DEERWALK INSTITUTE OF TECHNOLOGY

Tribhuvan University

Faculties of Computer Science



**Bachelors of Science in Computer Science and Information Technology**

(B.Sc. CSIT)

Course: Computer Networks (CSC 263)

Class of 2027/Semester: IV

A Lab Report On:

**Designing a network with VLAN and Trunk.**

**Submitted by:**

Name: Shaurav Bhandari

Roll No: 1333

**Submitted to:**

Er Rohit Nakarmi

Faculty, Department of Computer Science

# **Lab 4:**

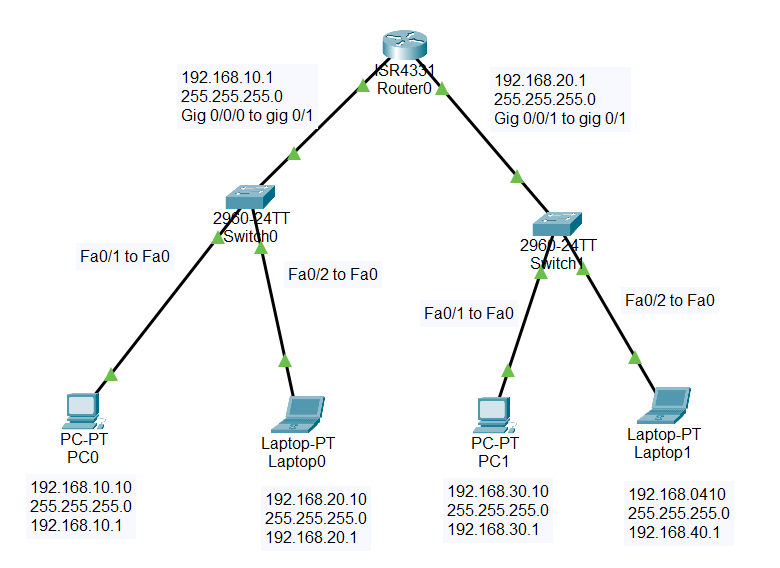
**Objective:**

*Segment a network using* ***VLAN*** *and* ***Trunks****.*

**Tools Used:**

* *Cisco Packet Tracer*
* *Router ISR433M*
* *Switch 2960-24TT*
* *VPCs, Laptops*

