Task 2

Initial IP address: 192.168.1.0/24

Subnet C → No. of hosts = 60 || 2^n-2 = 60 | n = 6

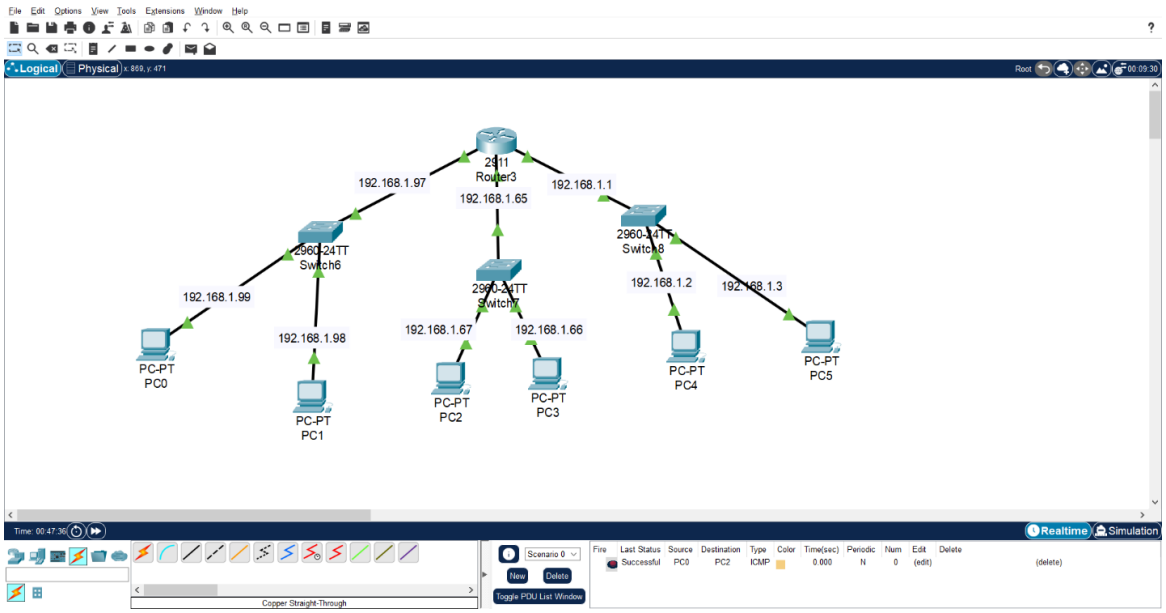
Next Hop = 64
New subnet (binary) = 1111 1111.1111 1111.1111 1111.1100 0000
New subnet (decimal) = 255.255.255.192 or / 26
Network IP = 192.168.1.0
Host Range = 192.168.1.1 - 192.168.1.62
Broadcast IP = 192.168.1.63

Subnet B → No. of hosts = 30 || 2^n-2 = 30 | n = 5

Next Hop = 32
New subnet (binary) = 1111 1111.1111 1111.1111 1111.1110 0000
New subnet (decimal) = 255.255.255.224 or / 27
Network IP = 192.168.1.64
Host Range = 192.168.1.65 - 192.168.1.94
Broadcast IP = 192.168.1.95

Subnet A → No. of hosts = 14 || 2^n-2 = 14 | n = 4

Next Hop = 16
New subnet (binary) **=** 1111 1111.1111 1111.1111 1111.1111 0000
New subnet (decimal) = 255.255.255. 240 or / 28
Network IP = 192.168.1.96
Host Range = 192.168.1.97 - 192.168.1.110
Broadcast IP = 192.168.1.111



Interfaces Configurations

G0/0:

```
Router#
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int
Router(config)#interface g0/0
Router(config-if)#IP ad
Router(config-if)#IP address 192.168.1.97 255.255.255.240
Router(config-if)#no shutd
Router(config-if)#no shutdown
```

