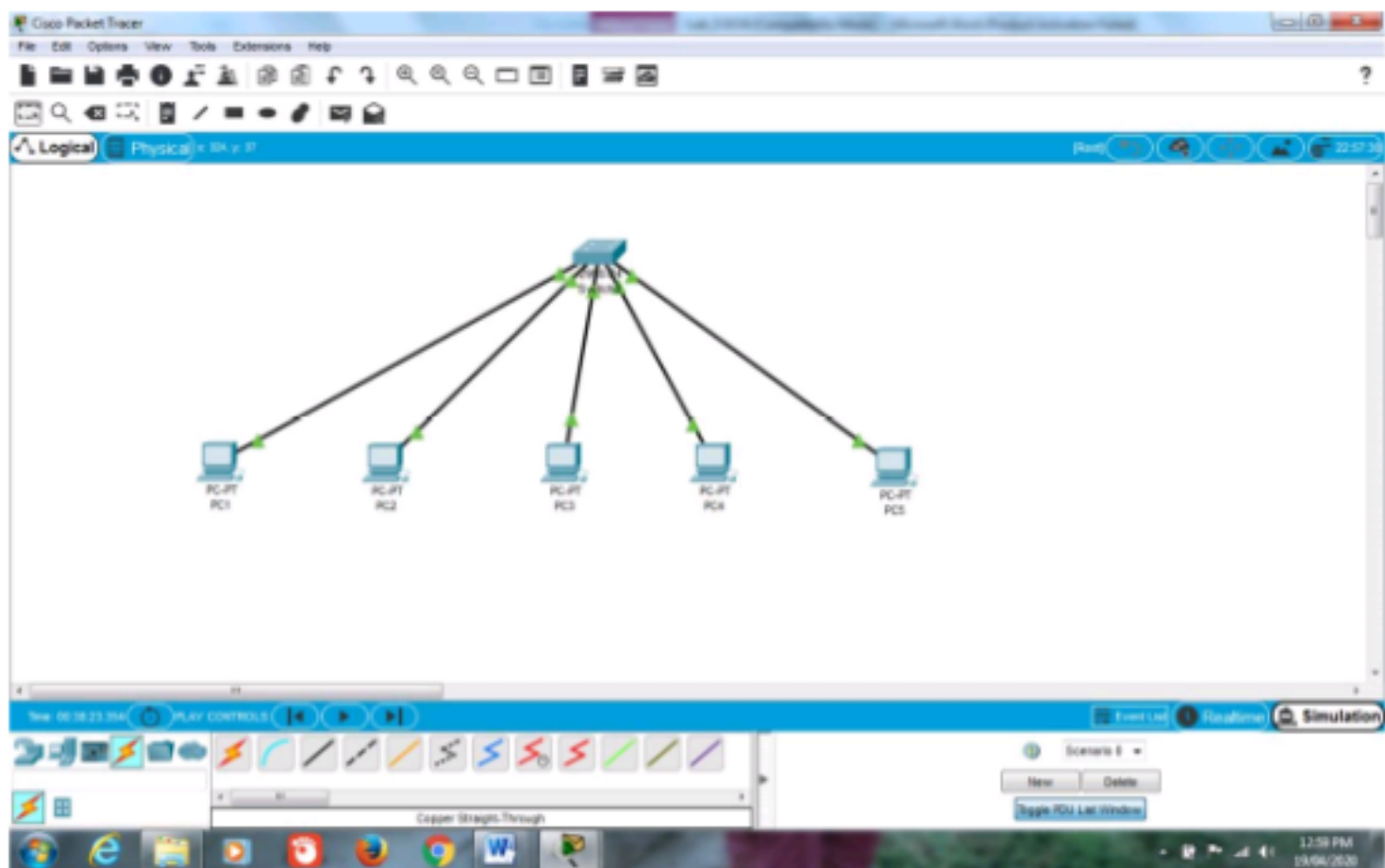
*ID # : 15031*

**Task 1:**

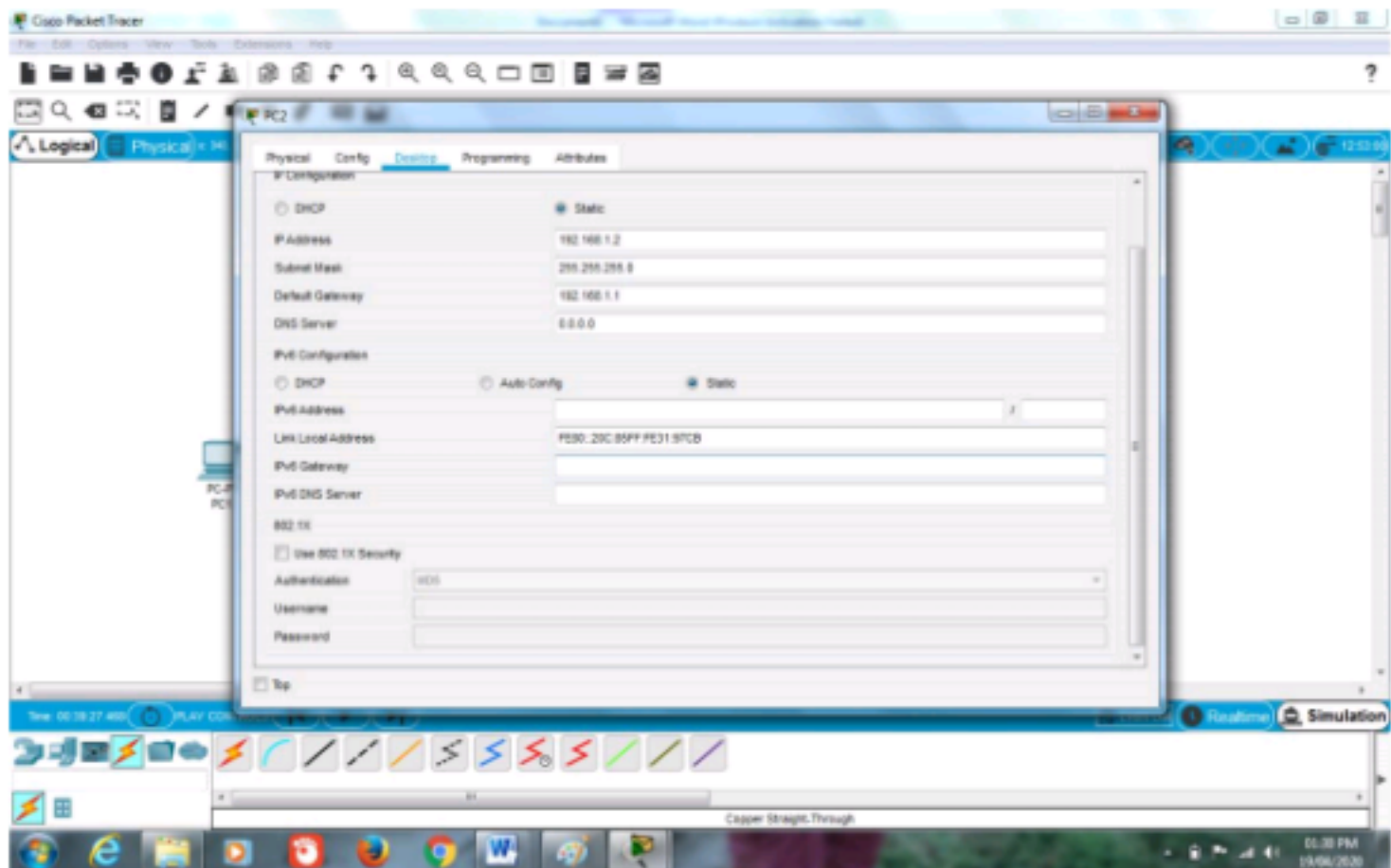
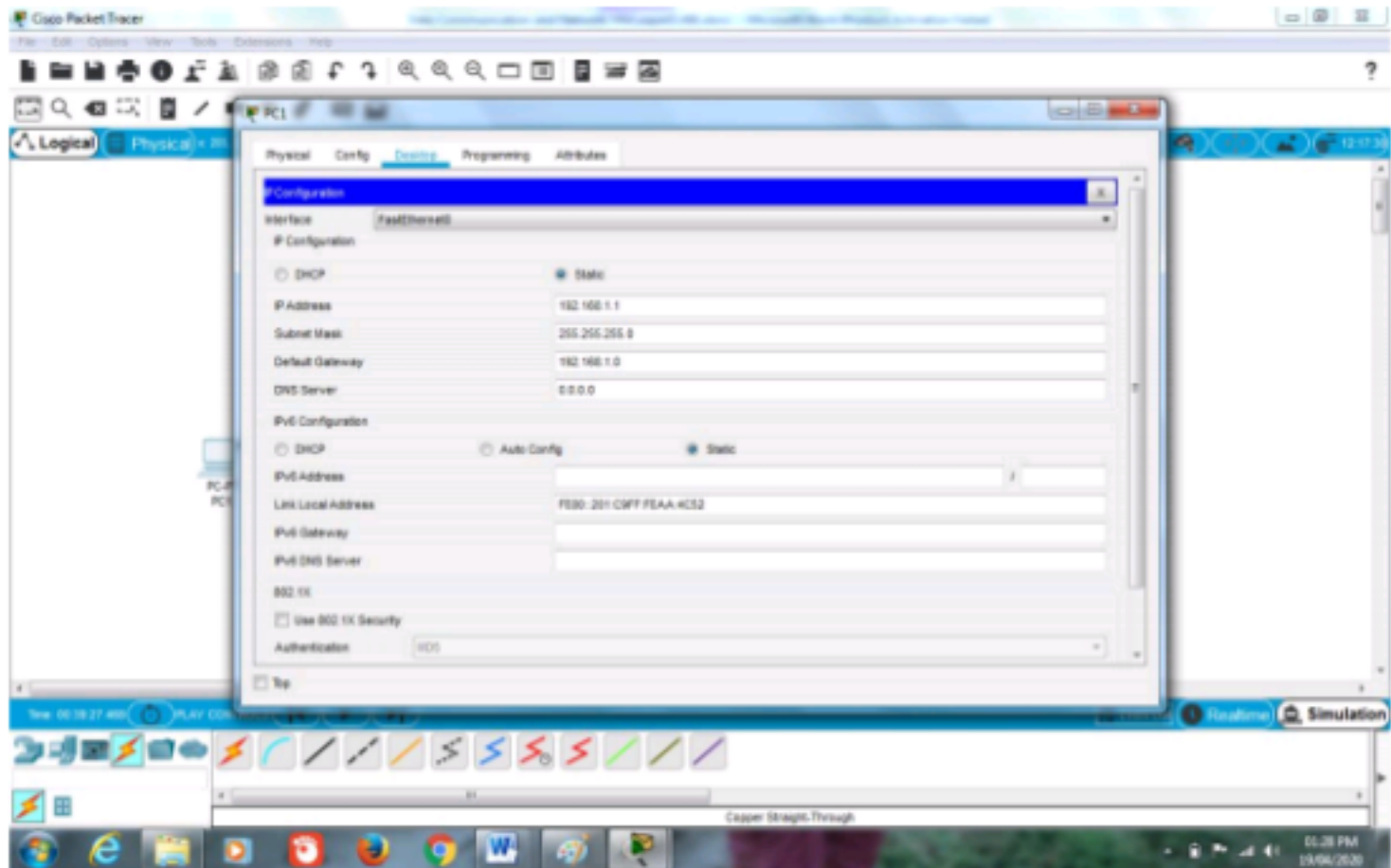
**Construct a network topology having one switch with connected with 5 PC's with Fast Ethernet Cable, assign them proper IP addresses, subnet mask and default gateways and send message from PC5 to PC1 and demonstrate the simulation.**