**Logical Topology Diagram:**

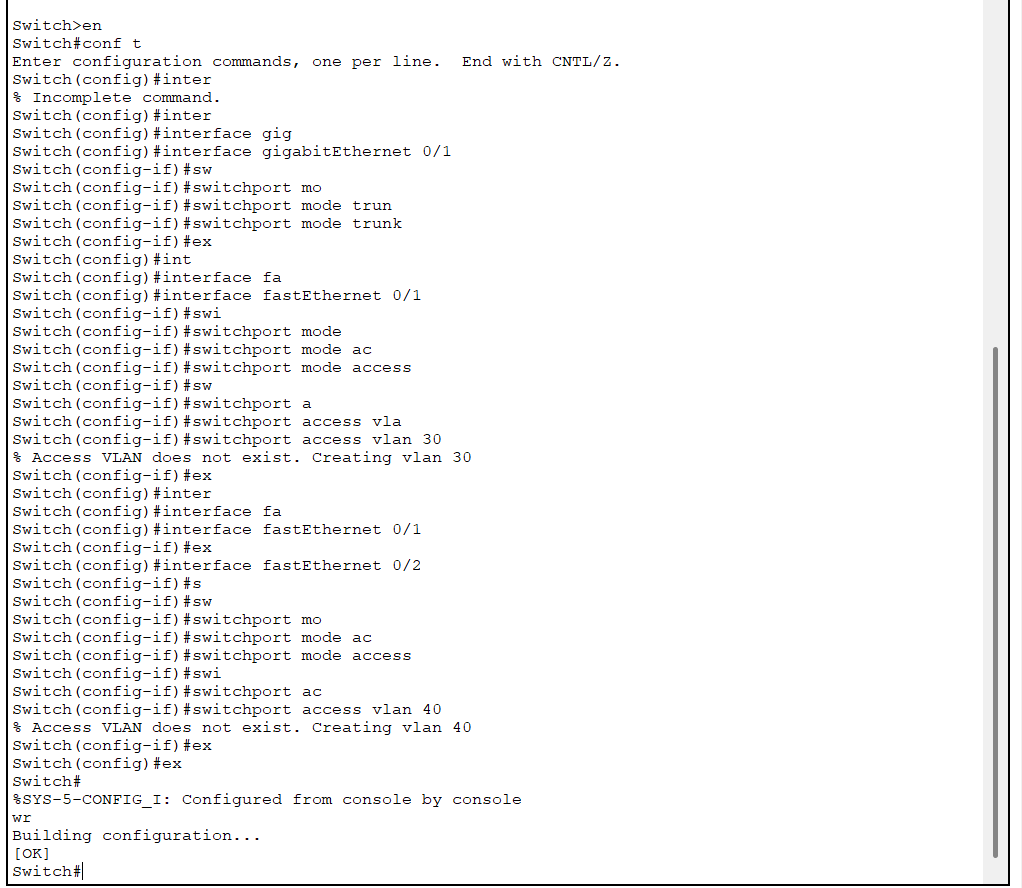
****

**Configuration of the switches:**

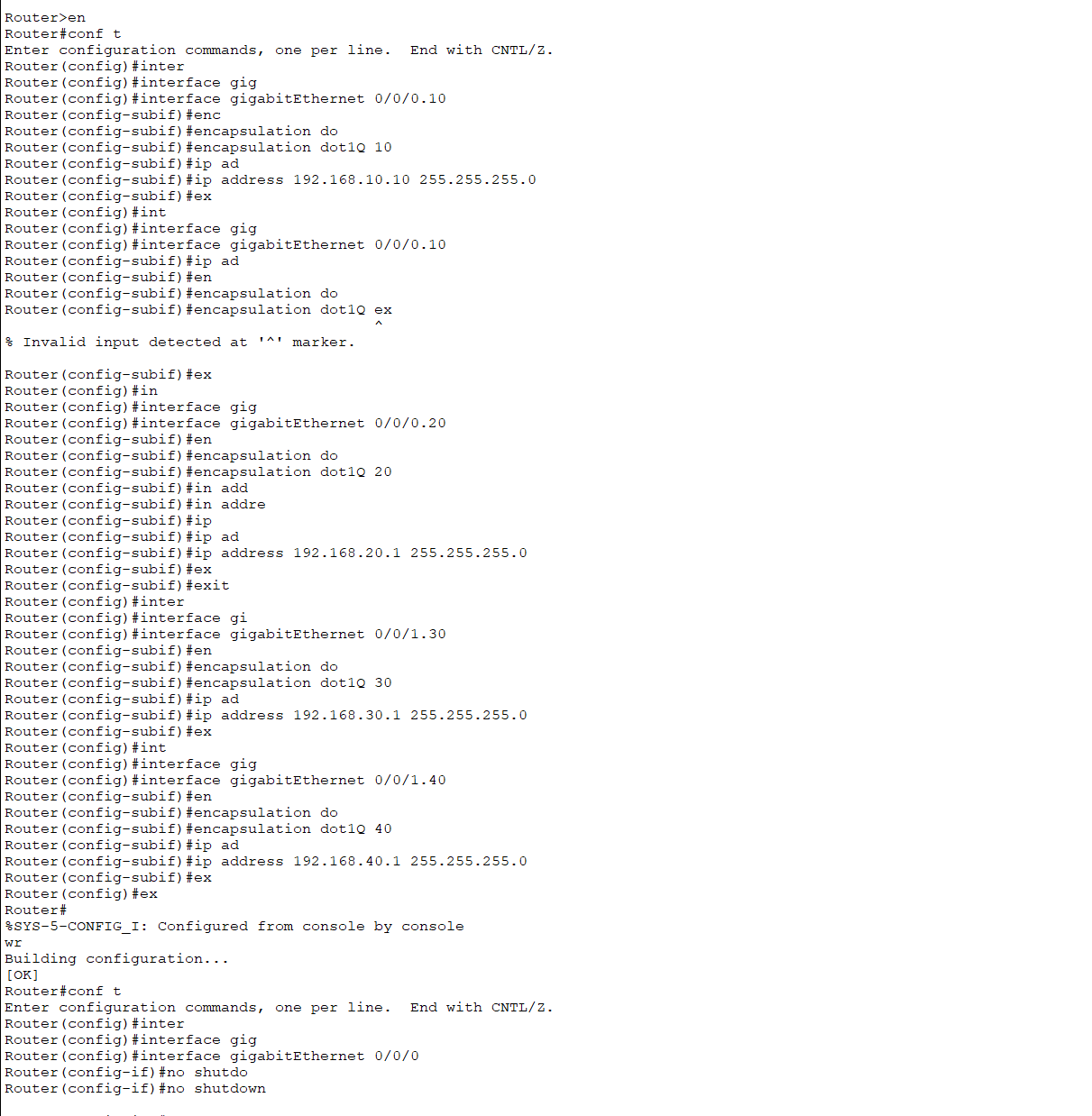
* + **Switch 0:**

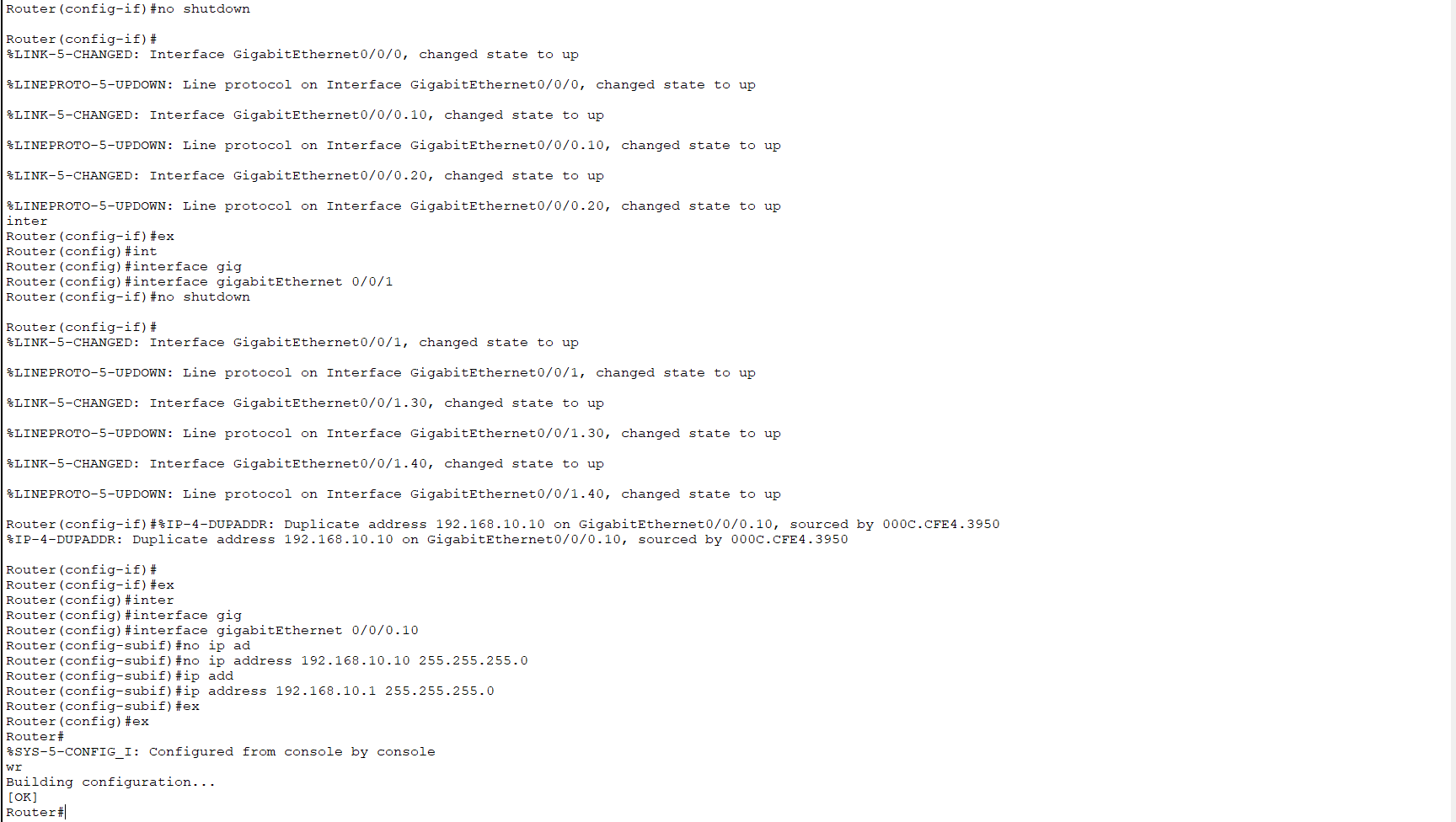
****

* + **Switch 1:**

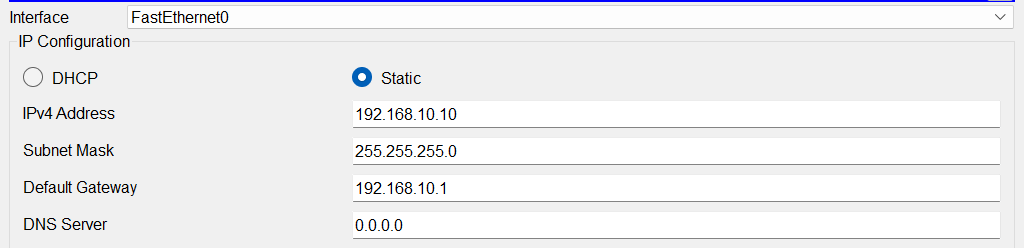
****

* **Configuration of routers:**
