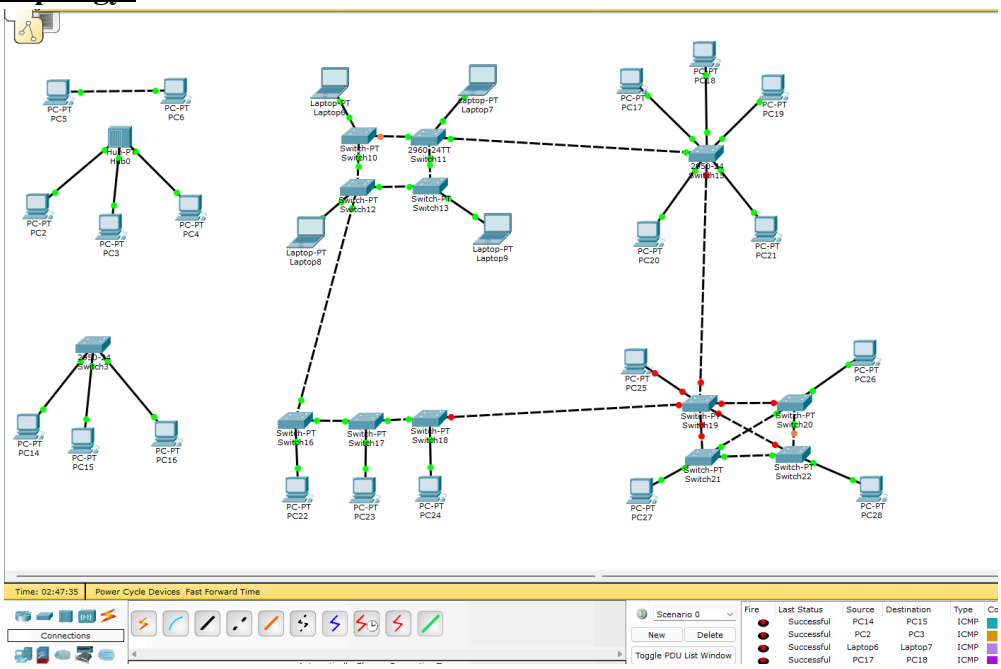
Program – 1:

Aim: Create a topology and simulate sending a simple PDU from source to destination using hub and switch as connecting devices and demonstrate ping message.

Topology:



Procedure:

- **Point-to-Point link**
  - **PC5** → 20.10.0.2
  - **PC6** → 20.10.0.3
- **Hub (PC2, PC3, PC4)**
  - **PC2** → 20.10.0.4
  - **PC3** → 20.10.0.5
  - **PC4** → 20.10.0.6
- **Switch (PC14, PC15, PC16)**
  - **PC14** → 20.10.0.7
  - **PC15** → 20.10.0.8
  - **PC16** → 20.10.0.9

LAN Topology & PC IP Configurations

1. Star Topology (Switch13 Region)

- **PC17** → 10.0.0.2
- **PC18** → 10.0.0.3
- **PC19** → 10.0.0.4
- **PC20** → 10.0.0.5
- **PC21** → 10.0.0.6

2. Bus Topology (Switch16 → Switch17 → Switch18)

- **PC22** → 10.0.0.7
- **PC23** → 10.0.0.8
- **PC24** → 10.0.0.9

3. Ring Topology (Switch19 → Switch20 → Switch21 → Switch22)

- **PC25** → 10.0.0.10
- **PC26** → 10.0.0.11
- **PC27** → 10.0.0.12
- **PC28** → 10.0.0.13

4. Mesh Topology (Bottom-right interconnected switches)

If mesh includes the same PCs (25–28), then **IPs remain the same**.
If you have more PCs, assign next IPs:

- **Next PC** → 10.0.0.14
- **Next PC** → 10.0.0.15
- Continue as needed…

Output: