

**Experiment No. 1****Title:** Socket Programming

## 1) Server

Code:

```
package lab_01;
```

```
import java.net.*;
```

```
import java.io.*;
```

```
public class Server {
```

```
    private Socket socket = null;
```

```
    private ServerSocket server = null;
```

```
    private DataInputStream in = null;
```

```
    public Server(int port) {
```

```
        try {
```

```
            server = new ServerSocket(port);
```

```
            System.out.println("Server started");
```

```
            System.out.println("Waiting for a client ...");
```

```
        socket = server.accept();

        System.out.println("Client accepted");

        in = new DataInputStream(new
BufferedInputStream(socket.getInputStream()));

        String line = "";

        while (!line.equals("Close")) {

            try {

                line = in.readUTF();

                System.out.println(line);

            } catch (IOException i) {

                System.out.println(i);

            }

        }

        System.out.println("Closing connection");

        socket.close();

        in.close();

    } catch (IOException i) {

        System.out.println(i);

    }

}
```

```
    }

    public static void main(String args[]) {
        new Server(5000);
    }
}
```

## 2) Client:

Code:

```
package lab_01;

import java.net.*;
import java.io.*;

public class Client {
    private Socket socket = null;
    private BufferedReader input = null;
    private DataOutputStream out = null;

    public Client(String address, int port) {
        try {
            socket = new Socket(address, port);
        }
    }
}
```

```
        System.out.println("Connected to the server: " + socket);

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

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

    } catch (UnknownHostException u) {

        System.out.println(u);

    } catch (IOException i) {

        System.out.println(i);

    }

String line = "";

while (!line.equals("Close")) {

    try {

        line = input.readLine();

        out.writeUTF(line);

    } catch (IOException i) {

        System.out.println(i);

    }

}

try {

    System.out.println("Connection Closed!");

    input.close();

    out.close();

}
```

```
        socket.close();

    } catch (IOException i) {

        System.out.println(i);

    }

}

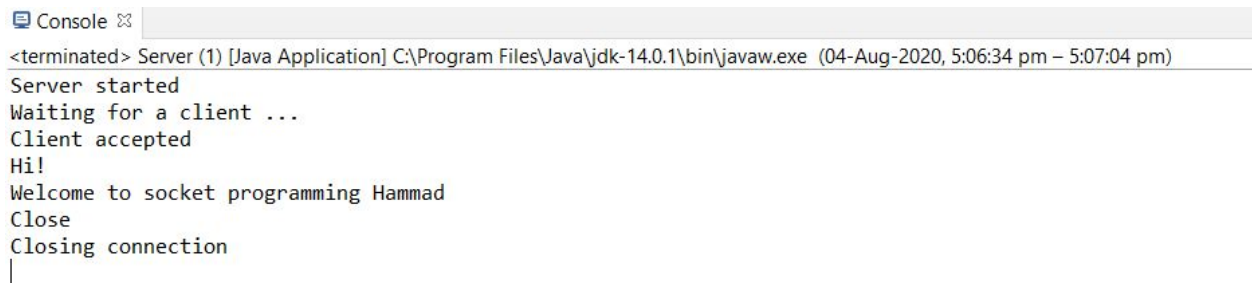
public static void main(String args[]) {

    new Client("127.0.0.1", 5000);

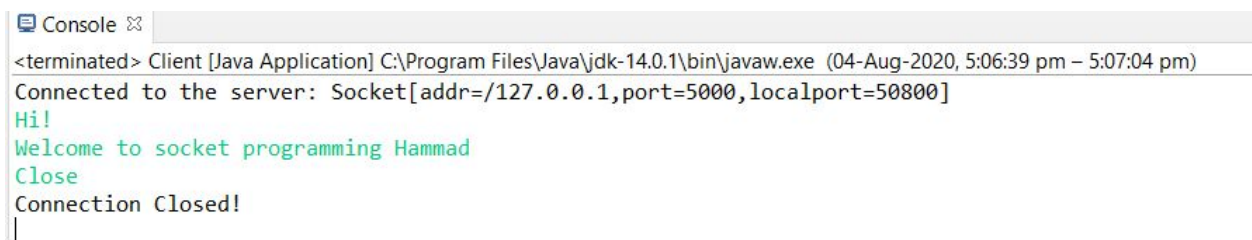
}

}
```

### Screenshots:



```
<terminated> Server (1) [Java Application] C:\Program Files\Java\jdk-14.0.1\bin\javaw.exe (04-Aug-2020, 5:06:34 pm – 5:07:04 pm)
Server started
Waiting for a client ...
Client accepted
Hi!
Welcome to socket programming Hammad
Close
Closing connection
|
```



```
<terminated> Client [Java Application] C:\Program Files\Java\jdk-14.0.1\bin\javaw.exe (04-Aug-2020, 5:06:39 pm – 5:07:04 pm)
Connected to the server: Socket[addr=/127.0.0.1,port=5000,localport=50800]
Hi!
Welcome to socket programming Hammad
Close
Connection Closed!
|
```