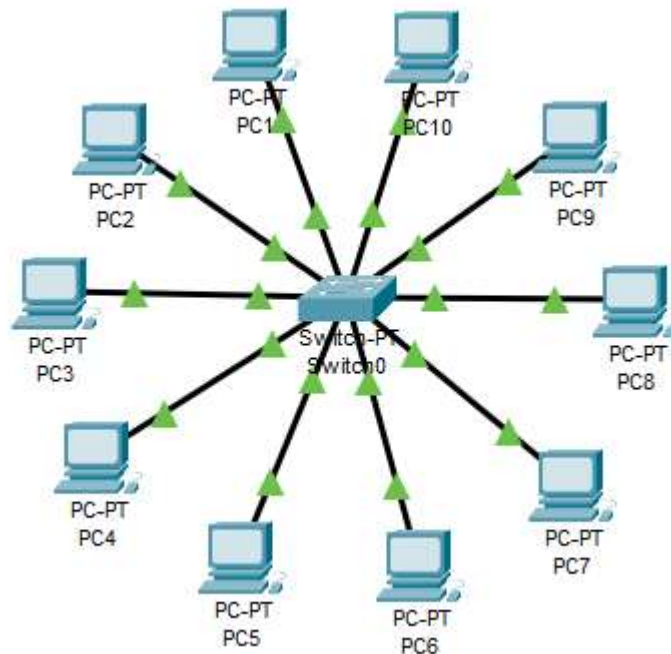


Tugas Jarkom Modul 3

A. Desain jaringan menggunakan switch seri generic dan 10 (sepuluh) unit PC



B. Menentukan subnet mask yang harus digunakan pada semua computer tersebut.

Subnet = 5

Host = 25

$$2^x - 2 = \text{jumlah subnet}$$

Subnet yang dibutuhkan adalah 5 maka nilai X = 3. Sehingga subnet yang didapat adalah:

$$2^3 - 2 = 6 \text{ subnet}$$

Ubah nilai bit 0 yang ada pada subnet mask default menjadi bit 1 sebanyak 3 bit.

Subnet mask default kelas C = 255.255.255.0

Desimal	255	255	255	0
Biner	11111111	11111111	11111111	00000000
				3 bit = 11100000

Terdapat 5 bit 0 yang dapat difungsikan sebagai host, maka hasilnya:

$$2^5 - 2 = 30 \text{ host}$$

30 host sudah cukup memenuhi kebutuhan.

Jadi 11100000 = 224 Dengan demikian yang digunakan sebagai subnet mask untuk semua computer adalah **255.255.255.224**

