**Prelab Exp 2**

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1. Compare between static and dynamic routing with respect to router configuration, flexibility, performance, and security.

A static routing must be configured on every router for full connectivity, however dynamic routing is configured automatically .

A dynamic routing is more flexible than static routing .

A dynamic routing operates in higher performance because we save time required for manually maintain routing table in static .

A static routing is more secured than dynamic .

2. Why do we need subnetting? Discuss three reasons?

1. Subnets are created to separate areas of your network for security and/or to hold down broadcasts.
2. A subnet permits the flow of network traffic in between hosts to be separated based on a network configuration. All the computers that belong to the same subnet are addressed with a collective, matching, most-considerable bit-group in their IP address.
3. Subnetting enables the network administrator to further divide the host part of the address into two or more subnets. In this case, a part of the host address is reserved to identify the particular subnet. This is easier to see if we show the IP address in binary format.

3. Install at home a simulator from CISCO called **Packet Tracer** , build the network in Figure 1 , give PC0 , PC1 , PC2 , PC3 Ip addresses , show that (without configuring the router) it is possible to send a packet from PC0 to PC1 , but it is not possible to send from PC0 to PC2. (Use ping command and print screen to show the results)



