**Assignment 2**

**Name: Hitesh Tolani**

**Roll no: 73**

**Class: SY-AIDS-A**

**Socket**

Sockets in computer networks are used for communication between processes on the same machine or on different machines. Sockets consist of two parts IP address and port number. The IP address is used to locate the machine to which communication is to be established and the port number is used to send/receive data from the process.

**Types of Sockets:**

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristic | Stream Socket | Datagram Socket | Raw Socket |
| Connection oriented | Yes | No | Not |
| Protocol | TCP | UDP | ICMP |
| Sequenced | Yes | No | No |
| Loss less transmission | Yes | No | No |
| Socket Type | SOCK\_STREAM | SOCK\_DGRAM | SOCK\_RAW |

**Program**

Client

import socket

PORT = 9010

IP\_ADDRESS = "192.168.6.106"

clientSocket = socket.socket()

clientSocket.connect((IP\_ADDRESS,PORT))

clientSocket.send("Hello".encode())

print(f"{clientSocket.recv(1024).decode()}")

clientSocket.close()

Server

import socket

PORT = 9010

IP\_ADDRESS = "192.168.6.106"

serverSocket = socket.socket()

serverSocket.bind((IP\_ADDRESS,PORT))

serverSocket.listen(5)

print("Waiting for client")

while True:

    conn , addr = serverSocket.accept()

    print("Client connected from ",addr)

    print(f"{conn.recv(1024).decode()} from {addr}")

    conn.send("Your message is received".encode())

    conn.close()

    break

**Output:**

