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:

**Implementation of Dynamic Routing protocol using OSPF .**

**Submitted by:**

Name: Shaurav Bhandari

Roll No: 1333

**Submitted to:**

Er Rohit Nakarmi

Faculty, Department of Computer Science

# **Lab 7:**

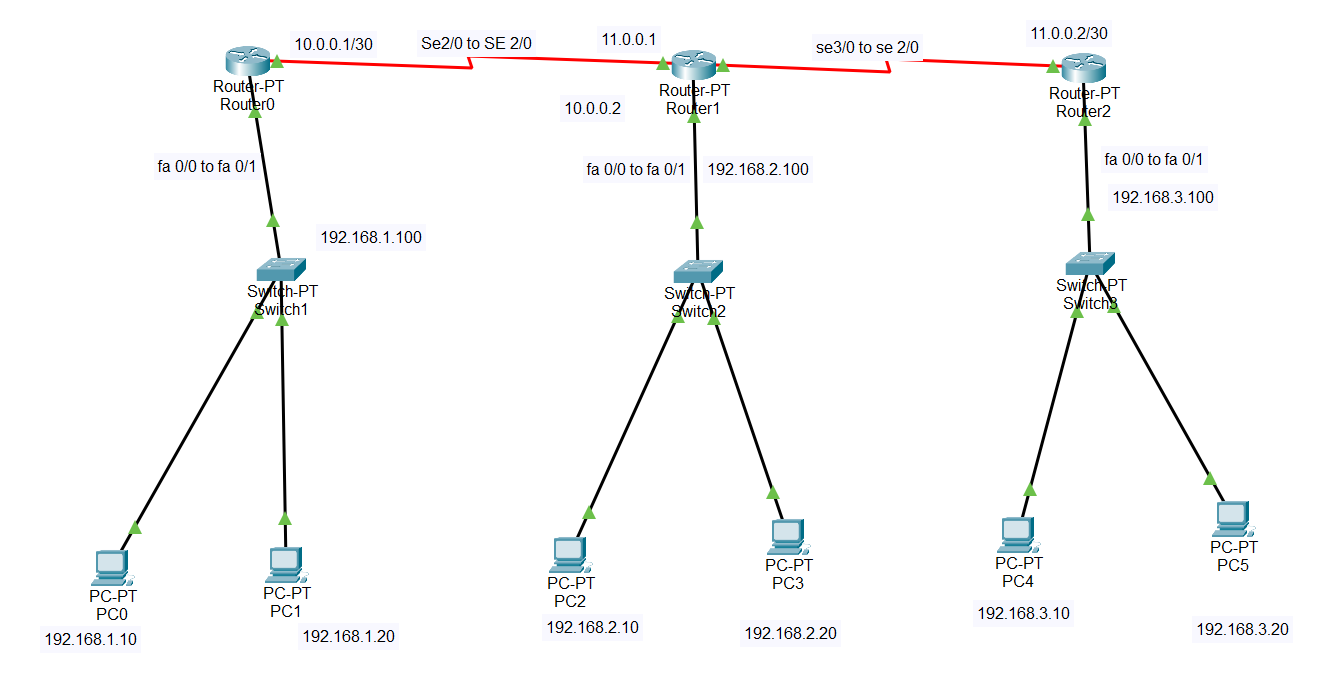
**Objective:**

*Implement a network using OSPF in cisco packet tracer.*

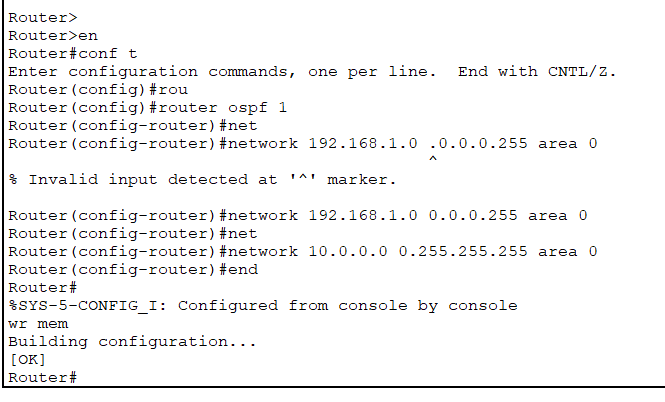
**Tools Used:**

* *Cisco Packet Tracer*