  + **Router 1:**

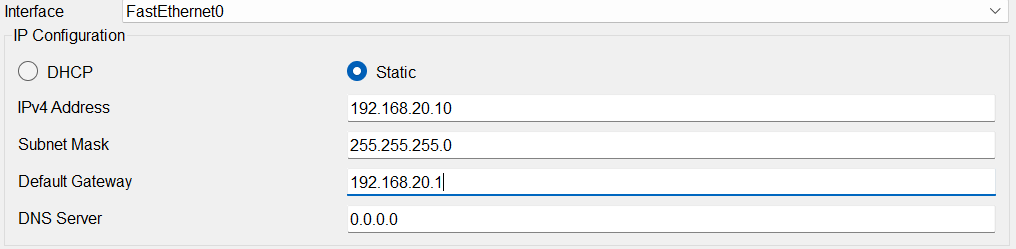
****

****

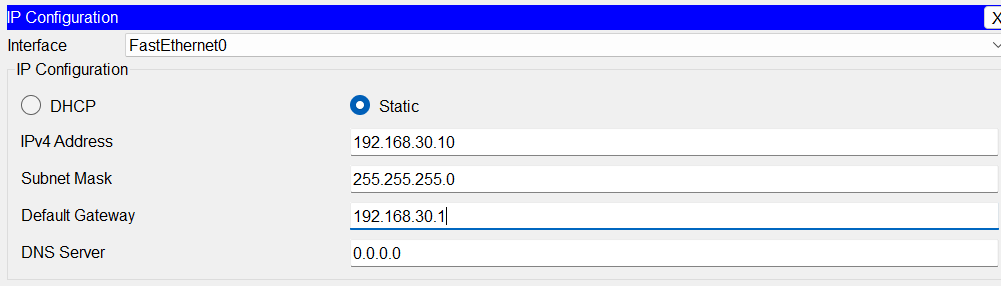
* **Configuration of VPCs and Laptops:**
  + **PC 0:**