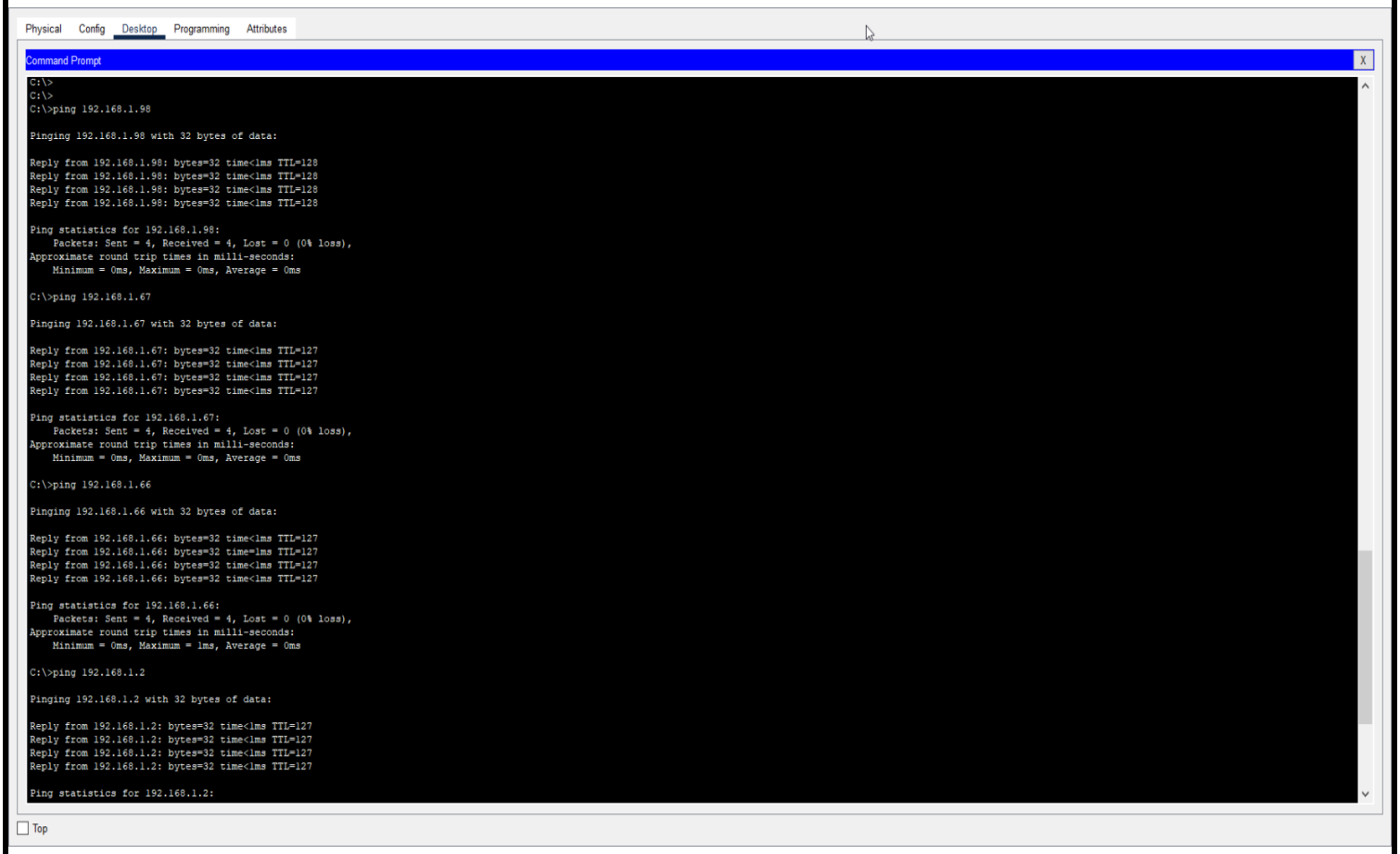
G0/1:

```
Router(config)#in
Router(config)#interface g0/1
Router(config-if)#IP ad
Router(config-if)#IP address 192.168.1.65 255.255.255.224
Router(config-if)#no sh
Router(config-if)#no shutdown
```

G0/2:

```
Router(config)#inter
Router(config)#interface g0/2
Router(config-if)#ip add
Router(config-if)#ip address 192.168.1.1 255.255.255.192
Router(config-if)#no shyt
Router(config-if)#no shut
Router(config-if)#no shutdown
```

Ping from PC0 to all other PCs




```
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=127
Reply from 192.168.1.3: bytes=32 time<1ms TTL=127
Reply from 192.168.1.3: bytes=32 time<1ms TTL=127
Reply from 192.168.1.3: bytes=32 time<1ms TTL=127

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 = 0ms, Average = 0ms

C:\>
```