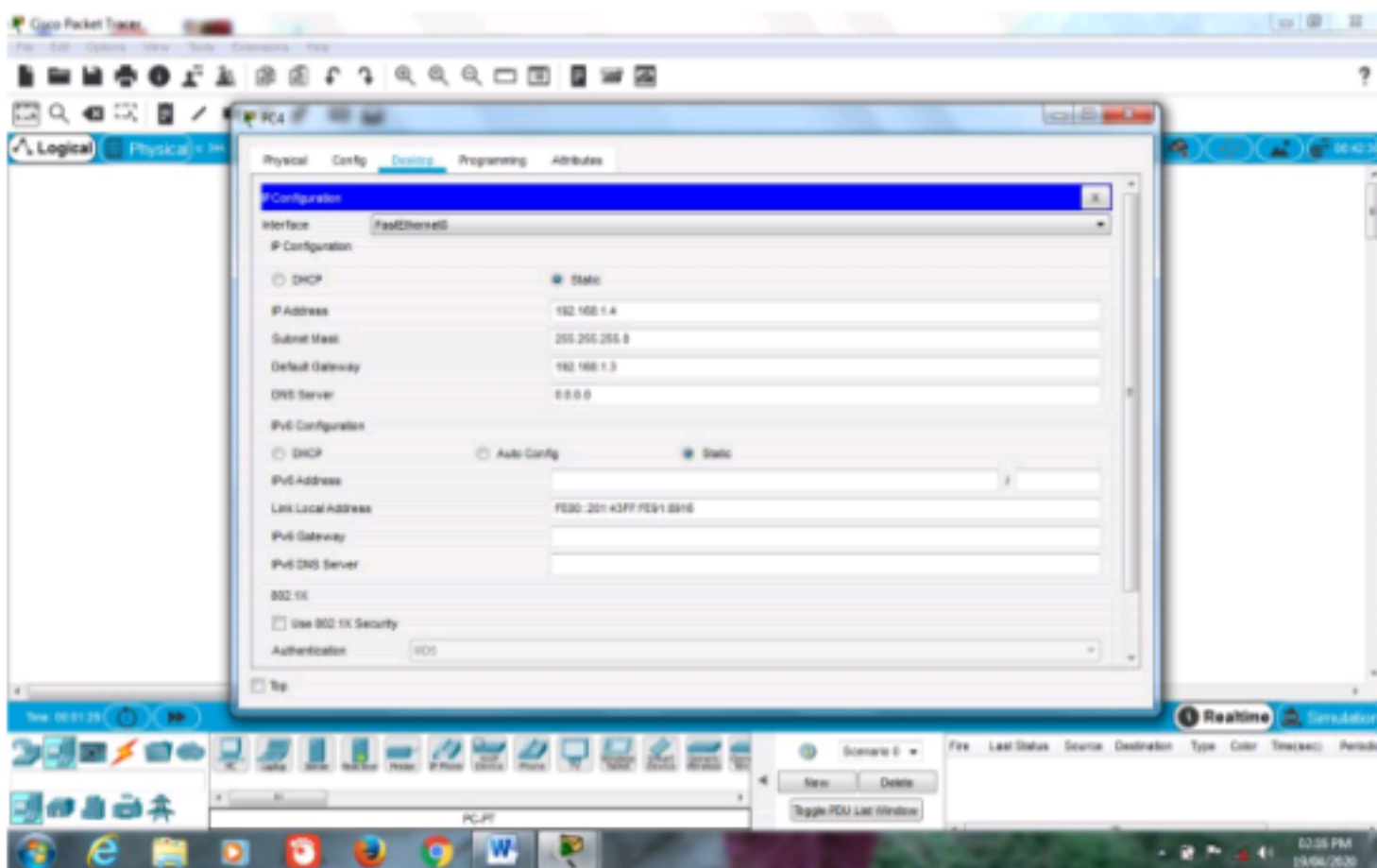
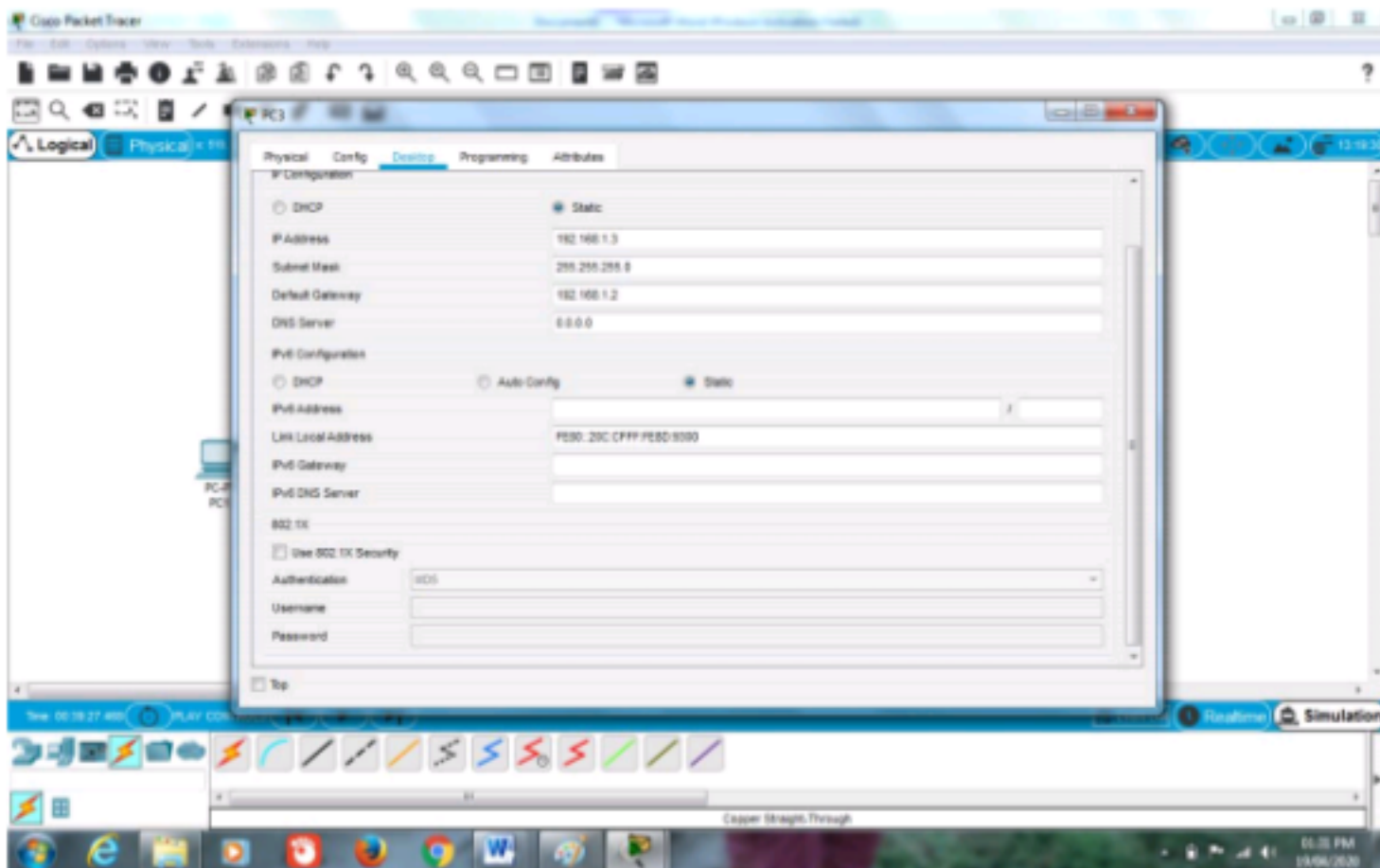
**Ans:**

