**G. H. RAISONI COLLEGE OF ENGG., NAGPUR**

**(An Autonomous Institute)**

**Department of Computer Science & Engg.**



**Date: 16 -09-2021**

**Practical Subject: DCN Pr A2**

**Session: 2021-22**

**Student Details:**

| **Roll Number** | 01 |
| --- | --- |
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| **Semester** | 9th |
| **Section** | A |
| **Batch** | CSE |

**Practical Details: Practical Number-10;**

| Practical Aim | Open Ended-2: IIT Bombay Computer Network Virtual Lab: Implement IP Addressing and Subnetting |
| --- | --- |
| Theory & Syntax | To configure your router for routing IP, such as how addresses are broken down and how subnetting works. You learn how to assign each interface on the router an IP address with a unique subnet. There are examples included in order to help tie everything together.  The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.  Additional Information  If definitions are helpful to you, use these vocabulary terms in order to get you started:  Address - The unique number ID assigned to one host or interface in a network.  Subnet - A portion of a network that shares a particular subnet address.  Subnet mask - A 32-bit combination used to describe which portion of an address refers to the subnet and which part refers to the host.  Interface - A network connection.  An IP address is an address used in order to uniquely identify a device on an IP network. The address is made up of 32 binary bits, which can be divisible into a network portion and host portion with the help of a subnet mask. The 32 binary bits are broken into four octets (1 octet = 8 bits). Each octet is converted to decimal and separated by a period (dot). For this reason, an IP address is said to be expressed in dotted decimal format (for example, 172.16.81.100). The value in each octet ranges from 0 to 255 decimal, or 00000000 - 11111111 binary.  Subnetting allows you to create multiple logical networks that exist within a single Class A, B, or C network. If you do not subnet, you are only able to use one network from your Class A, B, or C network, which is unrealistic. |
| Output |  |
| Conclusion | Implemented Open Ended-2: IIT Bombay Computer Network Virtual Lab: Implement IP Addressing and Subnetting |