

Continuous Assessment – 03

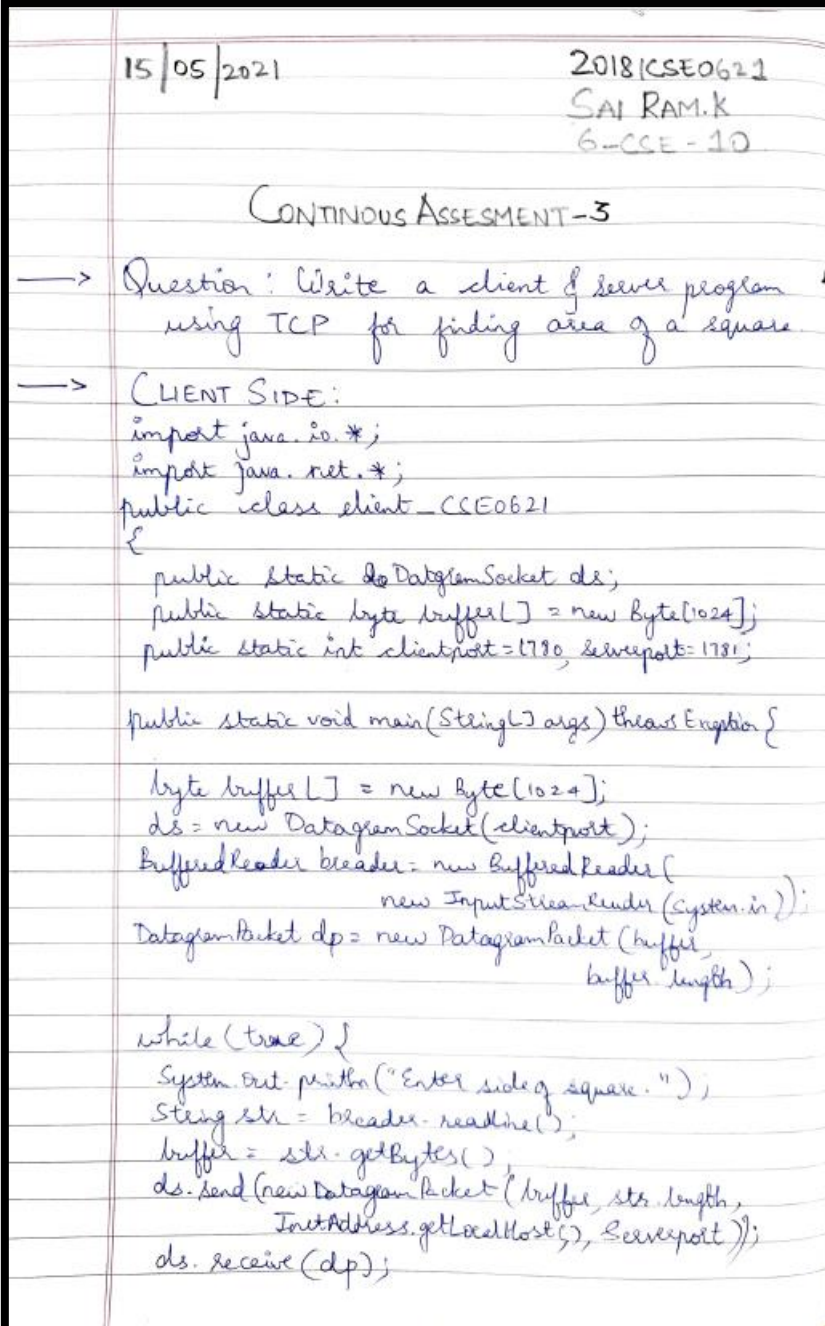
15 – 05 -2021

Sai Ram. K

20181CSE0621

6-CSE-10

Question: Write a client and server program using TCP for finding area of the square.



