

Experiment no.7

Aim:- implementation of client-server Architecture using TCP/IP.

A)Client-program:-

Input:-

Package manishjadhav;

import java.io.IOException;

import java.io.ObjectInputStream;

import java.io.ObjectOutputStream;

import java.net.InetAddress;

import java.net.Socket;

import java.net.UnknownHostException;

```
public class socketclient4 {
    private static Socket Socket;
    private static int i;
    public static void main(String[] args)throws
        UnknownHostException,IOException,ClassNotFoundException,InterruptedException{
        InetAddress host=InetAddress.getLocalHost();
        Socket socket=null;
        ObjectOutputStream oos=null;
        ObjectInputStream ois=null;
        for(int i=0;i<5;i++){
            Socket=new Socket(host.getHostName(),14);
            oos=new ObjectOutputStream(Socket.getOutputStream());
            System.out.println("SENDING REQUEST SOCKET SERVER");
            oos.writeObject("Name: Manish Jadhav\n"+"PRN:2030408246006\n"+"Roll no: 2201933");
            ois=new ObjectInputStream(Socket.getInputStream());
            String message=(String)
                ois.readObject();
            System.out.println("Message:"+message);
            ois.close();
            oos.close();
            Thread.sleep(100);
        }
    }
}
```

b)server-program:-

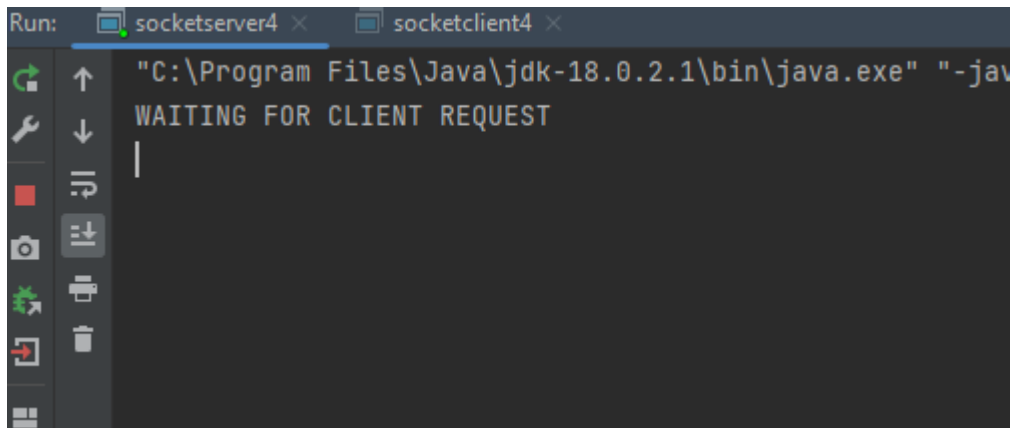
input:-

```
package manishjadhav;

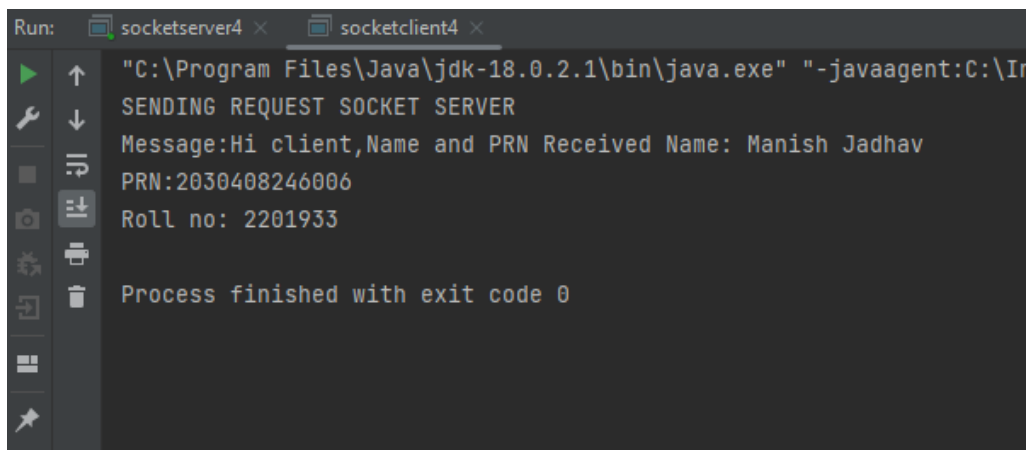
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.net.ServerSocket;
import java.net.Socket;

public class socketserver4 {
    static ServerSocket server;
    static final int port=14;
    public static void main(String[]args)throws IOException,ClassNotFoundException{
        socketserver4 f=new socketserver4();
        server=new ServerSocket(port);
        while(true){
            System.out.println("WAITING FOR CLIENT REQUEST");
            Socket socket=server.accept();
            ObjectInputStream ois=new ObjectInputStream(socket.getInputStream());
            String message=(String)
                ois.readObject();
            System.out.println("Message received "+message);
            ObjectOutputStream oos= new ObjectOutputStream(socket.getOutputStream());
            oos.writeObject("Hi client,Name and PRN Received "+message);
            oos.close();
            socket.close();
            if(message.equalsIgnoreCase("exit"))
                break;
        }
        System.out.println("Shut down socket server!!!.....");
    }
}
```

Output:-



A screenshot of a Java socket server console window. The window has two tabs: 'socketserver4' and 'socketclient4'. The 'socketserver4' tab is active. The console shows the command: `"C:\Program Files\Java\jdk-18.0.2.1\bin\java.exe" "-jav`. Below the command, the text 'WAITING FOR CLIENT REQUEST' is displayed, followed by a vertical cursor line.



A screenshot of a Java socket client console window. The window has two tabs: 'socketserver4' and 'socketclient4'. The 'socketclient4' tab is active. The console shows the command: `"C:\Program Files\Java\jdk-18.0.2.1\bin\java.exe" "-javaagent:C:\In`. Below the command, the text 'SENDING REQUEST SOCKET SERVER' is displayed. This is followed by three lines of received data: 'Message:Hi client,Name and PRN Received Name: Manish Jadhav', 'PRN:2030408246006', and 'Roll no: 2201933'. At the bottom, it says 'Process finished with exit code 0'.

| Practical Performance (4) | Writeup & Oral (4) | Attendance (2) | Total (10) |
|---------------------------------|-----------------------|-------------------|---------------|
| | | | |