# Assignment No. 1

**Q.1** write and execute program based on socket and server socket with two way communication.

→ The java.net package in the Java platform provides a class, socket, that implements one side of a two-way connection between your java program. The socket class sits on top of a platform-dependent implementation, hiding the details of any particular system from your java program.

By using java.net sockets class instead of relying on native code, your Java programs can communicate over the network in a platform-indepent fashion. Additionally, java.net includes the server socket class, which implements a socket that servers can use to listen for and accept connections to clients.

# Program:

Client Side

```java
import java.net.*;
import java.io.*;
class Client{
public static void main(String args[])throws Exception{
Socket s=new Socket("localhost",1111);
DataInputStream din=new DataInputStream(s.getInputStream());
DataOutputStream dout=new
DataOutputStream(s.getOutputStream());
BufferedReader br=new BufferedReader(new
InputStreamReader(System.in));

String str="", str1="";
while(!str.equals("stop")){
str=br.readLine();
dout.writeUTF(str);
dout.flush();
str1=din.readUTF();
System.out.println("Server - "+ str1);
}

dout.close();
s.close();
}}
```

## Server Side

```java
import java.net.*;
import java.io.*;
class Server{
public static void main(String args[])throws Exception{
ServerSocket ss=new ServerSocket(1111);
Socket s=ss.accept();
DataInputStream din=new DataInputStream(s.getInputStream());
DataOutputStream dout=new
DataOutputStream(s.getOutputStream());
BufferedReader br=new BufferedReader(new
InputStreamReader(System.in));

String str="", str1 ="";
while(!str.equals("stop")){
str=din.readUTF();
System.out.println("Client - "+str);
str1 =br.readLine();
dout.writeUTF(str1);
dout.flush();
}
din.close();
s.close();
ss.close();
}}
```

## Output:

## Client:

```
C:\Windows\System32\cmd.exe - java Client

Microsoft Windows [Version 10.0.19042.985]
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F:\BHT-TK-001\VIth Sem\IT501E - Advanced Java\Assignments>javac Client.java

F:\BHT-TK-001\VIth Sem\IT501E - Advanced Java\Assignments>java Client
Hello!
Server - Good Evening
This is Raquel Murillo
Server - and I am Professor
I am glad that we don't have to regret any casualties
Server - I am glad too

Server - Just in case one day you get us an helicopter, so we can go to Brazil.
Thats's what you want? A Helicopter ?
Server - Intelligenace, to get me a yes or a no.
Then you should speak directly with the president
Server - in that case, the polite thing to do is to greet and introduce oursselves.
Hello, I'm Angel deputy Police Inspector.
Server - Forgive me for not giving you my name but you can call me Professor.
_
```

## Server:

```
C:\Windows\System32\cmd.exe - java Server

Microsoft Windows [Version 10.0.19042.985]
(c) Microsoft Corporation. All rights reserved.

F:\BHT-TK-001\VIth Sem\IT501E - Advanced Java\Assignments>javac Server.java

F:\BHT-TK-001\VIth Sem\IT501E - Advanced Java\Assignments>java Server
Client - Hello!
Good Evening
Client - This is Raquel Murillo
and I am Professor
Client - I am glad that we don't have to regret any casualties
I am glad too
Client -
Just in case one day you get us an helicopter, so we can go to Brazil.
Client - Thats's what you want? A Helicopter ?
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Client - Hello, I'm Angel deputy         Police Inspector.
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_
```