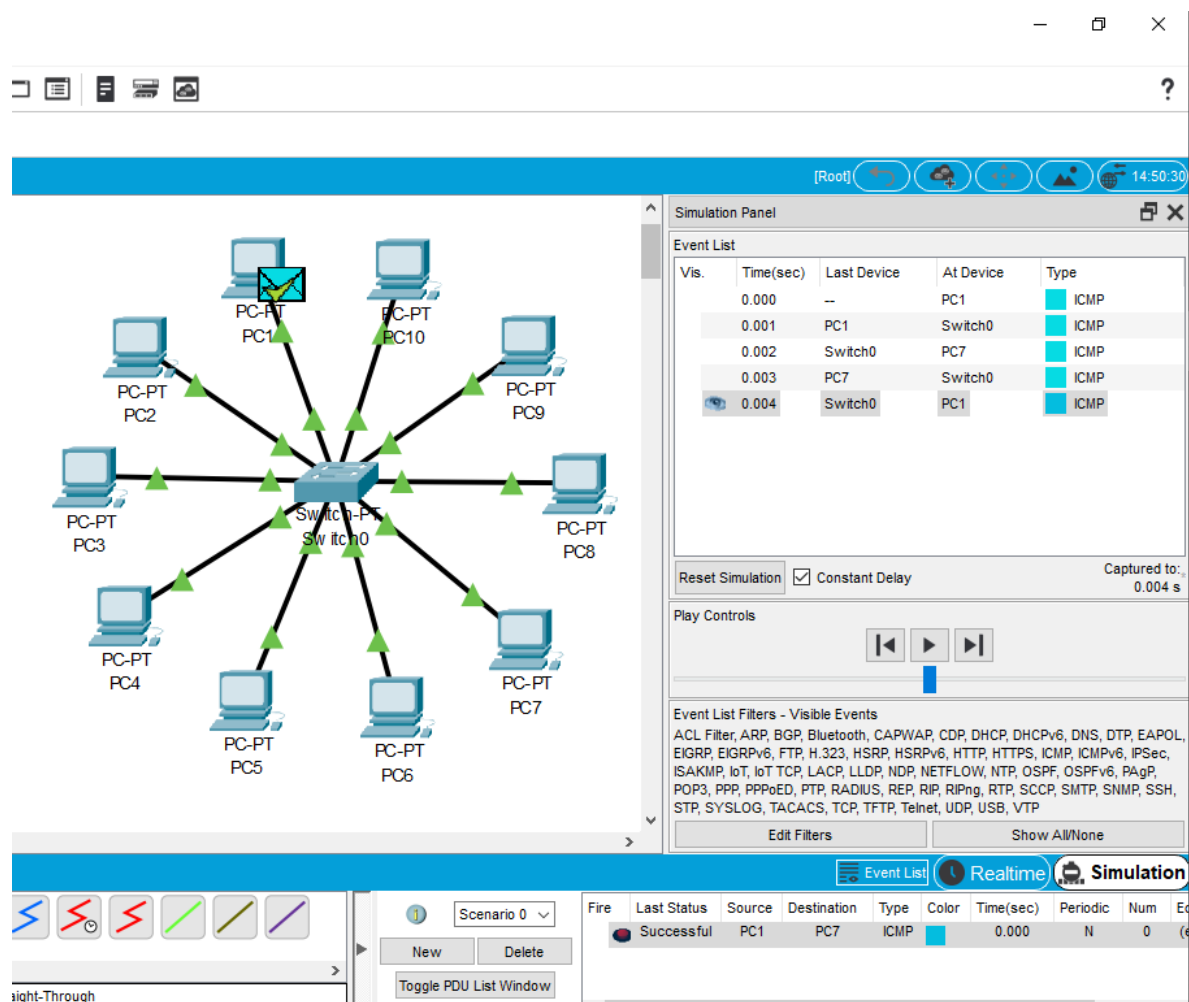
C. Menentukan subnet address yang terbentuk

