Implementation of Shared Memory

Q. Write a program to increment counter in Shared Memory

Solution :

Code :

Server :

```
package sharedmemorydemo;

import java.io.*;
import java.net.*;
import java.util.*;
import java.util.logging.*;

public class SharedMemoryDemo {
   static int a=50;
   static int count=0;
   public static int getA(PrintStream cout) {
      count++;
      cout.println(a);
      return a;
   }
   public void setA(int a) {
      this.a = a;
   }
   public static void main(String[] args) {
      int x,y;

      String op;
      try {
         ServerSocket ss=new ServerSocket(2000);

         while (  true )
         {
            Socket sk=ss.accept();
         BufferedReader cin = new BufferedReader(new InputStreamReader(sk.getInputStream()));
         PrintStream cout=new PrintStream(sk.getOutputStream());
         System.out.println("Client from "+sk.getInetAddress().getHostAddress()+" accepted");
         BufferedReader stdin=new BufferedReader(new InputStreamReader(System.in));
         String s;
            s=cin.readLine();
            Scanner sc=new Scanner(s).useDelimiter("\\s");
            op=sc.next();
            if (op.equalsIgnoreCase("show"))
            {
               x=getA(cout);
            }
            else
            {
               cout.println("Check Syntax");
               break;
```

```
            }
            //System.out.println("Client : "+s);
            System.out.println("Count : " +count);
            sk.close();
            cin.close();
            cout.close();
            stdin.close();
          }
          ss.close();
       } catch (IOException ex) {
          Logger.getLogger(SharedMemoryDemo.class.getName()).log(Level.SEVERE, null, ex);
       }
    }
}
```

Client (multiple instances) :

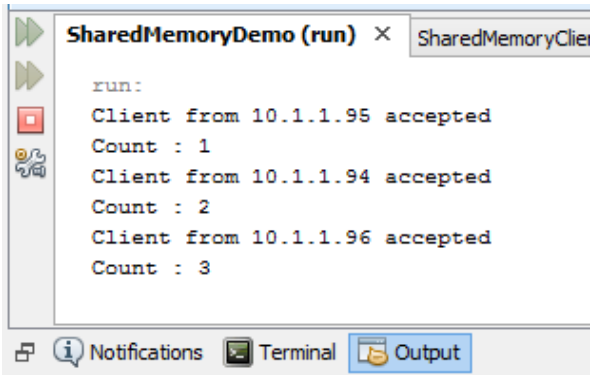
```
package sharedmemoryclient;
import java.io.*;
import java.net.*;
import java.util.*;
import java.util.logging.*;
public class SharedMemoryClient {

    private static Object host;
   public static void main(String args[]) throws Exception
   {
          BufferedReader sin;
          PrintStream sout;
             BufferedReader stdin;
       try (Socket sk = new Socket("10.1.1.95",2000)) {
          sin = new BufferedReader(new InputStreamReader(sk.getInputStream()));
          sout = new PrintStream(sk.getOutputStream());
          stdin = new BufferedReader(new InputStreamReader(System.in));
          String s;
          while (  true )
          {
             System.out.print("Client   : ");
             s=stdin.readLine();
             sout.println(s);
             s=sin.readLine();
             System.out.println("Answer : " +s);

                          break;
             }
       }
              sin.close();
              sout.close();
             stdin.close();
       }
}
```

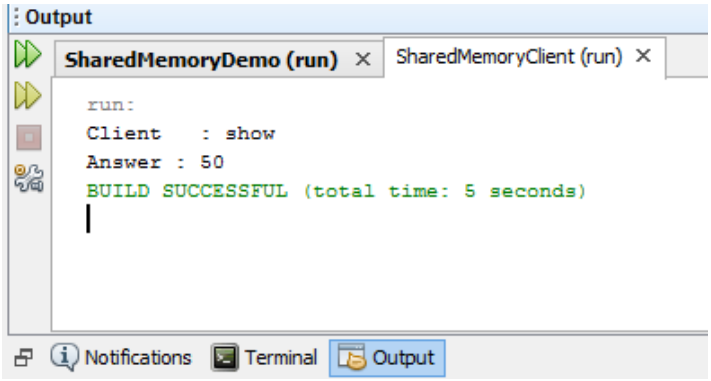
Output :

Server –



Clients –

1.



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