****

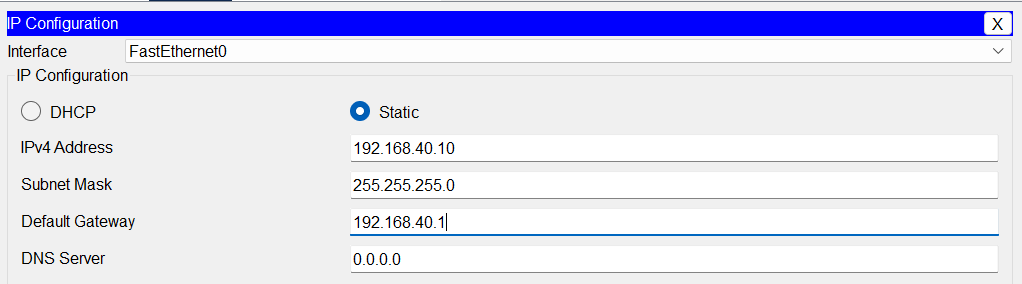
* + **Laptop 0:**

****

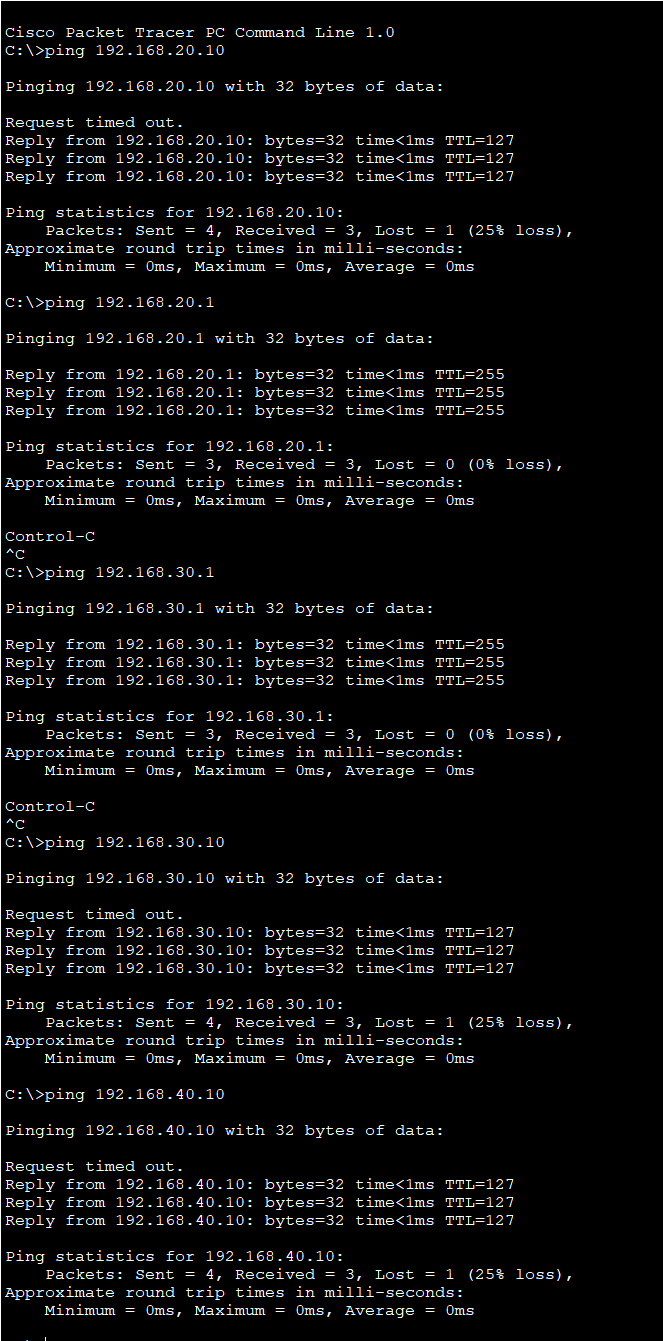
* + **PC 1:**

