Indian Institute of Technology Jodhpur

Computer Science and Engineering Department

Lab 2

CSL6010 - Cyber Security

Date: 23 Jan 2025   **Marks: 10**
Duration: 1.5 Hrs

Aim: Design and implementation of a client/server model and running application using sockets and TCP/IP.

1. Create a client server simple handshaking program using socket programming.

2. Create a socket program to connect to a predefined server (try https://iitj.ac.in/ use others too).

Create a client server program using socket programming, Where..

3. The server will simply echo whatever it receives back to the client.

4. The client sends a text message in Lowercase to the server and the server returns it in Uppercase to the client.

5. The client sends a text message to the server and the server returns it in reverse order to the client.

6. Note that the echo should be encrypted with a server's public key while message should be encrypted with client's public key, which on receipt each entity (client and server) would decrypt the respective messages (actual message and echo) with their respective private keys. You can use the ssh-keygen command to generate a pair of public key-private keys.

Reference Online Material:

1. https://realpython.com/python-sockets/
2. https://www.youtube.com/watch?v=GlVfVn17_ug
3. https://www.geeksforgeeks.org/socket-programming-python/
4. https://www.youtube.com/watch?v=T0rYSFPAR0A&t=1252s
5. https://www.youtube.com/watch?v=Lbfe3-v7yE0