ASSIGNMENT - 02

PROBLEM STATEMENT :-

Enhance the system with socket programming. Use client server architecture to develop chat server.

OBJECTIVE :-

To understand socket programming concepts in Java.

OUTCOMES :

One will able to write a fully functional client server architecture application.

THEORY

Socket programming allows programs from two different machines communicate with each other.
This is achieved via a 'socket'.
The server side socket is set up on a specific IP address and port number.
The client side socket connects to the IP & port and a connection is established between the two machines.

Syntax :-

1. Client Side.

Connect to a Socket.

Socket s = new Socket (IP, port)

eg Socket s = new Socket ("localhost", 3000)

2 Output through Socket

DataOutputStream out = new DataOutputStream
(s.getOutputStream());

out.writeUTF ("abcd");

3 Input from Socket.

DataInputStream in = new DataInputStream (s.getInputStream());

a = in.readUTF ();

4 Close socket

s.close ();

Server Side.

1 Creating a socket.

ServerSocket server = new ServerSocket (port)

Socket s = server.accept ();

Algorithm

1. Create socket from server side
2. Connect to socket from client side
3. Communicate using data IP/OUTPUT streams
4. Close client
5. Close server

TEST CASES :-

	Input	Expected Output	Actual Output	Result
	Client Side :-			
1.	Register user	User registered "Hello Admin"	User registered "Hello Admin"	PASS
	Server side			
	Start side on port 5555	Server started "Welcome"	Server started "Welcome"	PASS

CONCLUSION :-

Thus, we were able to create a fully functional client server application.