****

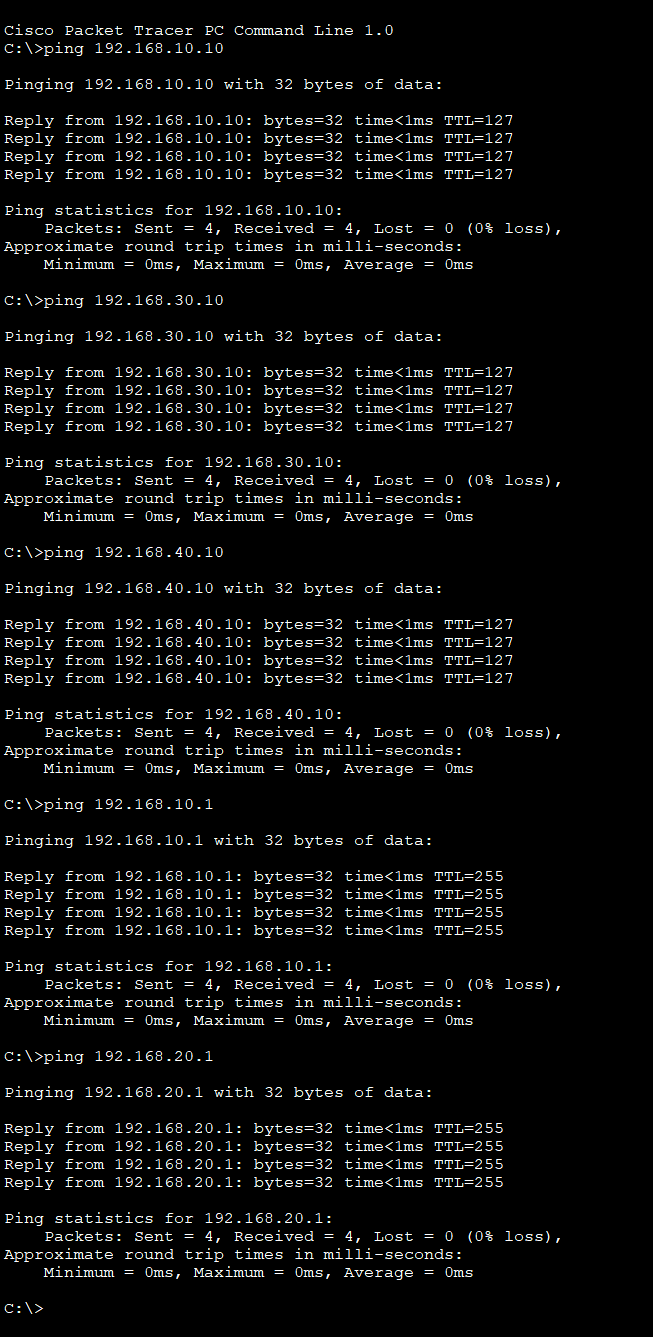
* + **Laptop 1:**

****

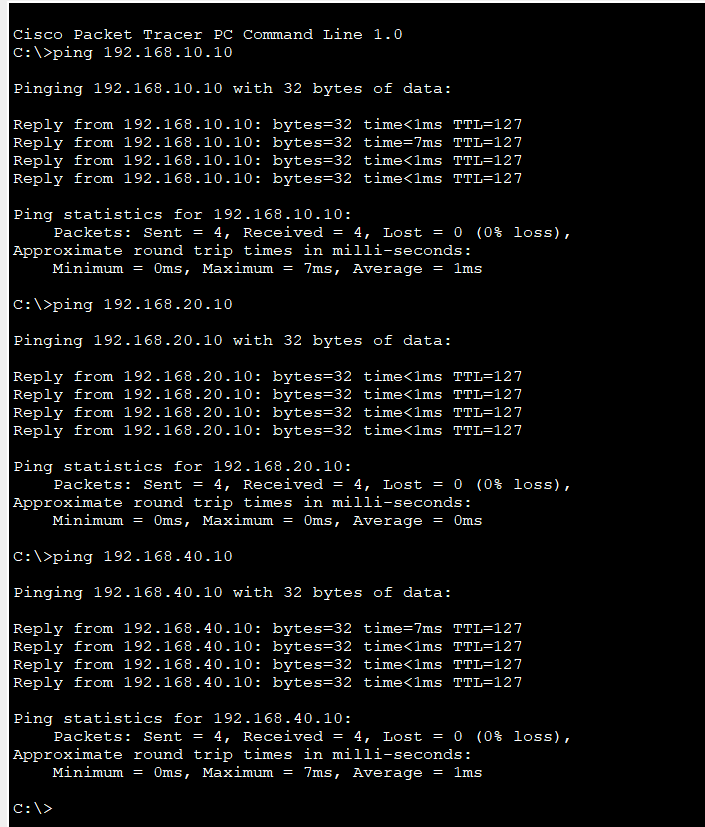
* **Pinging from Devices:**
  + **PC 0:**