* *Router-PT*
* *Switch-PT*
* *VPCs, Laptops*

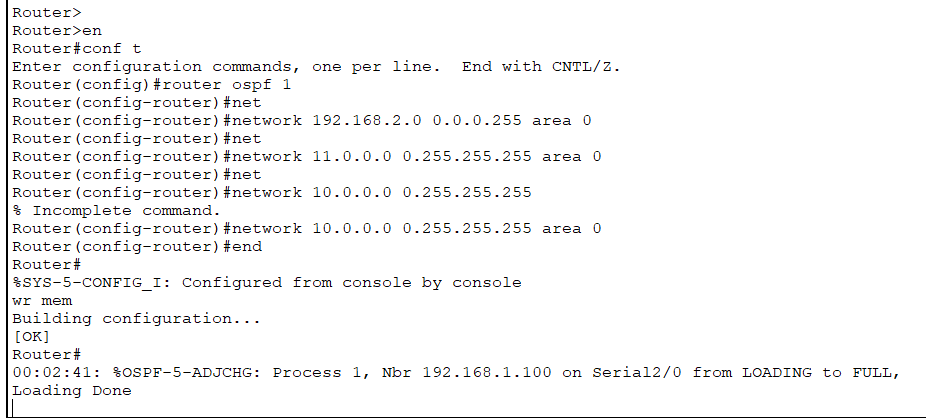
**Logical Topology Diagram:**



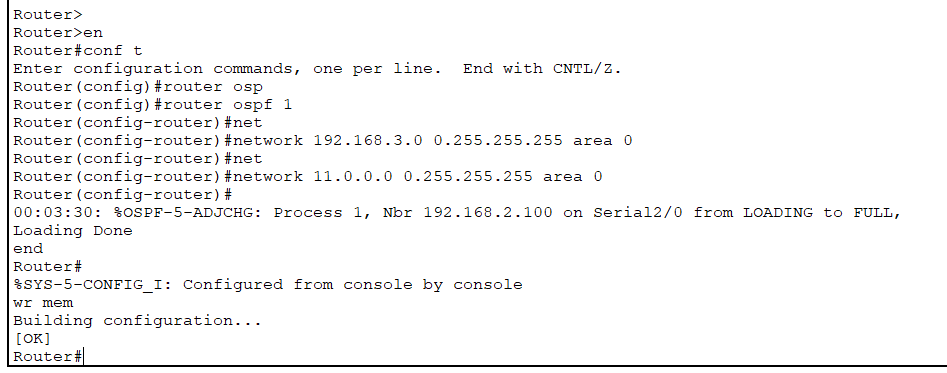
* **Configuration of routers:**
  + **Router 0:**

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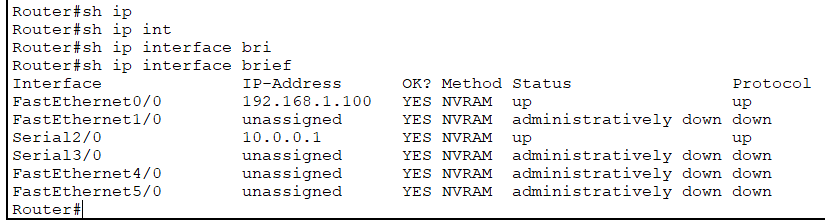
* + **Router 1:**

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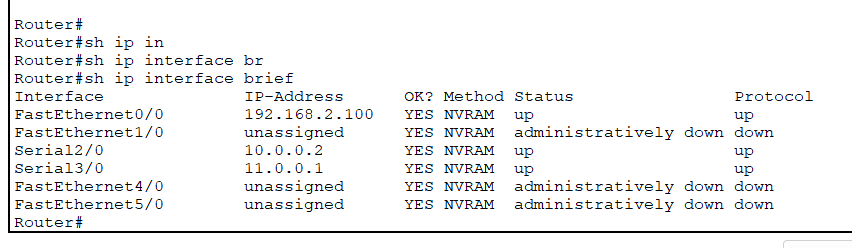
* + **Router 2:**