Handwritten code for a TCP client program to find the area of a square. The code is written in Java and includes comments for the date, student ID, and name.

```
15/05/2021  
20181CSE0621  
SAI RAM.K  
6-CSE-10  
  
CONTINUOUS ASSESMENT-3  
  
-> Question: Write a client & server program  
using TCP for finding area of a square.  
  
-> CLIENT SIDE:  
import java.io.*;  
import java.net.*;  
public class client_CSE0621  
{  
    public static DatagramSocket ds;  
    public static byte buffer[] = new byte[1024];  
    public static int clientport = 1780, serverport = 1781;  
  
    public static void main(String[] args) throws Exception {  
        byte buffer[] = new byte[1024];  
        ds = new DatagramSocket(clientport);  
        BufferedReader breader = new BufferedReader(  
            new InputStreamReader(System.in));  
        DatagramPacket dp = new DatagramPacket(buffer,  
            buffer.length);  
  
        while (true) {  
            System.out.println("Enter side of square.");  
            String str = breader.readLine();  
            buffer = str.getBytes();  
            ds.send(new DatagramPacket(buffer, str.length,  
                InetAddress.getLocalHost(), serverport));  
            ds.receive(dp);  
        }  
    }  
}
```

CLASSMATE
 Date _____
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20181CSE0621

```

String pdata = new String(dp.getData(), 0, dp.getLength());
System.out.println("Area=" + pdata + " sq. units");
}
}

-> Server Side :-

import java.net.*;
import java.io.*;
public class Server - CSE0621 {
    public static DatagramSocket ds;
    public static int clientport = 1780, serverport = 1781;

    public static void main(String[] args) throws Exception
    {
        byte Buffer[] = new Byte[1024];
        ds = new DatagramSocket(serverport);
        dp = new DatagramPacket(Buffer, Buffer.length);
        while(true)
        {
            ds.receive(dp);
