**Experiment – 1**

**Tittle :Write a program to perform client sends a text and server receives and prints it using Java Socket Programming.**

## 1)MyServer1.java

## import java.net.\*;

## public class MyServer1 {

## public static void main(String[] args){

## try{

## ServerSocket ss=new ServerSocket(6666);

## Socket s=ss.accept();//establishes connection

## DataInputStream dis=new DataInputStream(s.getInputStream());

## String str=(String)dis.readUTF();

## System.out.println("message= "+str);

## ss.close();

## }catch(Exception e){System.out.println(e);}

## }

## }

## 2) MyClient1.java

## import java.io.\*;

## import java.net.\*;

## public class MyClient1 {

## public static void main(String[] args) {

## try{

## Socket s=new Socket("localhost",6666);

## DataOutputStream dout=new DataOutputStream(s.getOutputStream());

## dout.writeUTF("Hello Server");

## dout.flush();

## dout.close();

## s.close();

## }catch(Exception e){System.out.println(e);}

## }

## }

## A screenshot of a computer Description automatically generatedOutPut :

## 

## 2) Write a program to perform operations Like Addition, Subtraction, Multiple , Division using Java Socket Programming

**A). MyServer.java**

import java.io.\*;

import java.net.\*;

public class MyServer {

public static void main(String[] args) {

try {

ServerSocket serverSocket = new ServerSocket(12345);

System.out.println("Server started. Waiting for clients...");

while (true) {

Socket clientSocket = serverSocket.accept();

System.out.println("Client connected: " + clientSocket.getInetAddress());

ClientHandler handler = new ClientHandler(clientSocket);

new Thread(handler).start();

}

} catch (IOException e) {

e.printStackTrace();

}

}

}

class ClientHandler implements Runnable {

private Socket clientSocket;

public ClientHandler(Socket socket) {

this.clientSocket = socket;

}

@Override

public void run() {

try {

BufferedReader in = new BufferedReader(new InputStreamReader(clientSocket.getInputStream()));

PrintWriter out = new PrintWriter(clientSocket.getOutputStream(), true);

String operation = in.readLine();

double num1 = Double.parseDouble(in.readLine());

double num2 = Double.parseDouble(in.readLine());

double result = 0.0;

if (operation.equals("ADD")) {

result = num1 + num2;

} else if (operation.equals("SUB")) {

result = num1 - num2;

} else if (operation.equals("MUL")) {

result = num1 \* num2;

} else if (operation.equals("DIV")) {

result = num1 / num2;

}

out.println("Result: " + result);

in.close();

out.close();

clientSocket.close();

} catch (IOException e) {

e.printStackTrace();

}

}

}

**B). MyClient.java**

import java.io.\*;

import java.net.\*;

public class MyClient {

public static void main(String[] args) {

try {

Socket clientSocket = new Socket("localhost", 12345);

PrintWriter out = new PrintWriter(clientSocket.getOutputStream(), true);

BufferedReader in = new BufferedReader(new InputStreamReader(clientSocket.getInputStream()));

BufferedReader userInput = new BufferedReader(new InputStreamReader(System.in));

System.out.println("Enter operation (ADD, SUB, MUL, DIV):");

String operation = userInput.readLine();

out.println(operation);

System.out.println("Enter first number:");

double num1 = Double.parseDouble(userInput.readLine());

out.println(num1);

System.out.println("Enter second number:");

double num2 = Double.parseDouble(userInput.readLine());

out.println(num2);

String result = in.readLine();

System.out.println("Server response: " + result);

in.close();

out.close();

userInput.close();

clientSocket.close();

} catch (IOException e) {

e.printStackTrace();

}

}

}

A screenshot of a computer screen

Description automatically generated**OUTPUT :**