****

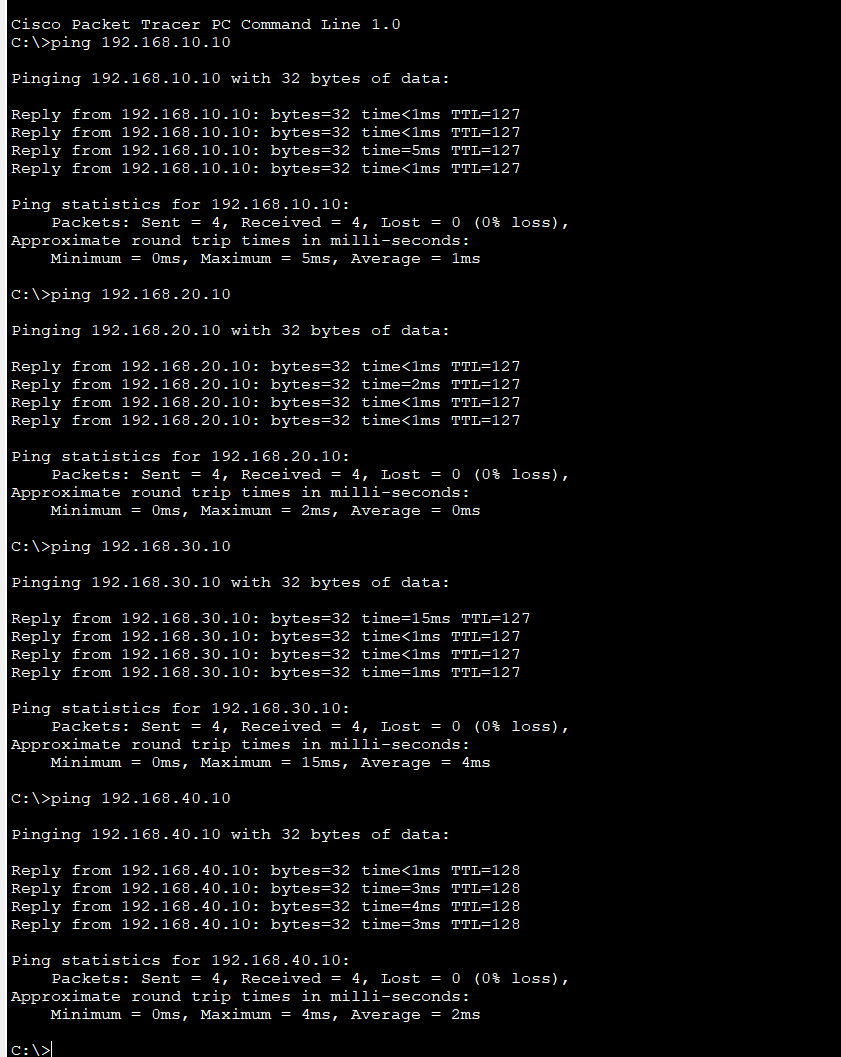
* + **Laptop 0:**

****

* + **PC 1:**

****

* + **Laptop 1:**

****

***Conclusion:***

Hence, the network was designed to enable inter VLAN routing using **router-on-a-stick**, enabling communication between VLANs by assigning appropriate IP addresses to router sub-interfaces.