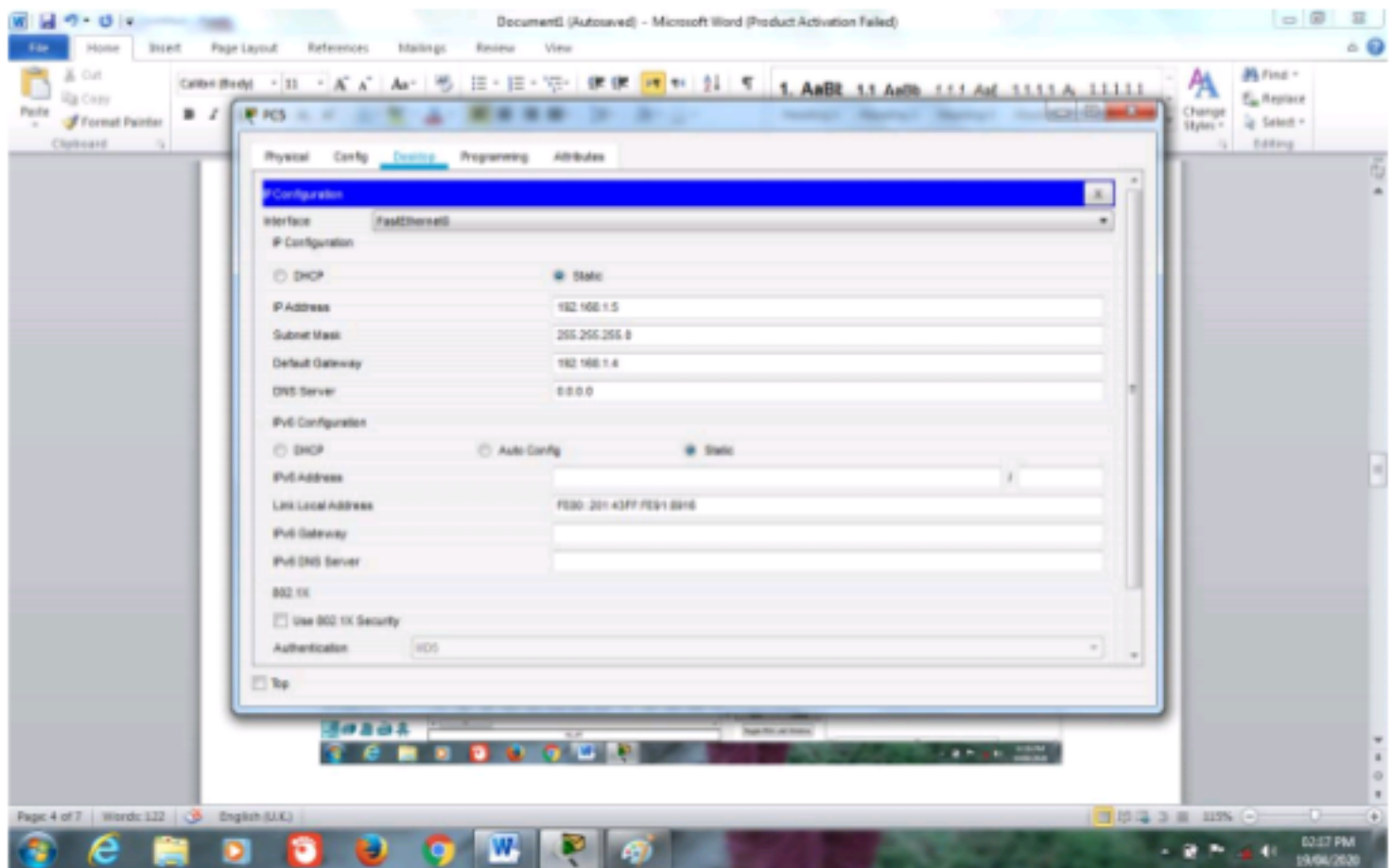
**Construction:**



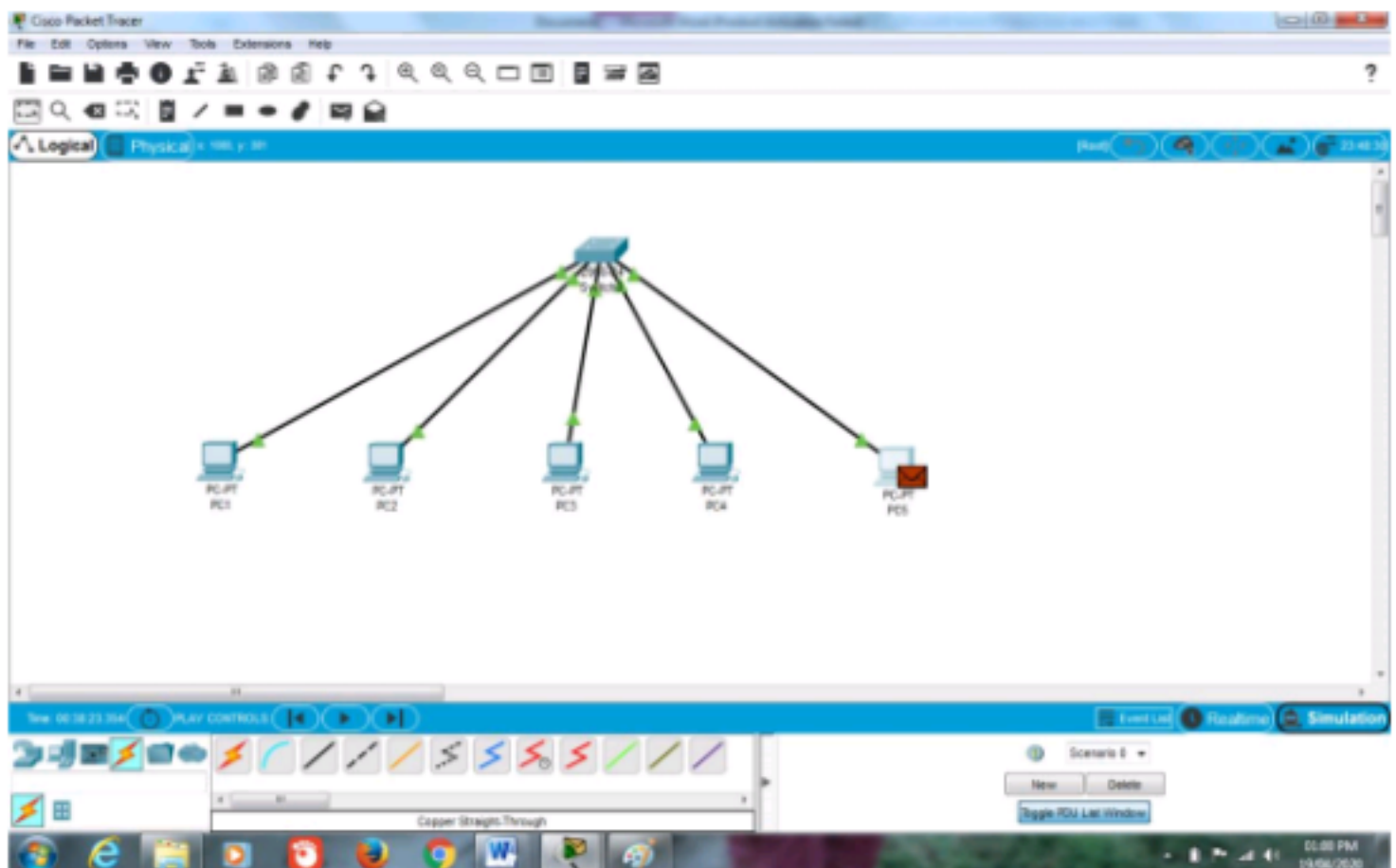
**IP Addresses, Subnet Mask, Default Gateways:**







