**Assignment**

**Question:**

**Write a Client Server Program in Java where the Server sends a message to the Client and terminates the program.**

**Solution:**

**GreetingServer.java**

package clientServer;

import java.net.\*;

import java.io.\*;

public class GreetingServer extends Thread{

private ServerSocket serverSocket;

public GreetingServer(int port) throws IOException{

serverSocket = new ServerSocket(port);

serverSocket.setSoTimeout(10000);

}

public void run(){

while(true){

try {

System.out.println("Waiting for client on port " + serverSocket.getLocalPort() + "...");

Socket server = serverSocket.accept();

System.out.println("Just connected to "+ server.getRemoteSocketAddress());

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

System.out.println(in.readUTF());

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

out.writeUTF("Thank you for connecting to "+ server.getLocalSocketAddress() + "\nGoodbye!");

server.close();

}catch(SocketTimeoutException s){

System.out.println("Socket timed out!");

break;

}catch(IOException e){

e.printStackTrace();

break;

}

}

}

public static void main(String [] args){

int port = Integer.parseInt(args[0]);

try{

Thread t = new GreetingServer(port);

t.start();

}catch(IOException e){

e.printStackTrace();

}

}

}

**GreetingClient.java**

package clientServer;

import java.net.\*;

import java.io.\*;

public class GreetingClient{

public static void main(String [] args){

String serverName = args[0];

int port = Integer.parseInt(args[1]);

try{

System.out.println("Connecting to " + serverName +" on port " + port);

Socket client = new Socket(serverName, port);

System.out.println("Just connected to " + client.getRemoteSocketAddress());

OutputStream outToServer = client.getOutputStream();

DataOutputStream out = new DataOutputStream(outToServer);

out.writeUTF("Hello from "+ client.getLocalSocketAddress());

InputStream inFromServer = client.getInputStream();

DataInputStream in = new DataInputStream(inFromServer);

System.out.println("Server says " + in.readUTF());

client.close();

}catch(IOException e){

e.printStackTrace();

}

}

}

**Output:**

**Server Output:**

>java GreetingServer 7000

Waiting for client on port 7000...

**Client Output**

**>** java GreetingClient localhost 7000

Connecting to localhost on port 7000

Just connected to /127.0.0.1:7000

Thank You for connecting to /127.0.0.1:7000

Goodbye!