**Network Servers and Infrastructure**

**Assignment 4**

**Q1: Suppose that a network has an address 195.185.125.0. This network should be divided into 8 subnets. Extract the following task for each of the following subnet**

1. **Subnet ID**
2. **Broadcast ID for each subnet**
3. **Range of IP addresses for each subnet**

**After that determines in which subnet this IP address 195.185.125.180 located.**

|  |  |
| --- | --- |
| **000** | **0.0.0.0.0** |
| **1.1.1.1.1** |
| **001** | **0.0.0.0.0** |
| **1.1.1.1.1** |
| **010** | **0.0.0.0.0** |
| **1.1.1.1.1** |
| **011** | **0.0.0.0.0** |
| **1.1.1.1.1** |
| **100** | **0.0.0.0.0** |
| **1.1.1.1.1** |
| **101** | **0.0.0.0.0** |
| **1.1.1.1.1** |
| **110** | **0.0.0.0.0** |
| **1.1.1.1.1** |
| **111** | **0.0.0.0.0** |
| **1.1.1.1.1** |

**195.185.125.0 is a class C**

**11000011.10111001.01111101.10110100**

|  |  |  |  |
| --- | --- | --- | --- |
| **Network** | | | **Host** |
| **195** | **185** | **125** | **180** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Subnet ID** | **Broadcast ID** | **Range of IP addresses** |
| **11000011.10111001.01111101.00000000-11000011.10111001.01111101.00011111**  **195.185.125.0-195.185.125.31** | **195.185.125.0** | **195.185.125.31** | **11000011.10111001.01111101.00000001-11000011.10111001.01111101.00011110**  **195.185.125.1-195.185.125.30** |
| **11000011.10111001.01111101.00100000-11000011.10111001.01111101.00111111**  **195.185.125.32-195.185.125.63** | **195.185.125.32** | **195.185.125.63** | **11000011.10111001.01111101.00100001-11000011.10111001.01111101.00111110**  **195.185.125.31-195.185.125.62** |
| **11000011.10111001.01111101.01000000-11000011.10111001.01111101.01011111**  **195.185.125.64-195.185.125.95** | **195.185.125.64** | **195.185.125.95** | **11000011.10111001.01111101.01000001-11000011.10111001.01111101.01011110**  **195.185.125.65-195.185.125.94** |
| **11000011.10111001.01111101.01100000-11000011.10111001.01111101.01111111**  **195.185.125.96-195.185.125.127** | **195.185.125.96** | **195.185.125.127** | **11000011.10111001.01111101.01100001-11000011.10111001.01111101.01111110**  **195.185.125.96-195.185.125.126** |
| **11000011.10111001.01111101.10000000-11000011.10111001.01111101.10011111**  **195.185.125.128-195.185.125.159** | **195.185.125.128** | **195.185.125.159** | **11000011.10111001.01111101.10000001-11000011.10111001.01111101.10011110**  **195.185.125.129-195.185.125.158** |
| **11000011.10111001.01111101.10100000-11000011.10111001.01111101.10111111**  **195.185.125.160-195.185.125.191** | **195.185.125.160** | **195.185.125.191** | **11000011.10111001.01111101.10100001-11000011.10111001.01111101.10111110**  **195.185.125.161-195.185.125.190** |
| **11000011.10111001.01111101.11000000-11000011.10111001.01111101.11011111**  **195.185.125.192-195.185.125.223** | **195.185.125.192** | **195.185.125.223** | **11000011.10111001.01111101.1100001-11000011.10111001.01111101.11011110**  **195.185.125.193-195.185.125.222** |
| **11000011.10111001.01111101.11100000-11000011.10111001.01111101.11111111**  **195.185.125.224-195.185.125.255** | **195.185.125.224** | **195.185.125.255** | **11000011.10111001.01111101.11100001-11000011.10111001.01111101.11111110**  **195.185.125.225-195.185.125.254** |

195.185.125.180 is a class **c** and located at subnet 6

195.185.125.160-195.185.125.191

Binary:

11000011.10111001.01111101.11000000-11000011.10111001.01111101.11011111