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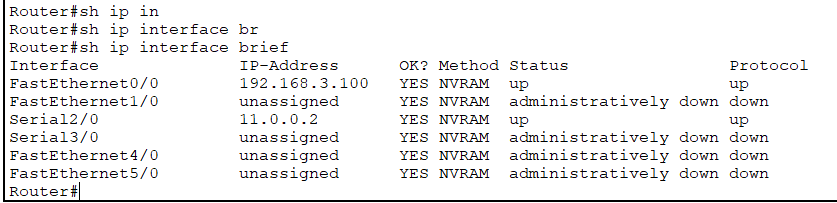
* **Interface configuration and route verifications:**
  + **Interface brief:**
    - **Router 0:**

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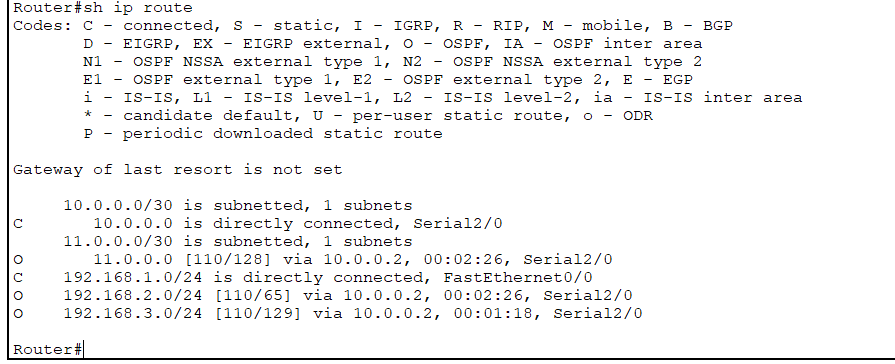
* + - **Router 1:**

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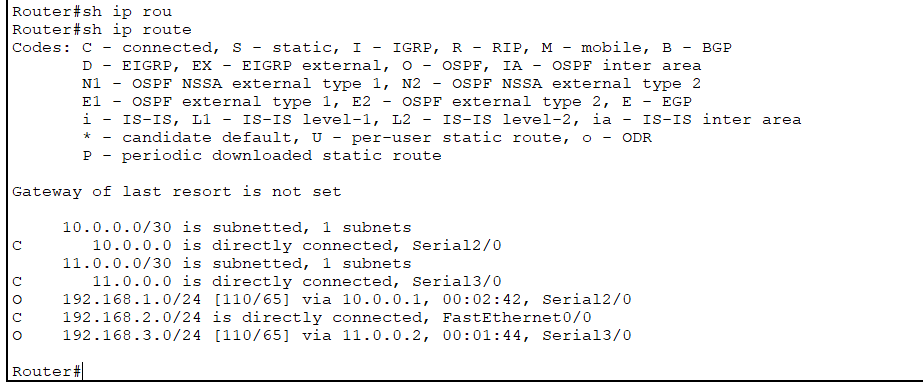
* + - **Router 2:**

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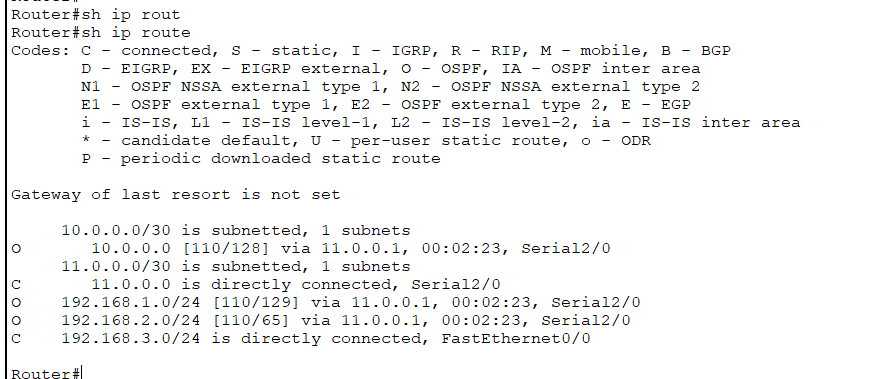
* + **Ip routes:**
    - **Router 0:**