## **Send message and Simulation:**





Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical 10 x 20

```

    graph TD
      S[Switch] --- PC1[PC1]
      S --- PC2[PC2]
      S --- PC3[PC3]
      S --- PC4[PC4]
      S --- PC5[PC5]
  
```

Simulation Panel

Event List

Time	Time(sec)	Last Device	At Device	Type
0:00	--	PC5		COMP
0:01		PC5	Switch0	COMP
0:02		Switch0	PC1	COMP
0:02		Switch0	PC2	COMP
0:02		Switch0	PC3	COMP
0:02		Switch0	PC4	COMP
0:03		PC1	Switch0	COMP
0:04		Switch0	PC5	COMP

Reset Simulation  Constant Delay Captured to: 12,208 s

Play Controls

Event List Filters - Visible Events

ACL, Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, GDRP, GDRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, ISAT, ISAT, LACP, LLDP, MVRP, NTP, NETFLOW, NTP, OSPF, OSPFv6, RADIUS, POP3, RRP, RRPv6, RTR, RTRv6, RTR, SDR, SDRv6, SSH, STR, SYSLOG, TACACS, TCP, TFTP, Telnet, USB, VTP

Edit Filters Show AllNone

Time: 00:00:00:00 PLAY CONTROLS

Event List Realtime Simulation

Copper Straight-Through

10:38 PM 10/04/2020

Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical 10 x 20

```

    graph TD
      S[Switch] --- PC1[PC1]
      S --- PC2[PC2]
      S --- PC3[PC3]
      S --- PC4[PC4]
      S --- PC5[PC5]
  
```

Simulation Panel

Event List

Time	Time(sec)	Last Device	At Device	Type
0:00	--	PC5		COMP
0:01		PC5	Switch0	COMP
0:02		Switch0	PC1	COMP
0:02		Switch0	PC2	COMP
0:02		Switch0	PC3	COMP
0:02		Switch0	PC4	COMP
0:03		PC1	Switch0	COMP
0:04		Switch0	PC5	COMP

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, GDRP, GDRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, ISAT, ISAT, LACP, LLDP, MVRP, NTP, NETFLOW, NTP, OSPF, OSPFv6, RADIUS, POP3, RRP, RRPv6, RTR, RTRv6, RTR, SDR, SDRv6, SSH, STR, SYSLOG, TACACS, TCP, TFTP, Telnet, USB, VTP

