Experiment No. 8
Perform to simulate VLANs on the switch/router using Cisco packet tracer/GNS3
Date of Performance:
Date of Submission:
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Roll No. 01

Experiment 8

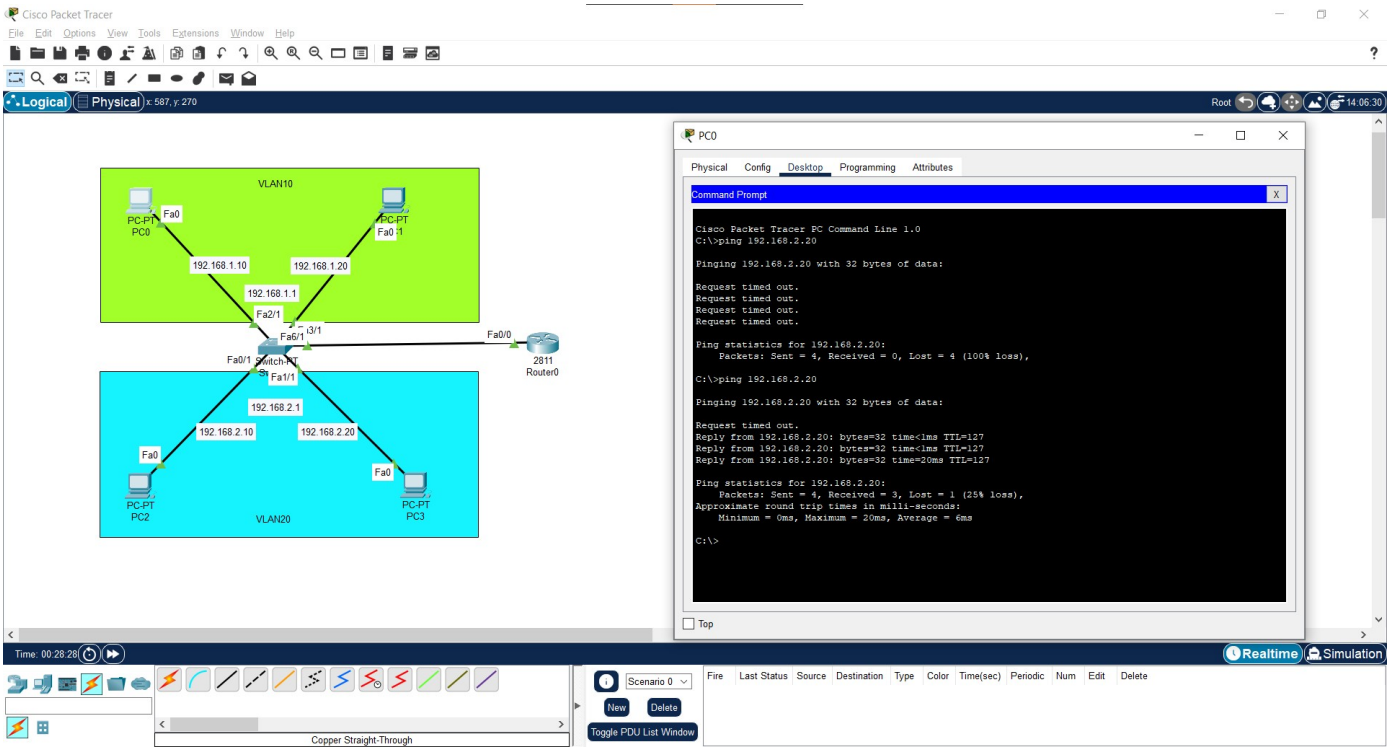
Aim: To create a network topology for simulating VLANs on the switch using Cisco packet tracer

Theory:

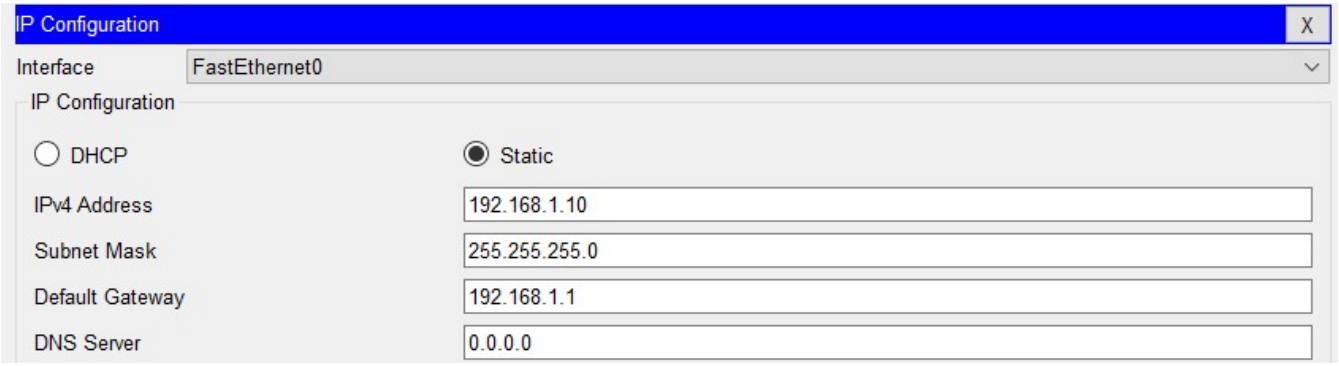
A Virtual LAN (VLAN) is simply a logical LAN. VLANs have similar characteristics with those of physical LANs, only that with VLANs, you can logically group hosts even if they are physically located on separate LAN segments. Each VLAN can be considered as a separate subnet or broadcast domain. For this reason, to move packets from one VLAN to another, a router or a layer 3 switch is used. VLANs are configured on switches by placing some interfaces into one broadcast domain and some interfaces into another.

Output:

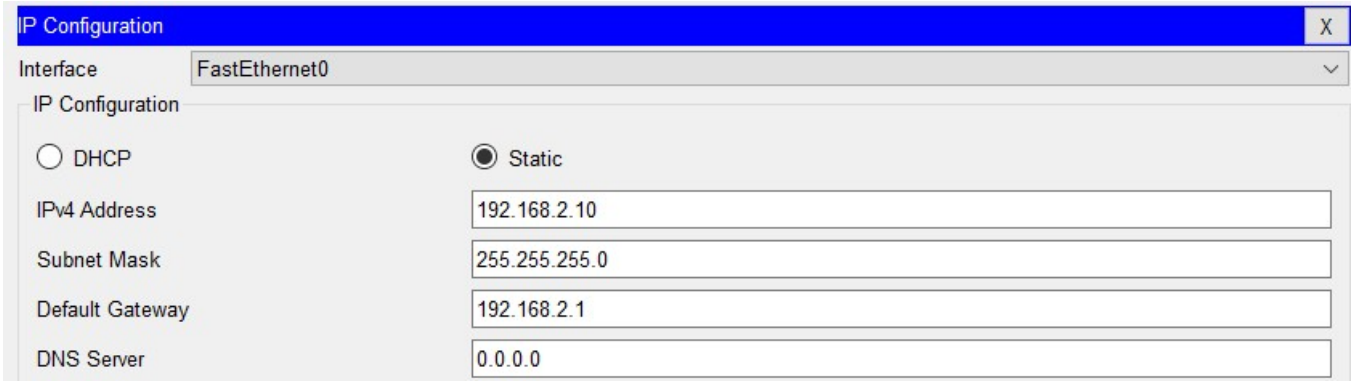
Main:



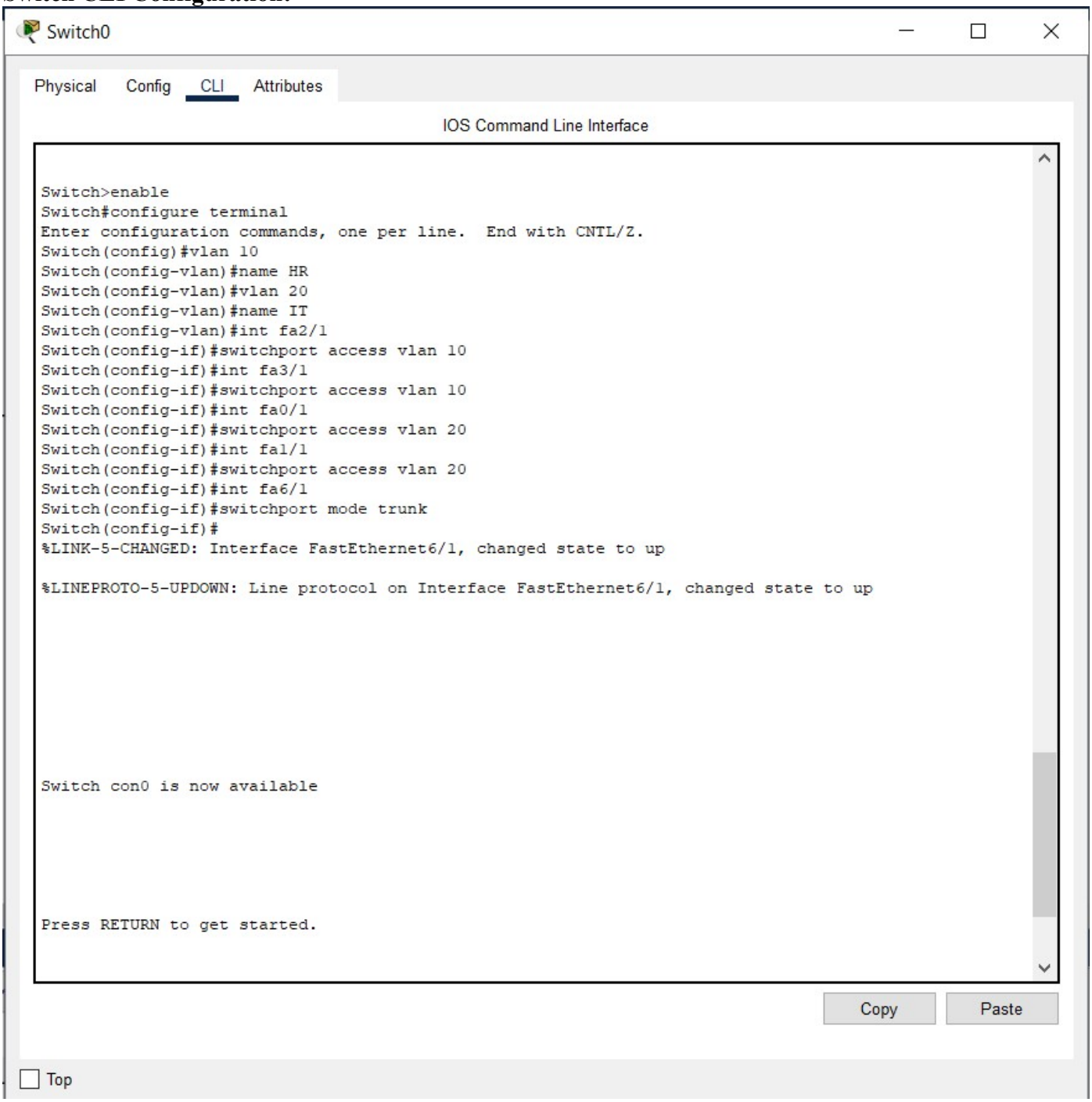
VLAN10 PC Configuration:



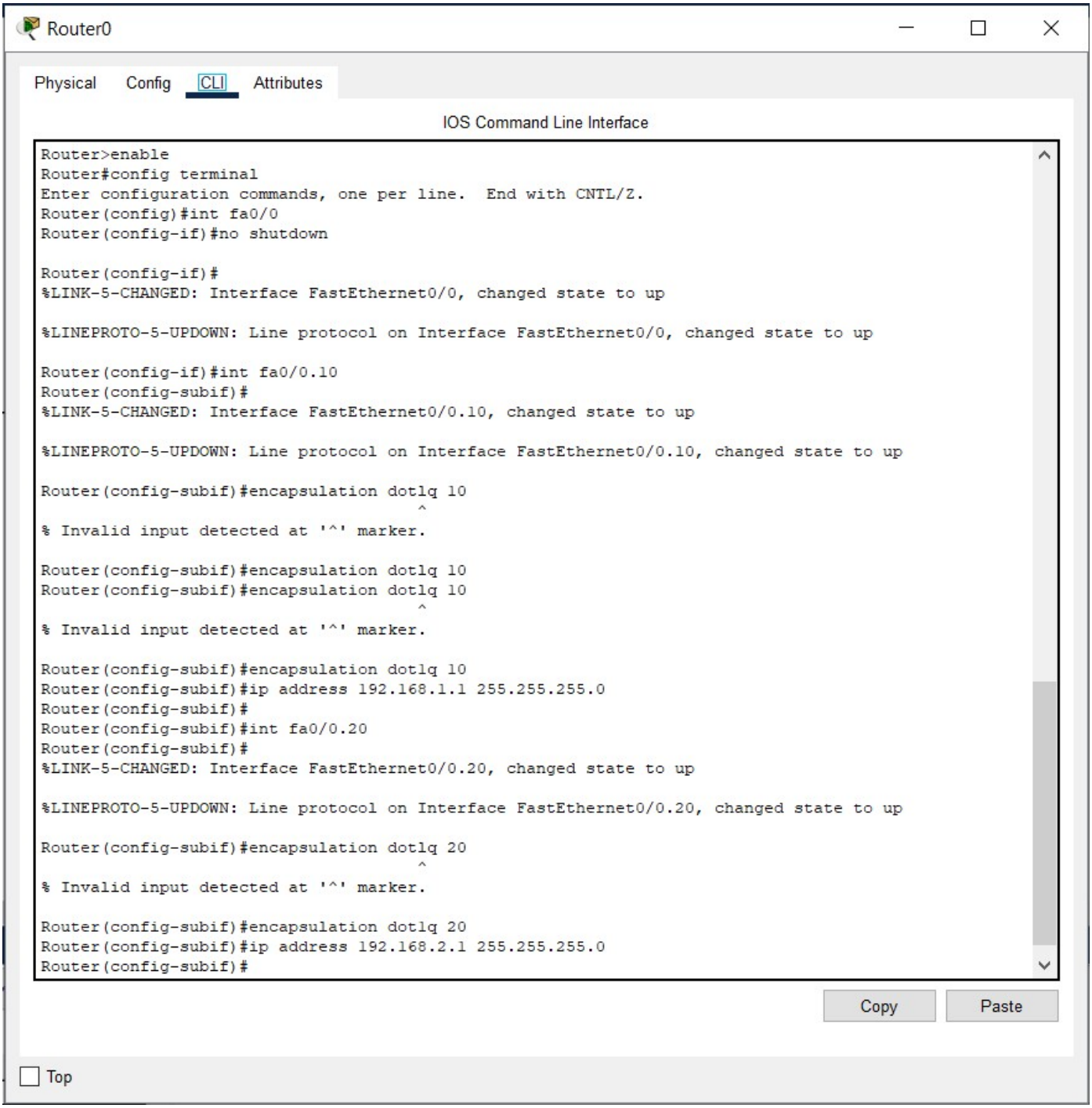
VLAN20 PC Configuration



Switch CLI Configuration:



Router CLI Configuration:



Conclusion:

Simulating VLANs using Cisco Packet Tracer and GNS3 provides an invaluable hands-on experience for both novice and experienced network engineers. These tools offer a realistic

environment to study and experiment with VLAN configurations, ensuring that users can design, configure, and troubleshoot VLANs effectively. By mastering VLANs in these simulated environments, network professionals can enhance their skills and better prepare for real-world networking challenges, leading to more efficient, secure, and manageable network infrastructures.