            String recdata = new String(dp.getData(), 0, dp.getLength());
            String rh[] = recdata.split(" ");
            double area = ((Double.parseDouble(rh[0]) *
                (Double.parseDouble(rh[1]))));
            String str = String.valueOf(area);
            buffer = str.getBytes();
            ds.send(new DatagramPacket(buffer, str.length(),
                InetAddress.getLocalHost(), clientport));
        }
    }
}

```

OUTPUT

```
Mod-3 Socket Programming - CA3_20181CSE0621/src/server.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer
CA3_20181CSE0621
  JRE System Library
  src
    (default package)
      client.java
      server.java
  exp1_IPFinder
  exp2_Local_IPAddress
  exp3_UDP_Protocol
  exp4_tcp
  exp5_pingConnectivity
  exp6_ARP
  exp7_FTP
  MidTerm_30-04-21
  rough

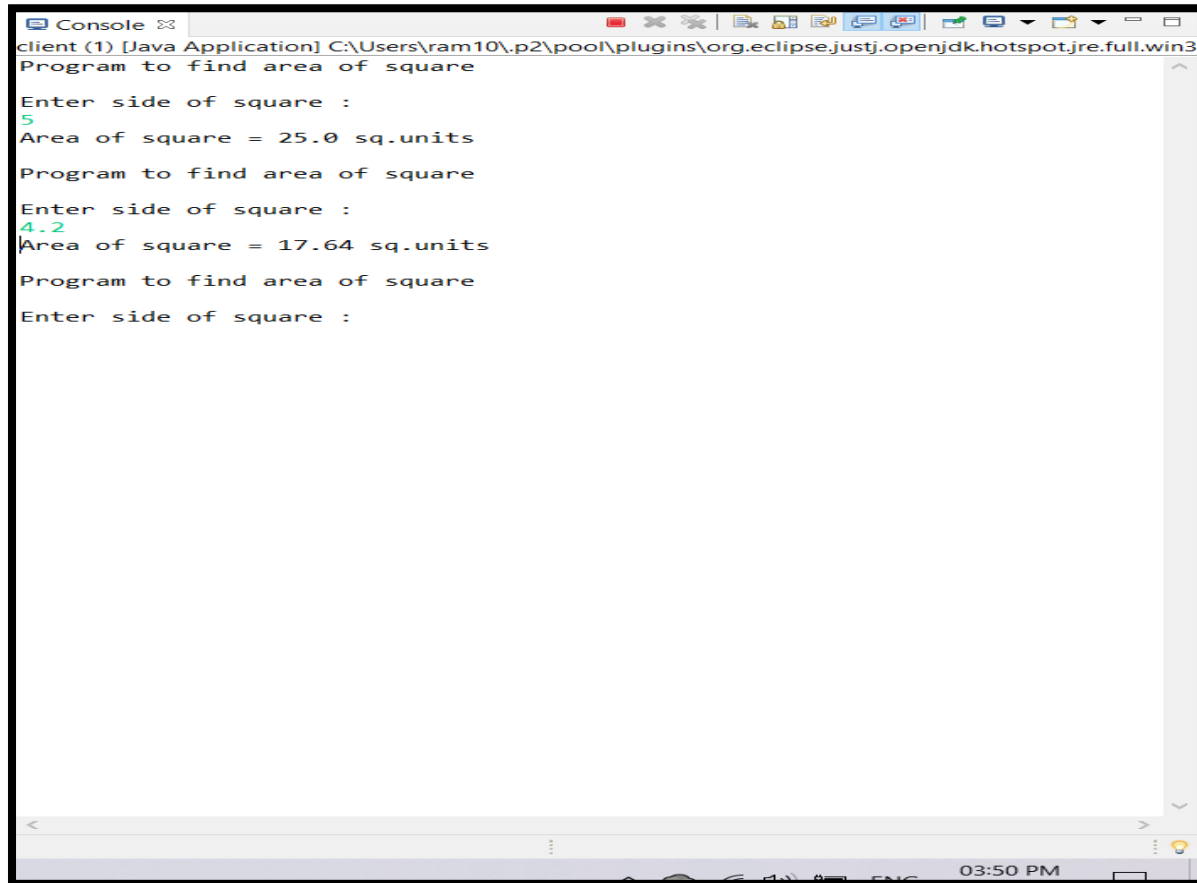
client.java
1 import java.net.*;
2 import java.io.*;
3
4 public class client {
5
6     public static DatagramSocket ds;
7     public static byte buffer[] = new byte[1024];
8     public static int clientport = 1780, serverport = 1781;
9
10    public static void main(String args[]) throws Exception {
11
12        byte buffer[] = new byte[1024];
13        ds = new DatagramSocket(clientport);
14        BufferedReader breader = new BufferedReader(new InputStreamReader(System.in));
15        DatagramPacket dp = new DatagramPacket(buffer, buffer.length);
16
17        while (true) {
18            System.out.println("Program to find area of square\n");
19            System.out.println("Enter side of square : ");
20            String str = breader.readLine();
21
22            client (1) [Java Application] C:\Users\ram10\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_15.0.2.v20210
23            Program to find area of square
24            Enter side of square :
25            5
26            Area of square = 25.0 sq.units
27            Program to find area of square
28            Enter side of square :
```