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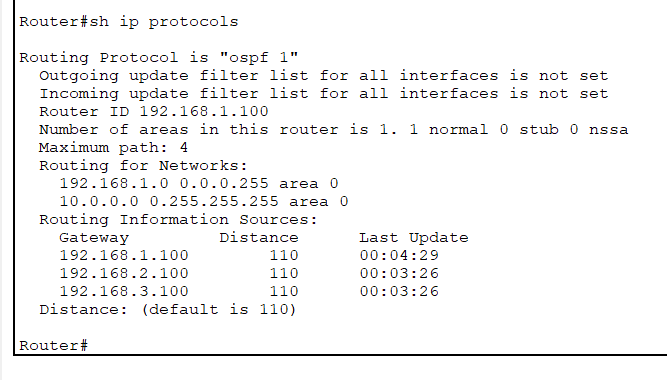
* + - **Router 1:**

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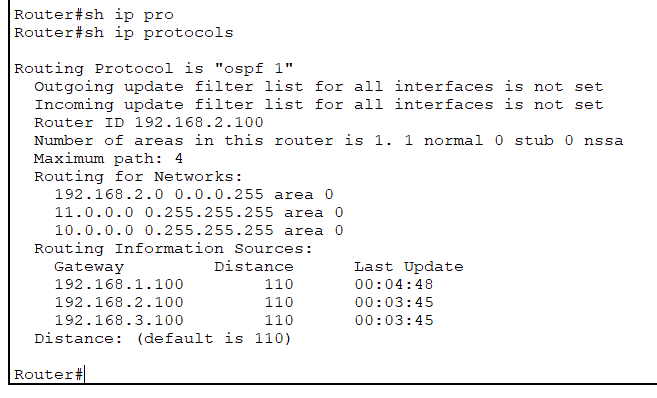
* + - **Router 2:**

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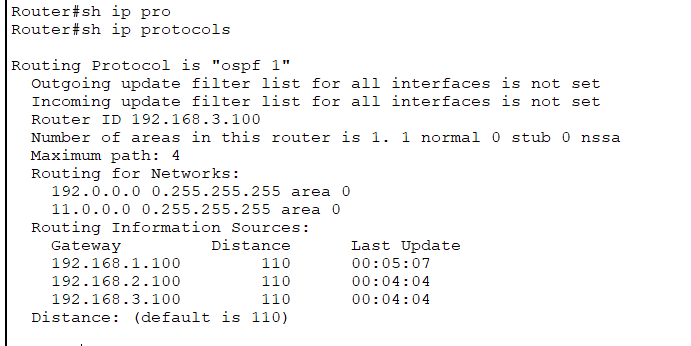
* + **Ip protocols:**
    - **Router 0:**

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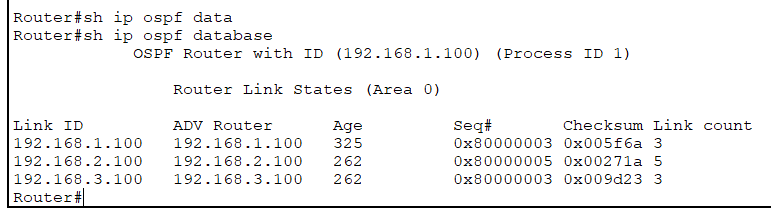
* + - **Router 1:**

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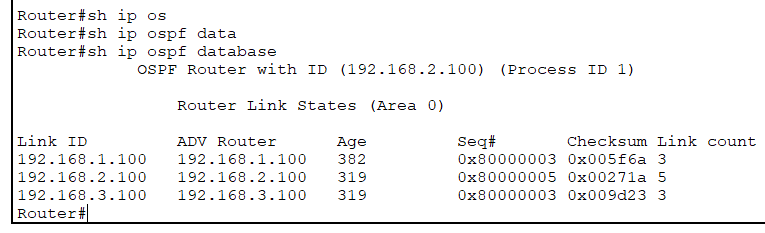
* + - **Router 2:**

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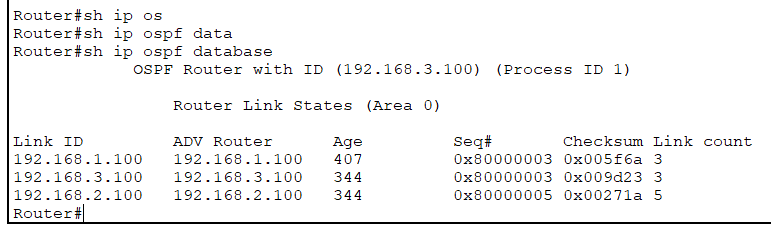
* + **OSPF database:**
    - **Router 0:**

