DC Expt-2:

Program: IPCServer.java

```java
import java.io.DataInputStream;
import java.io.DataOutputStream;
import java.net.ServerSocket;
import java.net.Socket;

public class IPCServer {
    public static void main(String args[]) {
        System.out.println("\n **** INTERPROCESS COMMUNICATION By Moin MN
(211P030)****\n");
        System.out.println("\n **** SERVER PROCESS STARTED ****\n");
        System.out.println("\n **** SERVER IS READY AND WAITING TO RECEIVE DATA
FROM CLIENT PROCESS ON PORT****" + 1200);
        try {
            ServerSocket ss = new ServerSocket(1200); //1200 is port number
            Socket clientSocket = ss.accept();

            System.out.println("\n **** Client is connected with IP address****"
+ clientSocket.getInetAddress() + "and port Number" + clientSocket.getPort());
            DataOutputStream dos = new
DataOutputStream(clientSocket.getOutputStream());

            DataInputStream dis = new
DataInputStream(clientSocket.getInputStream());
            int a = dis.readInt();
            System.out.println("\n SERVER RECEIVED");
            System.out.println("\n NUMBER 1 =====>" + a);
            int b = dis.readInt();
            System.out.println("\n NUMBER 2====>" + b);
            int c = a + b;
            dos.writeInt(c);
            System.out.println("\n SERVER PROCESS HAS EXECUTED REQUESTED PROCESS
AND SENT RESULT " + c + " TO THE CLIENT\n");
            clientSocket.close();
            System.out.println("\n SERVER PROCESS EXITING....................");
            ss.close();
        } catch (Exception e) {
            System.out.println("Exception: " + e);
        }
    }
}
```

Program: IPClient.java

```java
import java.io.BufferedReader;
import java.io.DataInputStream;
import java.io.DataOutputStream;
import java.io.InputStreamReader;
import java.net.Socket;

public class IPCClient {
    public static void main(String args[]) {
        try {
            Socket s = new Socket("localhost", 1200);
            DataOutputStream dos = new DataOutputStream(s.getOutputStream());
            DataInputStream dis = new DataInputStream(s.getInputStream());
            InputStreamReader isr = new InputStreamReader(System.in);
            System.out.println("\n \t*********** CLIENT By Moin MN
(211P030)*****************");
            System.out.println("\n \t*********** CLIENT PROCESS
STARTED*****************");
```

```java
            System.out.println(
                    "\n *****PLEASE ENTER THE VALUES OF NUMBER 1 AND NUMBER 2 TO
PASS THEM TO SERVER PROCESS**********\n");
            BufferedReader br = new BufferedReader(isr);
            int a = Integer.parseInt(br.readLine());
            System.out.println("Number 1===>" + a);
            dos.writeInt(+a);
            int b = Integer.parseInt(br.readLine());
            System.out.println("Number 2=====>" + b);
            dos.writeInt(+b);
            int result = dis.readInt();
            System.out.println(
                    "\n........................CLIENT PROCESS HAS RECEIVED RESULT
FROM SERVER..................\n");
            System.out.println("\n THE ADDITION OF " + a + " & " + b + " = " +
result);
            s.close();
        } catch (Exception e) {
            System.out.println("Exception is " + e);
        }
    }
}
```

Output:

```
PS C:\Users\Moin MN\Downloads> javac IPCServer.java
PS C:\Users\Moin MN\Downloads> java IPCServer

 **** INTERPROCESS COMMUNICATION By Moin MN (211P030)****


 **** SERVER PROCESS STARTED ****


 **** SERVER IS READY AND WAITING TO RECEIVE DATA FROM CLIENT PROCESS ON PORT****1200

 **** Client is connected with IP address****/127.0.0.1and port Number49296

 SERVER RECEIVED

 NUMBER 1 =====>27

 NUMBER 2====>45

 SERVER PROCESS HAS EXECUTED REQUESTED PROCESS AND SENT RESULT 72 TO THE CLIENT


 SERVER PROCESS EXITING....................
PS C:\Users\Moin MN\Downloads> |
```

```
PS C:\Users\Moin MN\Downloads> javac IPCClient.java
PS C:\Users\Moin MN\Downloads> java IPCClient

        ************ CLIENT By Moin MN (211P030)******************

        ************ CLIENT PROCESS STARTED******************

 *****PLEASE ENTER THE VALUES OF NUMBER 1 AND NUMBER 2 TO PASS THEM TO SERVER PROCESS**********

27
Number 1===>27
45
Number 2=====>45

....................CLIENT PROCESS HAS RECEIVED RESULT FROM SERVER..................


 THE ADDITION OF 27 & 45 = 72
PS C:\Users\Moin MN\Downloads> |
```