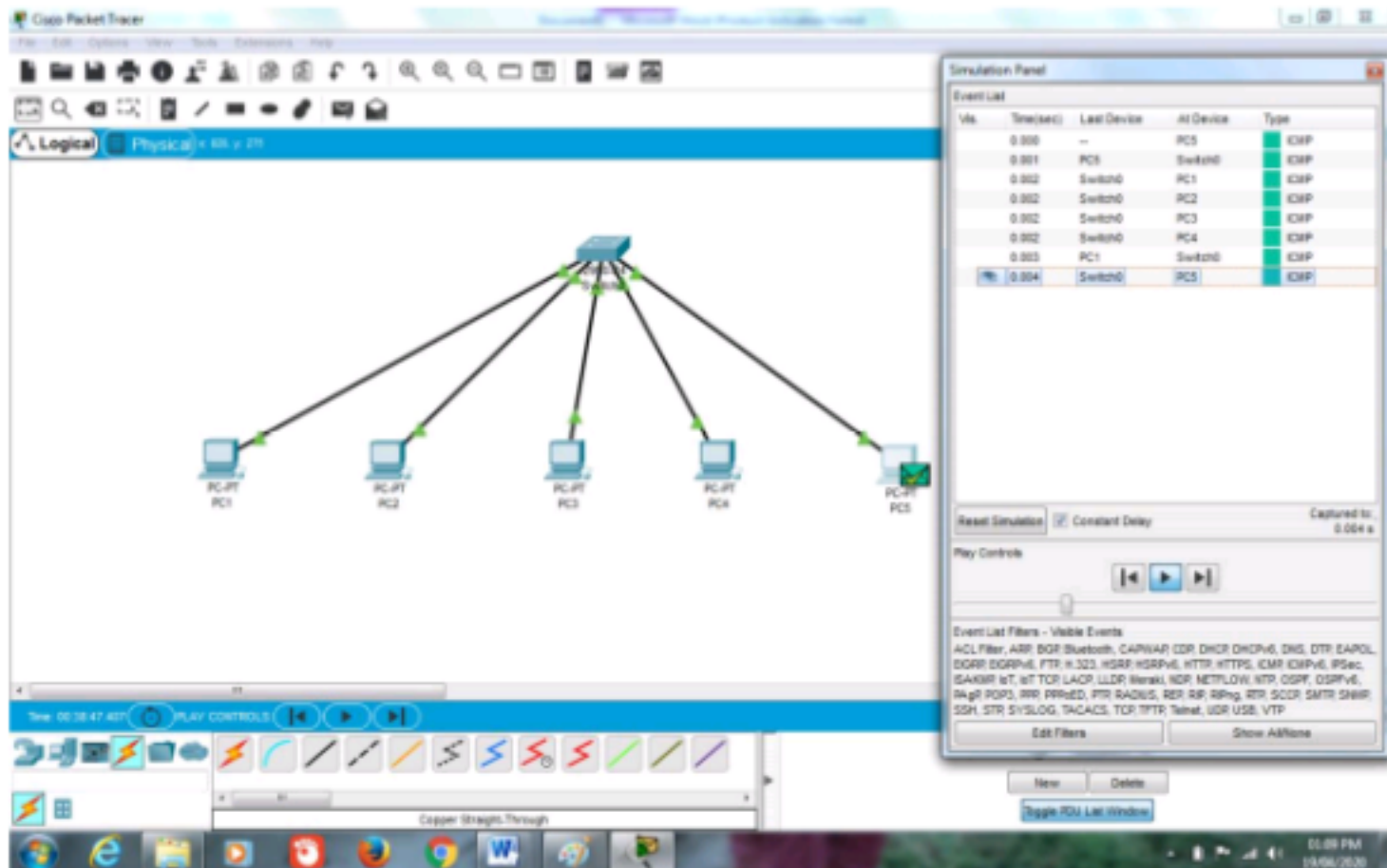
Edit Filters Show AllNone

Time: 00:00:01:01 PLAY CONTROLS

Event List Realtime Simulation

Copper Straight-Through

10:38 PM 10/04/2020

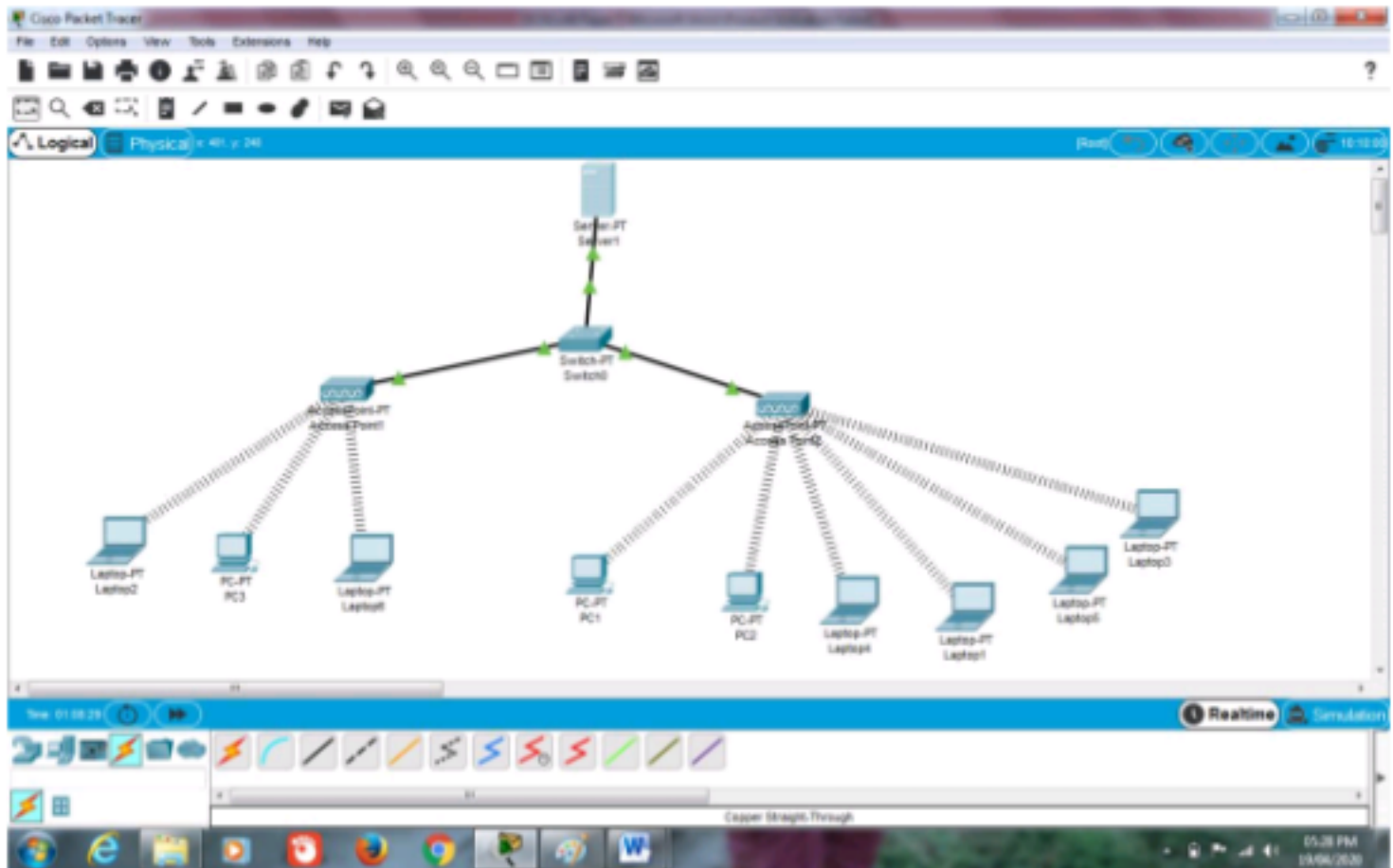


## Task 2:

**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:**

