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ASSIGNMENT 5

AIM: Implement assignment 4 using Applet /Swing/AWT for UI.

THEORY:

An applets are client side web based program i.e. executed on web browser. To write an applet, developers must write access specifiers public.

Swing applets are the same as AWT applets, the variation is that Swing extends JApplet and JApplet consists of all the features of Applet because JApplet is derived from Applet.
JApplet is a high level container that includes panes.Applet life cycle uses five methods such as init(), start(), paint(), stop(), destroy() methods.
The init() and destroy() methods of an applet get executed only once whereas the remaining methods of an applet get executed every time when applet comes into focus uses start() or lost focus uses stop().

Syntax

Here class name should extend the Applet and this applet class available in import java.applet.*; package.
import java.applet.*;

SOURCE CODE:

```
import java.io.*;
import
java.awt.event.*;
import java.awt.*;
class que extends Frame
{
   Label p,c;
   TextArea
   t1,t2; Panel
```

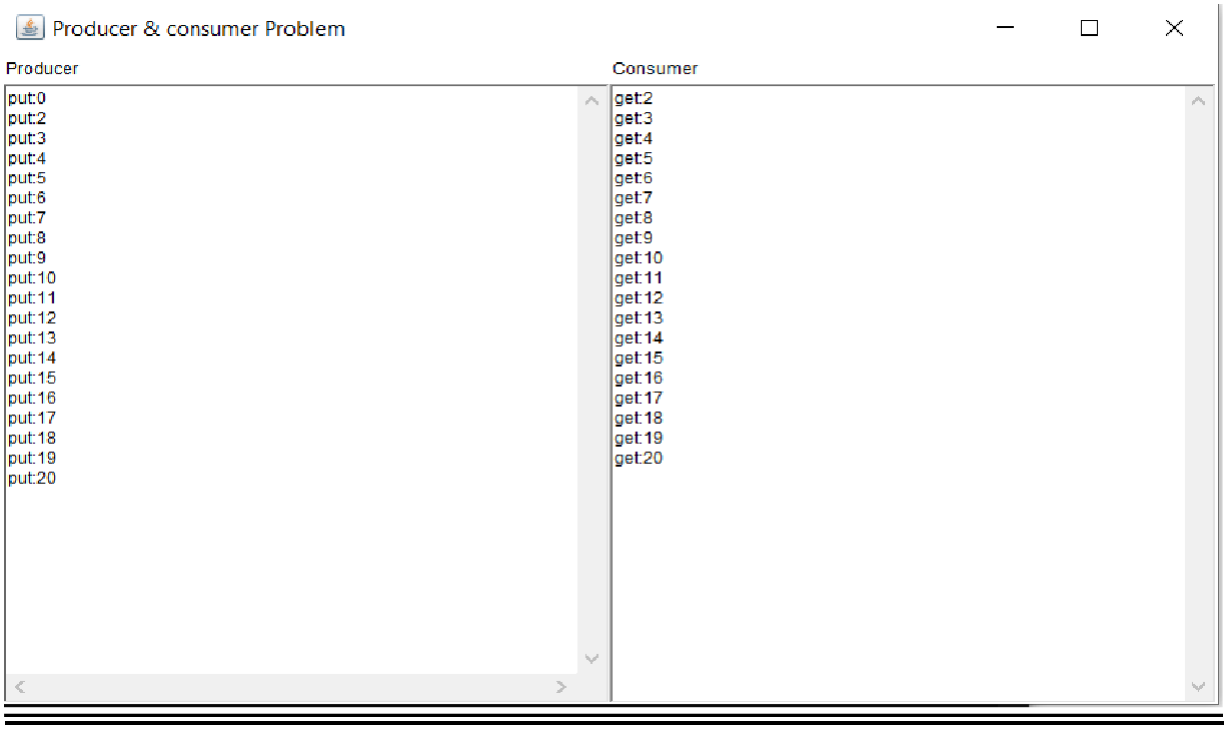
```
p1,p2; int s;
que()
{
   super("Producer & consumer
   Problem"); p=new
   Label("Producer");
   c=new Label("Consumer");
```

```
    t1=new TextArea();
    t2=new TextArea();
    p1=new Panel();
    p2=new Panel();
    add(p1,BorderLayout.NORTH);
    add(p2,BorderLayout.CENTER);
    addWindowListener(new WindowAdapter()
    {
       public void windowClosing(WindowEvent we)
       {
          setVisible(false);
          System.exit(0);
       }
    });
    p1.setLayout(new GridLayout(1,2));
    p1.add(p);p1.add(c);
    p2.setLayout(new GridLayout(1,2));
    p2.add(t1);p2.add(t2);

}

int n;
boolean value=false;
synchronized void get()throws Exception
{
       if(!value)
       {
          try
          {
             wait();
          }
          catch(Exception e)
          {
          }
       }
    Thread.sleep(2000);
    t2.append("get:"+n+"\n");
    value=false;
    notify();
```

```
    }
    synchronized void put(int x)
    {
        if(value)
        {
            try
            {
                wait();
            }
            catch(Exception e1)
                {
                }
        }
        t1.append("put:"+n+"\n");
        n=x;
        value=true;
        notify();
    }
}
class produce implements Runnable
{
    que q;
    produce(que m)
    {
        q=m;
        new Thread(this,"Producer").start();
    }
    public void run()
    {
        int i=2;
        try
        {
            while(true)
                q.put(i++);
        }
        catch(Exception e2)
        {
        }
    }
}
```

```
class consumer implements Runnable
{
   que q;
   consumer (que z)
   {
      q=z;
      new Thread(this,"Consumer").start();
   }
   public void run()
   {
      try
      {
         while(true)
            q.get();
      }
      catch(Exception e3)
      {
      }
   }
}
class Ass5 extends Frame
{
   que q1=new que();
   public static void main(String args[])
   {
         Ass5 pc= new Ass5();
         que q1=new que();
         new produce(q1);
         new consumer(q1);
         q1.setVisible(true);
         q1.setSize(300,400);
   }
}
```

OUTPUT :



CONCLUSION:

Java Swing provides platform-independent and lightweight components. **Swing** is a GUI framework (comparable to GTK or Qt). An **applet** is a **Java** application running embedded on a webpage (comparable to a Flash application).