Server side :

```
*server.java
1 import java.net.*;
2
3 public class server_CSE0621 {
4
5     public static DatagramSocket ds;
6     public static int clientport = 1780, serverport = 1781;
7
8     public static void main(String args[]) throws Exception {
9         byte buffer[] = new byte[1024];
10        ds = new DatagramSocket(serverport);
11        DatagramPacket dp = new DatagramPacket(buffer, buffer.length);
12
13        while (true) {
14
15            ds.receive(dp);
16            String recvddata = new String(dp.getData(), 0, dp.getLength());
17            System.out.println("[Server] Received Data from Client");
18            String rh[] = recvddata.split(" ");
19            double area = ((Double.parseDouble(rh[0]) * Double.parseDouble(rh[0])));
20            String str = String.valueOf(area);
21            buffer = str.getBytes();
22            ds.send(new DatagramPacket(buffer, str.length(), InetAddress.getLocalHost(), clientport));
23            System.out.println("[Server] Data sent to Client");
24        }
25    }
26 }
```

Client side :

```
*client.java
1 import java.net.*;
2 import java.io.*;
3
4 public class client CSE0621 {
5
6     public static DatagramSocket ds;
7     public static byte buffer[] = new byte[1024];
8     public static int clientport = 1780, serverport = 1781;
9
10    public static void main(String args[]) throws Exception {
11
12        byte buffer[] = new byte[1024];
13        ds = new DatagramSocket(clientport);
14        BufferedReader breader = new BufferedReader(new InputStreamReader(System.in));
15        DatagramPacket dp = new DatagramPacket(buffer, buffer.length);
16
17        while (true) {
18            System.out.println("Program to find area of square\n");
19            System.out.println("Enter side of square : ");
20            String str = breader.readLine();
21            buffer = str.getBytes();
22            ds.send(new DatagramPacket(buffer, str.length(), InetAddress.getLocalHost(), serverport));
23
24            ds.receive(dp);
25            String pdata = new String(dp.getData(), 0, dp.getLength());
26            System.out.println("Area of square = " + pdata + " sq.units\n");
27        }
28    }
29 }
```



```
client (1) [Java Application] C:\Users\ram10\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32
Program to find area of square

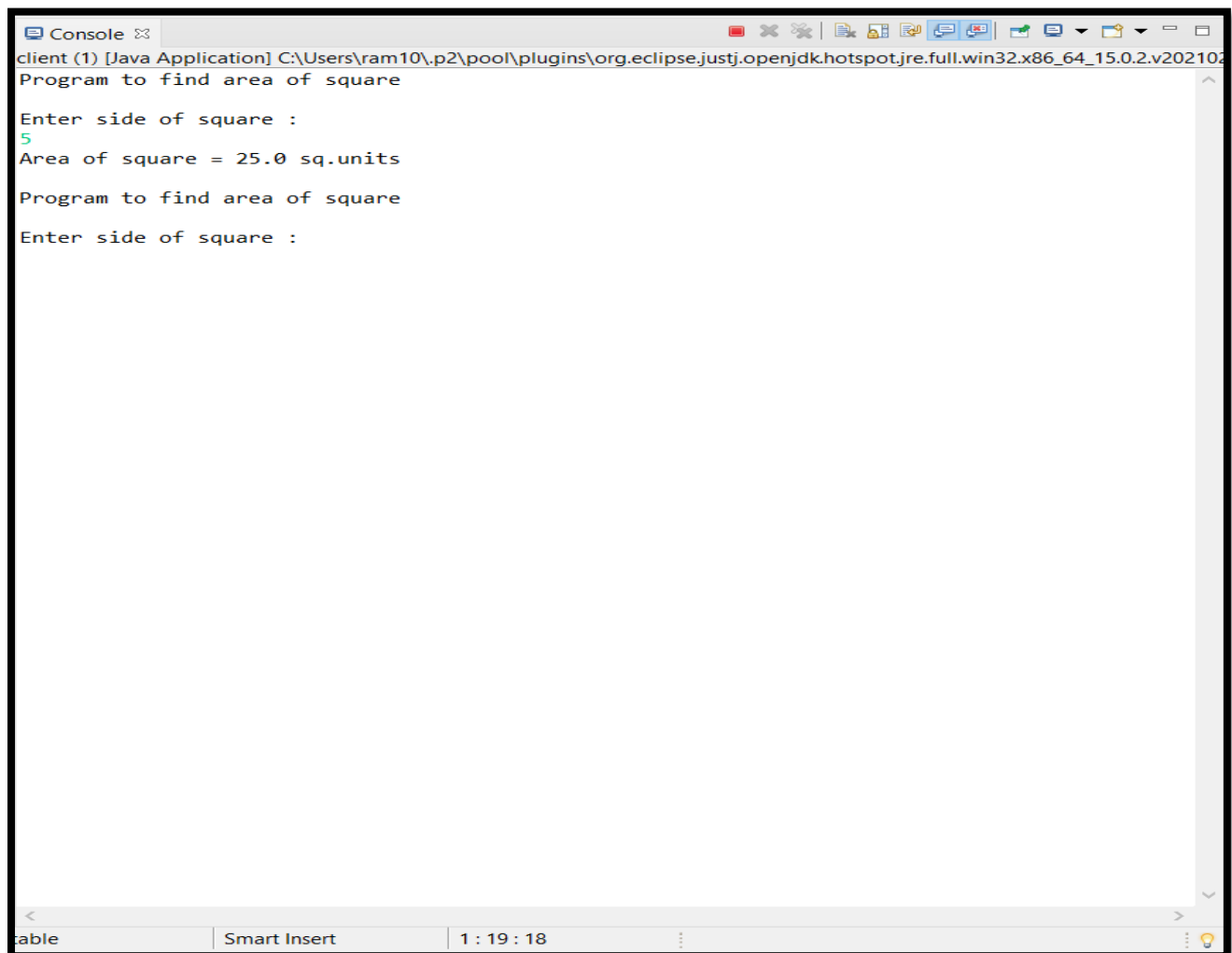
Enter side of square :
5
Area of square = 25.0 sq.units

Program to find area of square

Enter side of square :
4.2
Area of square = 17.64 sq.units

Program to find area of square

Enter side of square :
```



```
client (1) [Java Application] C:\Users\ram10\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_15.0.2.v202102
Program to find area of square

Enter side of square :
5
Area of square = 25.0 sq.units

Program to find area of square

Enter side of square :
```