Physical Config **Config** Programming Attributes

IP Configuration

Interface: Ethernet0

IP Configuration

DHCP  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

DHCP  Auto Config  Static

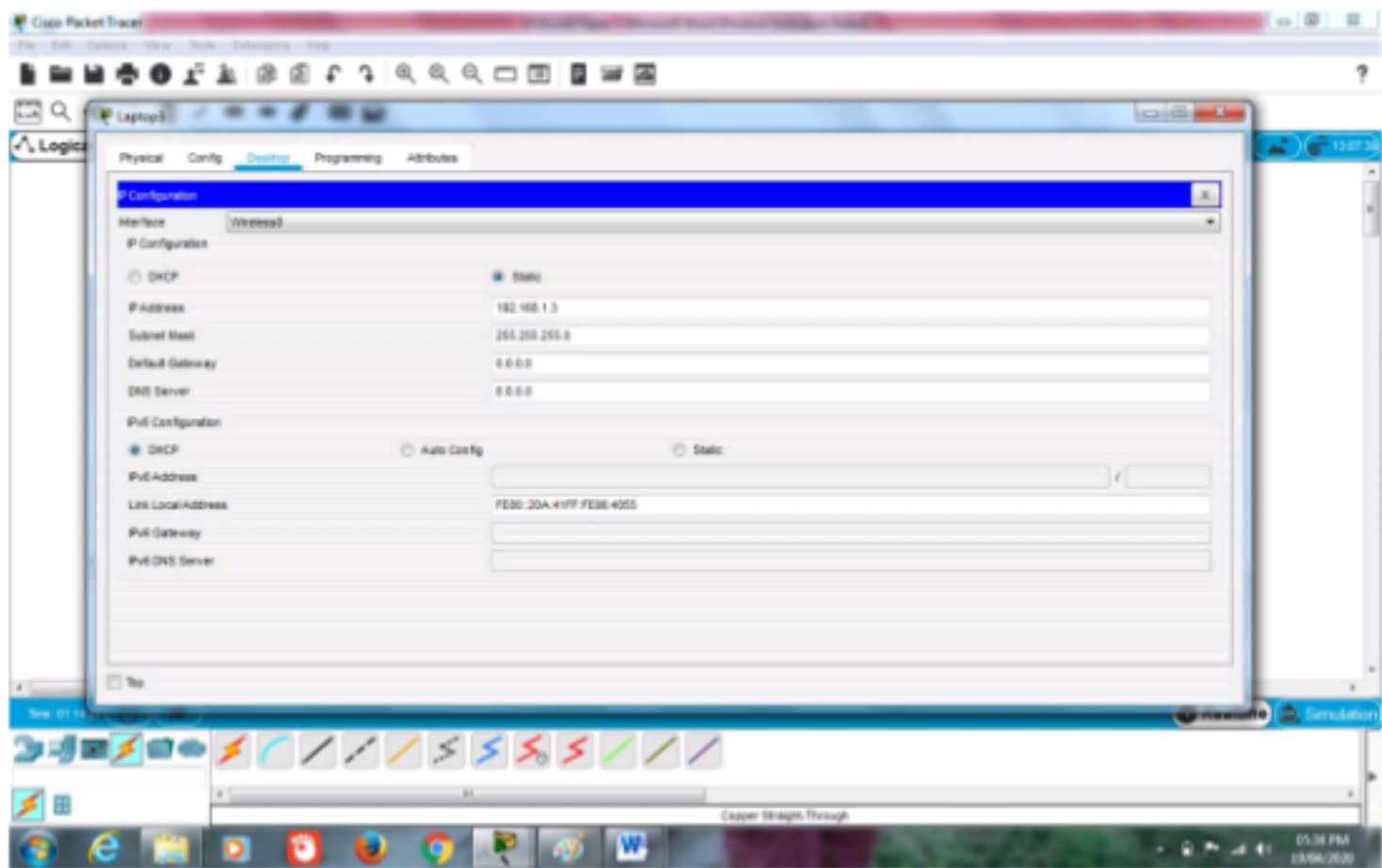
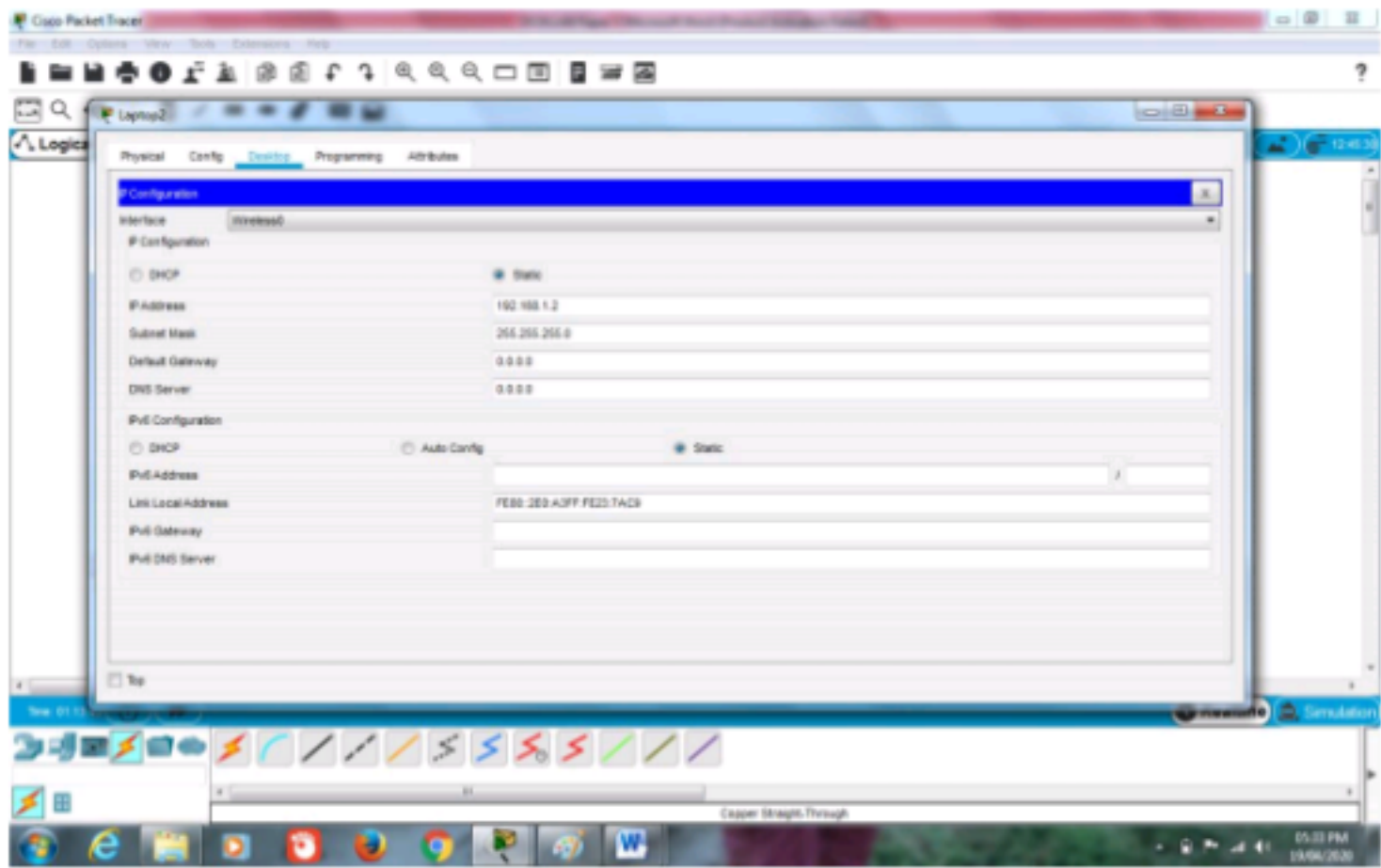
IPv6 Address: F