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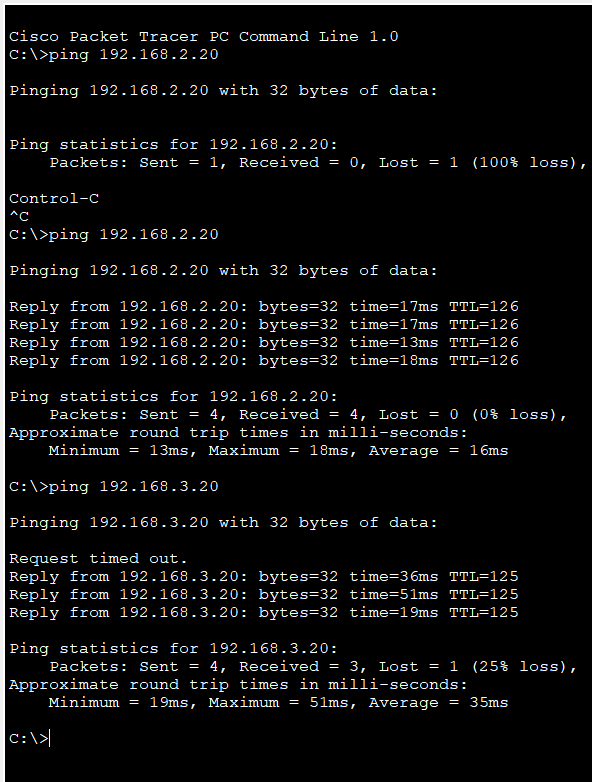
* + - **Router 1:**

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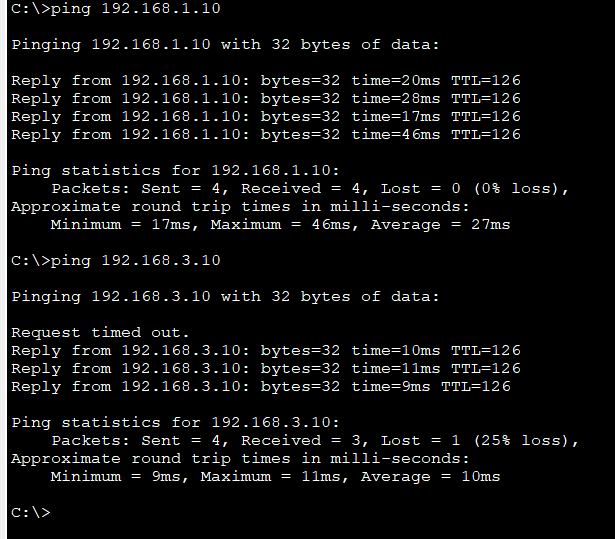
* + - **Router 2:**

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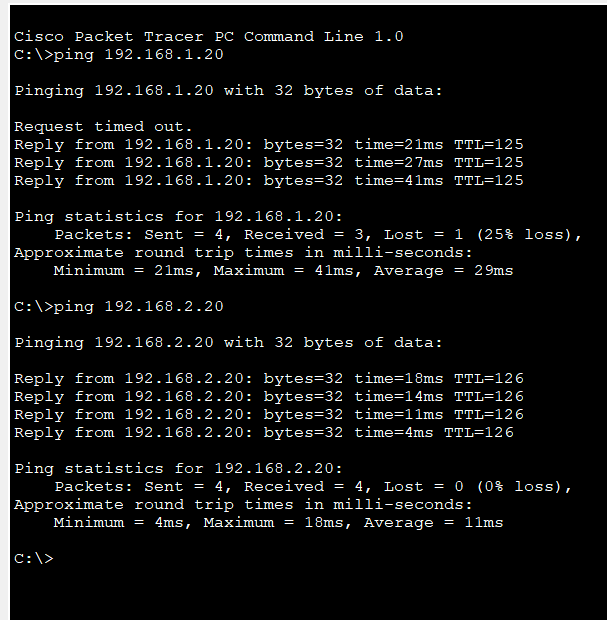
* **Pinging from Devices:**
  + **PC 0:**

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* + **PC 2:**

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* + **PC 4:**

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***Conclusion:***

Hence, the network was designed to implement and verify the features of Open Shortest Path First(OSPF),which enabled communication between the virtual devices in the network communicate through dynamic routing.