Subnet address = $256 - 224 = 32$

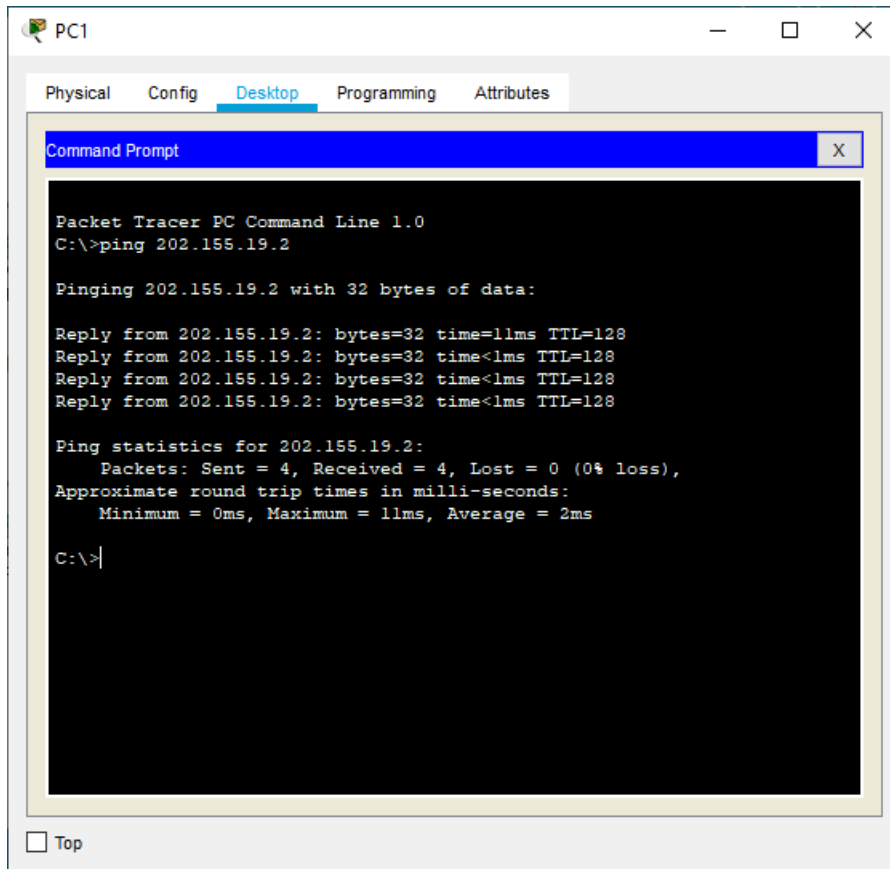
Divisi	Network	IP awal	IP akhir	Broadcast
1	202.155.19.0	202.155.19.1	202.155.19.30	202.155.19.31
2	202.155.19.32	202.155.19.33	202.155.19.62	202.155.19.63
3	202.155.19.64	202.155.19.65	202.155.19.94	202.155.19.95
4	202.155.19.96	202.155.19.97	202.155.19.126	202.155.19.127
5	202.155.19.128	202.155.19.129	202.155.19.158	202.155.19.159

D. Implementasi menggunakan simulator dan tes koneksi antara komputer komputer yang ada

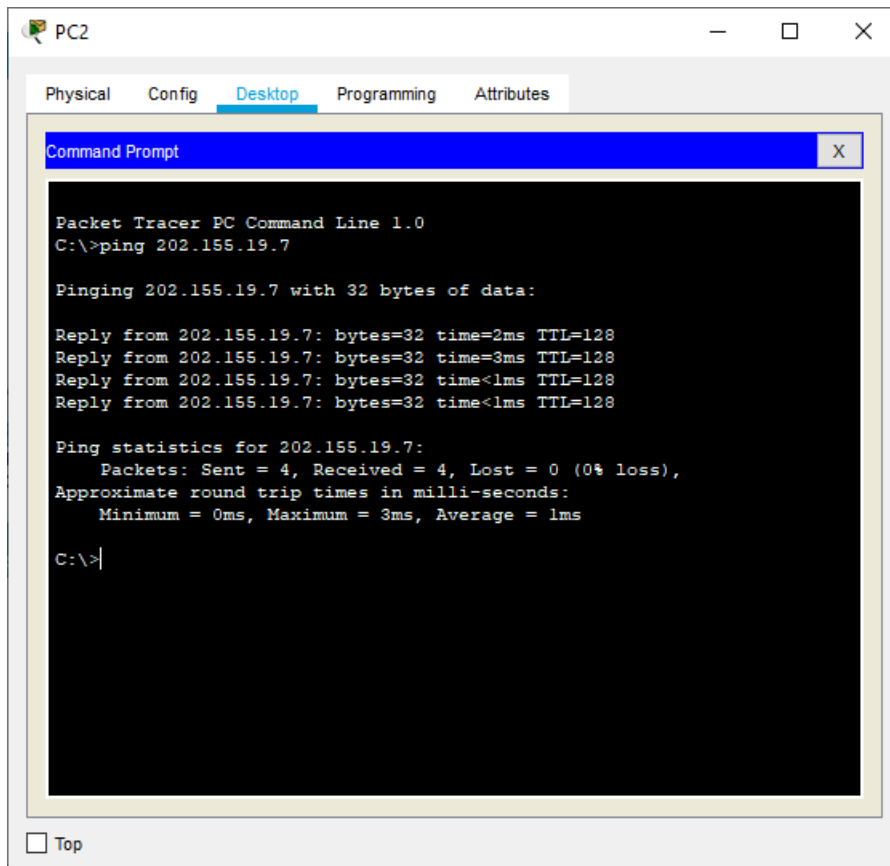
Simulasi dari PC 1 ke PC 7 lalu kembali



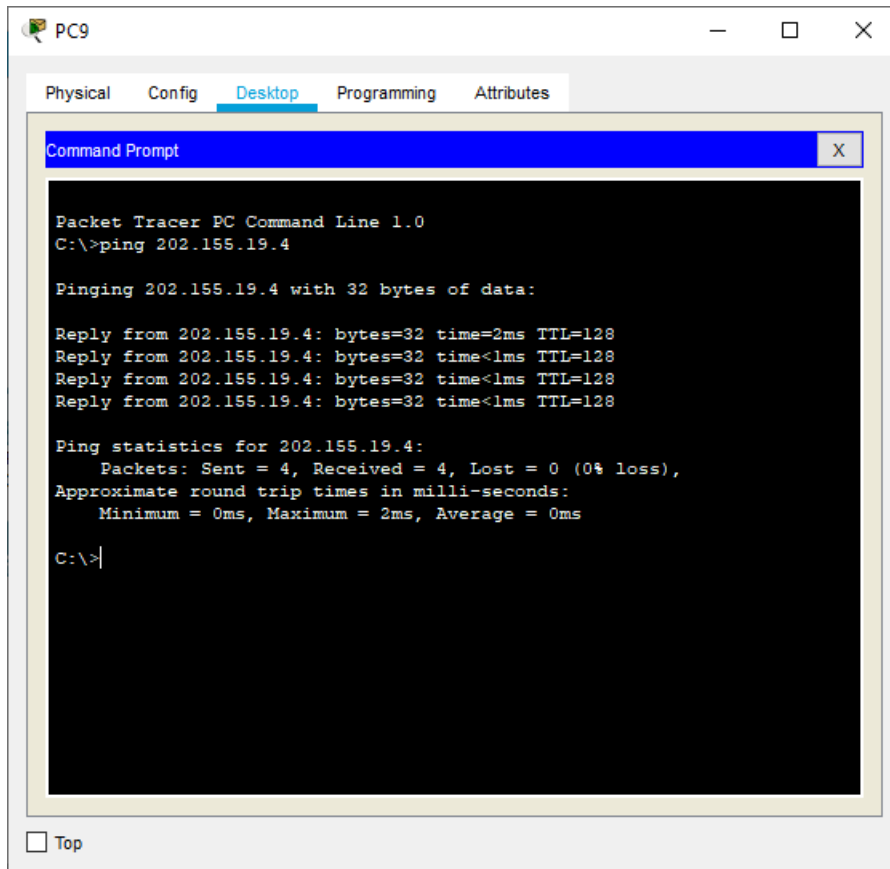
PC 1 ke PC 2



PC 2 ke PC 7



PC 9 ke PC 4



The screenshot shows a Packet Tracer PC window for PC9. The 'Desktop' tab is active, displaying a Command Prompt window. The command prompt shows the execution of the command 'ping 202.155.19.4'. The output indicates that the ping was successful, with 4 packets sent and received, 0% loss, and an average round trip time of 0ms. The command prompt is titled 'Command Prompt' and has a close button (X) in the top right corner. The Packet Tracer window has tabs for Physical, Config, Desktop, Programming, and Attributes. A 'Top' button is located at the bottom left of the window.

```
Packet Tracer PC Command Line 1.0
C:\>ping 202.155.19.4

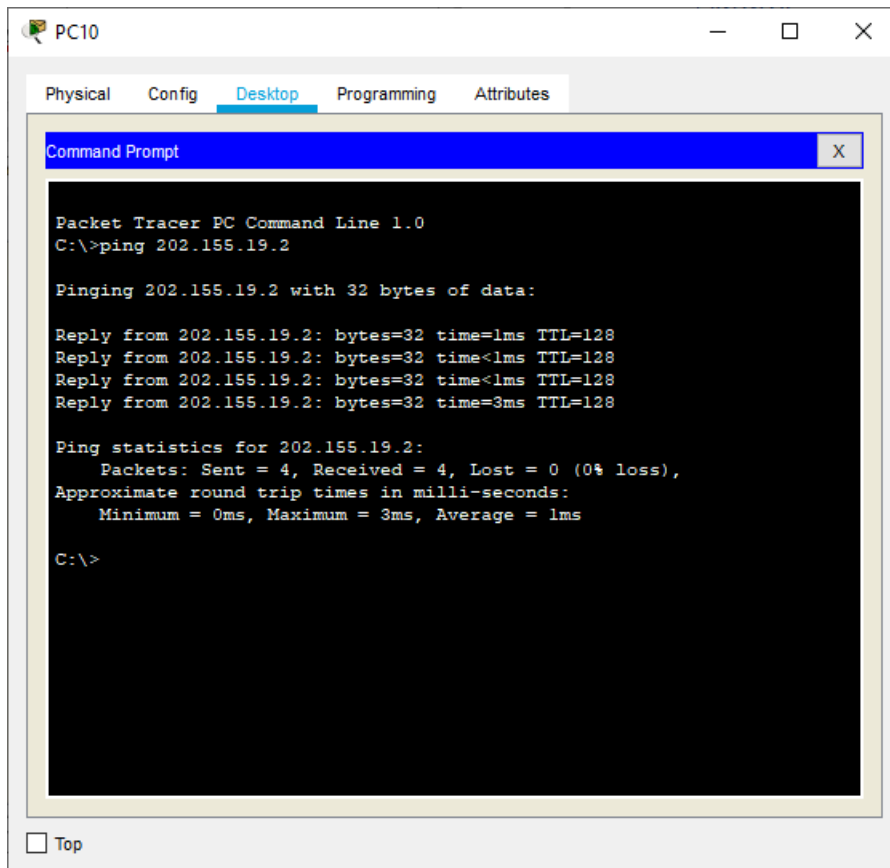
Pinging 202.155.19.4 with 32 bytes of data:

Reply from 202.155.19.4: bytes=32 time=2ms TTL=128
Reply from 202.155.19.4: bytes=32 time<1ms TTL=128
Reply from 202.155.19.4: bytes=32 time<1ms TTL=128
Reply from 202.155.19.4: bytes=32 time<1ms TTL=128

Ping statistics for 202.155.19.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\>
```

PC 10 ke PC 2



The screenshot shows a Packet Tracer PC window for PC10. The 'Desktop' tab is active, displaying a Command Prompt window. The command prompt shows the execution of the command 'ping 202.155.19.2'. The output indicates that the ping was successful, with 4 packets sent and received, 0% loss, and an average round trip time of 1ms. The command prompt is titled 'Command Prompt' and has a close button (X) in the top right corner. The Packet Tracer window has tabs for Physical, Config, Desktop, Programming, and Attributes. A 'Top' button is located at the bottom left of the window.

```
Packet Tracer PC Command Line 1.0
C:\>ping 202.155.19.2

Pinging 202.155.19.2 with 32 bytes of data:

Reply from 202.155.19.2: bytes=32 time=1ms TTL=128
Reply from 202.155.19.2: bytes=32 time<1ms TTL=128
Reply from 202.155.19.2: bytes=32 time<1ms TTL=128
Reply from 202.155.19.2: bytes=32 time=3ms TTL=128

Ping statistics for 202.155.19.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\>
```