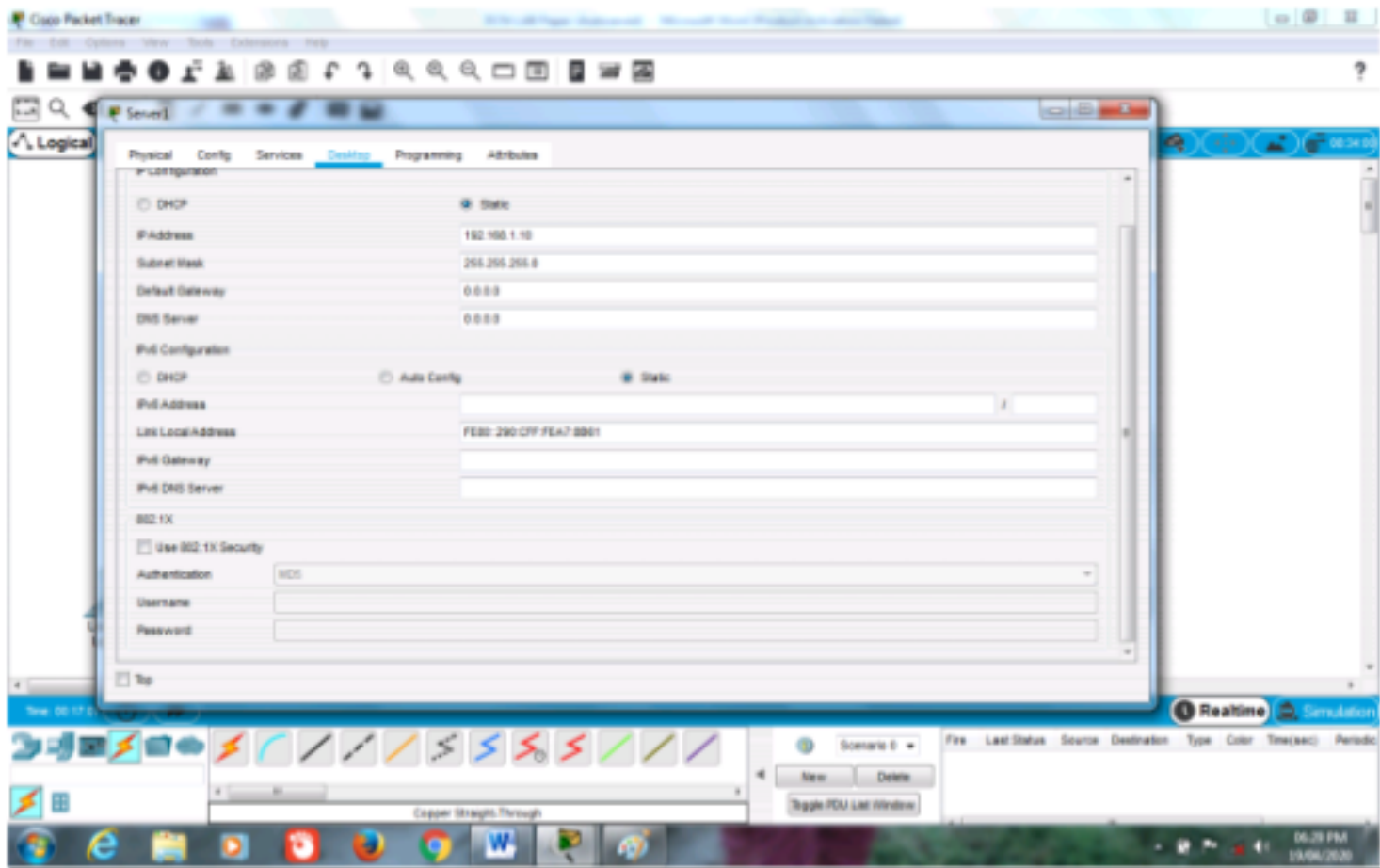
Link Local Address: FE80:260:477F:FEA4:5D4B

IPv6 Gateway:

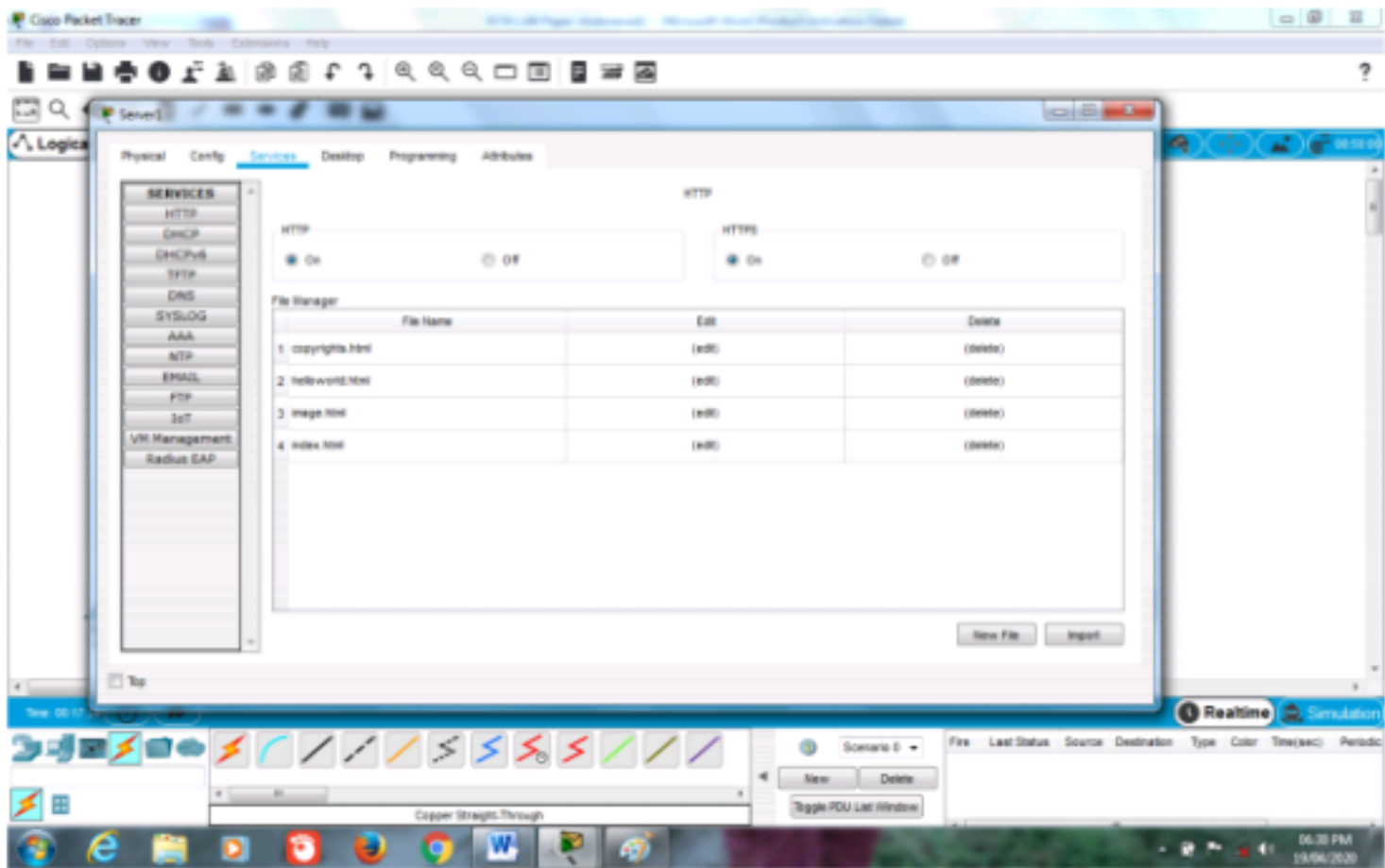
IPv6 DNS Server:







## HTTP in Server1:



## HTTP Server from the Client and Results:

