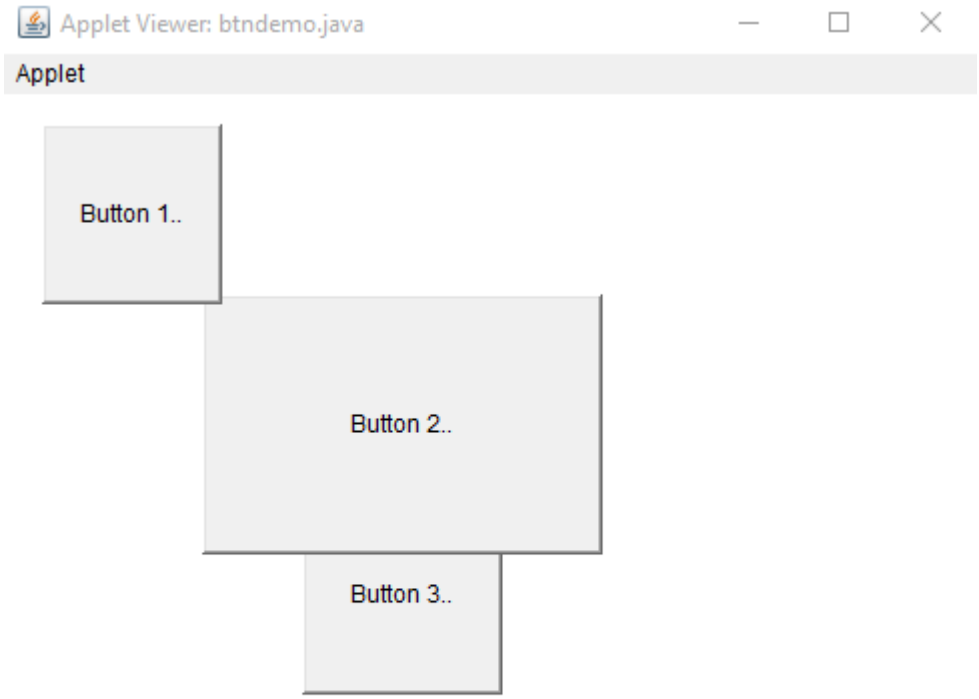
Sr. No.	Title
1	Write a program display 3 labels along with button.
2	Write a program to display check list for 3 subjects and male female radio button.
3	Write a program to get id and password, list hobbies and drop down 3 subjects.
4	Write a program to display vertical and horizontal scrollbar.
5	Write a program to display 4 buttons and textarea using BorderLayout
6	Write a program to display 16 buttons using GridLayout.
7	Write a program to display 7 pannels with different color using CardLayout.
8	Develop an applet that contains one button. Initialize the label on the button to "start", when the user presses the button, which changes the label between these two values each time the button is pressed. (start and stop)
9	Develop a program that contains three check boxes and 30 x 30 pixel canvas. The three checkboxes should be labeled "Red", "Green", "Blue". The selection of the check boxes determine the color of the canvas. For example, if the user selects both "Red" and "Blue", the canvas should be purple.
10	Develop an applet that display the position of the mouse at the upper left corner of the applet when it is dragged or moved. Draw a 10x10 pixel rectangle filed with black at the current mouse position.
11	Write a program to change background color as per mouse entered and exited the applet.
12	Write a program to display two text field. Once you write in one field also written in second text field using keytyped method.
13	Write a program to display two text field. The focused field should be in different color and other should be in white color.
14	Program to change background when frame switches to minimized and normal state.
15	Display scrollbar and label. Once scrollbar adjusted its value printed on label.

//Write a program display 3 labels along with button.

```
/* <applet code=btndemo.java height=900 width=900>
        </applet> */

import java. awt.*;
import java. applet.*;

public class btndemo extends Applet
{

        Button b1,b2,b3;
        Label l1,l2,l3;

        public void    init()
        {
                l1 = new Label(“one”);
                l2 = new Label(“two”);
                l3 = new Label(“three”);

                b1 = new Button("Button 1..");
                b2 = new Button("Button 2..");
                b3 = new Button("Button 3..");
                setLayout(null);
                b1.setBounds(20,15, 90,90);
                b2.setBounds(100,100,200,130);
                b3.setBounds(300,200,100,100);
                add(b1);
                add(b2);
                add(b3);
        }
}
```

Output:



//Write a program to display check list for 3 subjects and male female radio button.

```
/* <applet code=chkdemo.java height=900 width=900>
</applet> */
import java. awt.*;
import java. applet.*;
public class chkdemo extends Applet
{
                                    Checkbox c1,c2,c3;
                                    CheckboxGroup cb;
                                    public   void   init()
                                    {
                                      cb = new CheckboxGroup();
                                      c1 = new Checkbox("AJP");
                                      c2 = new Checkbox("MCAD");
```

```
        c3 = new Checkbox("NMA");
        add(c1);
        add(c2);
        add(c3);
        c1 = new Checkbox("Male",true,cb);
        c2 = new Checkbox("Female",false,cb);
        add(c1);
        add(c2);
    }
```
} Output:

//Write a program to get id and password, list hobbies and drop down 3 subjects.

```
import java.awt.*;
import java.applet.*;
/* <applet code="TextFieldDemo" width=380 height=150> </Applet> */

public class TextFieldDemo extends Applet implements ActionListener
{
    TextField name, pass;
    List l;
    Choice c;
```

```
    public void init()
   {
        Label namep = new Label("Name: ");
        Label passp = new Label("Password: ");
        name = new TextField(12);
        pass = new TextField(8);
        pass.setEchoChar('*');

      l = new List();
      l.add("AJP");
      l.add("MCAD");
      l.add("NMA");
      add(l);

      c.add("First");
      c.add("Second");
      c.add("Third");
      add(c);

        add(namep);
        add(name);
        add(passp);
        add(pass);
    }
}
```

//Write a program to display vertical and horizontal scrollbar.

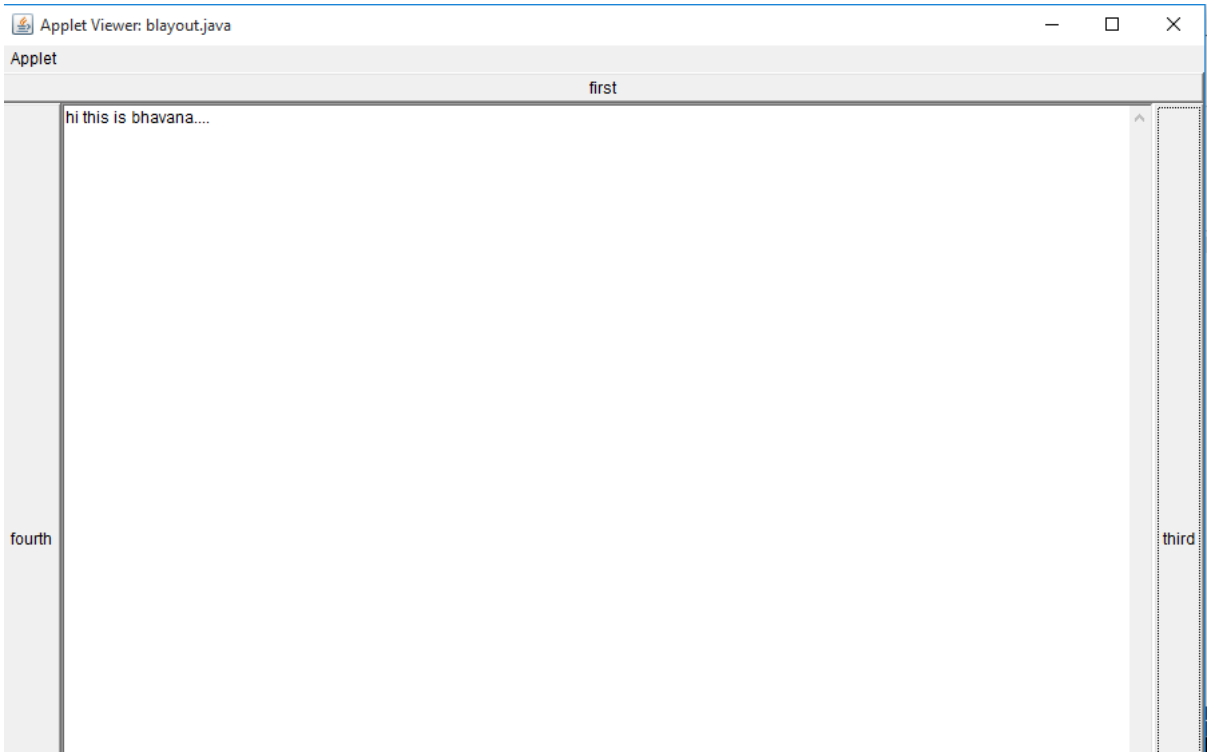
```
/* <applet code=sb.java height=900 width=900>
</applet> */
import java. awt.*;
import java. applet.*;
public class sb extends Applet
{
Scrollbar s1,s2;
public     void    init()
{
        setLayout(null);
        s1 = new Scrollbar();
        s1.setBounds(0,0,50,150);
```

```
                s2 = new Scrollbar(Scrollbar.HORIZONTAL,12,10,50,200);
                s2.setBounds(100,100,300,100);
                add(s2);
                add(s1);
        }
}
```

//Write a program to display use of BorderLayout.

```
/* <applet code=blayout.java height=900 width=900>
        </applet> */

import java. awt.*;
import java. applet.*;

public class blayout extends Applet
{

        Button b1,b2,b3,b4;
        TextArea t;

        public void    init()
        {
                t = new TextArea("hi this is bhavana....");
```

```
        setLayout(new BorderLayout ()    );
        b1 = new Button("first");
        b2 = new Button("second");
        b3 = new Button("third");
        b4 = new Button("fourth");
        add(b1,BorderLayout.NORTH);
        add(b2,BorderLayout.SOUTH);
        add(b3,BorderLayout.EAST);
        add(b4,BorderLayout.WEST);
        add(t,BorderLayout.CENTER);

    }
```

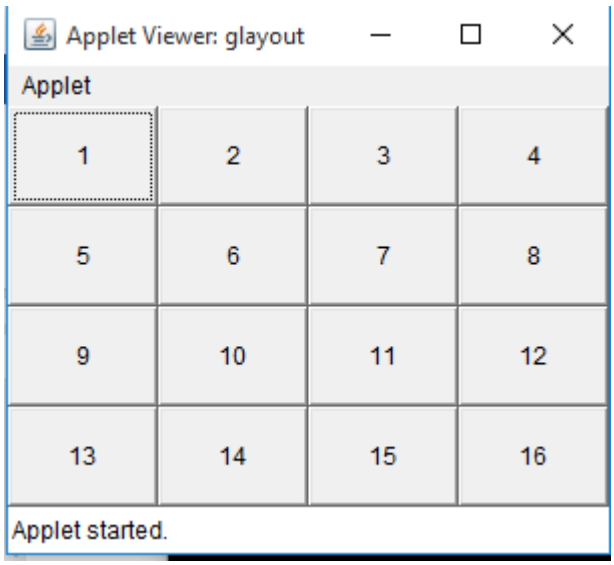



```
}
```

//Write a program to display use of GridLayout.

```
/* <applet code="glayout" width=300 height=200>
 </Applet> */
import java.applet.*;
```

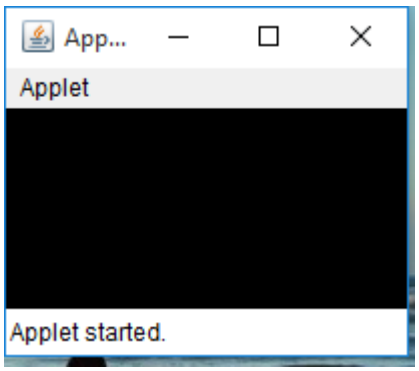
```
import java.awt.*;

public class glayout extends Applet

{

        static final int n = 4;

        int k=1;

        public void init()

        {

                setLayout(new GridLayout(n, n));

                for(int i = 0; i < n; i++)

                        for(int j = 0; j < n; j++)

                                add(new Button("" + k++));

        }

}
```



//Write a program to display use of CardLayout.

```
import java.awt.*;
import java.applet.*;

/*<Applet code=clayout width=200 height=100>
 </Applet> */

public class clayout extends Applet
{
        Panel p=new Panel();
        Panel p1=new Panel();
```

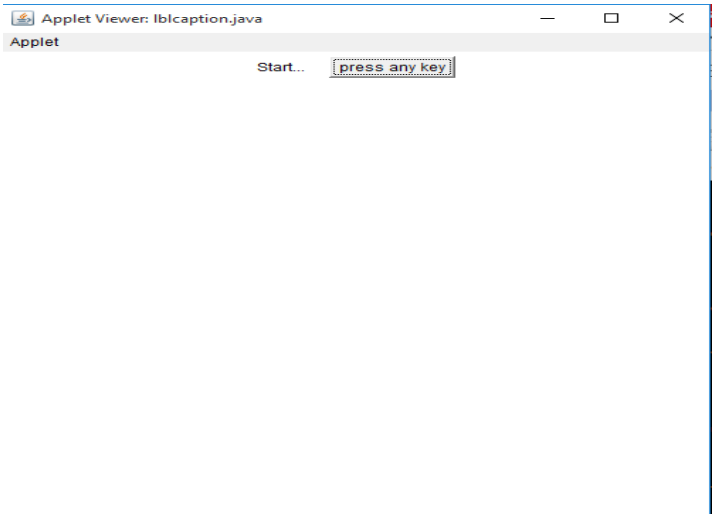
```
        Panel p2=new Panel();
        Panel p3=new Panel();
        CardLayout c=new CardLayout();
        public void init()
        {
                p.setLayout(c);
                p1.setBackground(Color.red);
                 p2.setBackground(Color.black);
                 p3.setBackground(Color.blue);
                p.add("p1",p1);
                p.add("p2",p2);
                p.add("p3",p3);
                 setLayout(new BorderLayout());
                add("Center",p);
        }
        public boolean mouseDown(Event e, int x, int y)
        {
                c.next(p);
                return true;
        }
}
```



/* Develop an applet that contains one button. Initialize the label on the button to "start", when the user presses the button, which changes the label between these two values each time the button is pressed. (start and stop) */

```
/*
   <applet code="lblcaption.java" width=500 height=500>
   </applet>
*/

import java.applet.*;
import java.awt.*;
import java.awt.event.*;

public class lblcaption extends Applet implements ActionListener
{

        Label l;
```

```
        Button b;
         public void init()
        {

                l = new Label("Start...");
                b = new Button("press any key");
                add(l);
                add(b);
                b.addActionListener(this);
         }
        public void actionPerformed(ActionEvent e)
        {
                if(l.getText().equals("Start..."))
                        l.setText("Stop...");
                else
                        l.setText("Start...");
        }
}
```

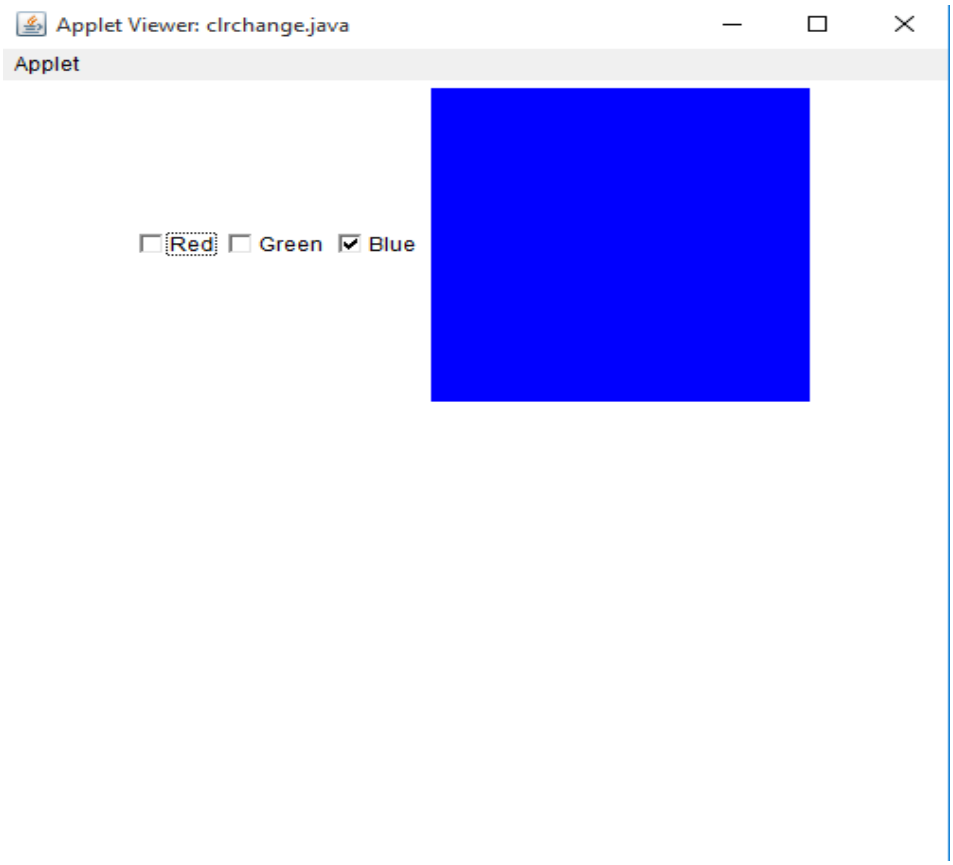


/*Develop an program that contains three check boxes and 30 x 30 pixel canvas.The three checkboxes should be labeled "Red", "Green","Blue". The selection of the check boxes determine the color of the canvas. For example, if the user selects both "Red" and "Blue", the canvas should be purple. */

```
/*
   <applet code="clrchange.java" width=500 height=500>
   </applet>
*/

import java.applet.*;
import java.awt.*;
import java.awt.event.*;

public class clrchange extends Applet implements ItemListener
{
```

```
        Checkbox c1,c2,c3;
        Canvas c;

    public void init()
    {
        c = new Canvas();
        c.setBackground(Color.PINK);
        c.setSize(200,200);
        c1 = new Checkbox("Red");
        c2 = new Checkbox("Green");
        c3 = new Checkbox("Blue");
        add(c1);
        add(c2);
        add(c3);
        add(c);

        c1.addItemListener(this);
        c2.addItemListener(this);
        c3.addItemListener(this);
    }
        public void itemStateChanged(ItemEvent e)
        {

                if(c1.getState() && c2.getState() && c3.getState())
                        c.setBackground(Color.GRAY);
                else if(c1.getState() && c2.getState())
                        c.setBackground(Color.YELLOW);
                else if(c1.getState() && c3.getState())
                        c.setBackground(Color.MAGENTA);
                else if(c2.getState() && c3.getState())
                        c.setBackground(Color.CYAN);
                else if(c2.getState())
                        c.setBackground(Color.GREEN);
                else if(c3.getState())
                        c.setBackground(Color.BLUE);
                else if(c1.getState())
                        c.setBackground(Color.RED);

        }
}
```

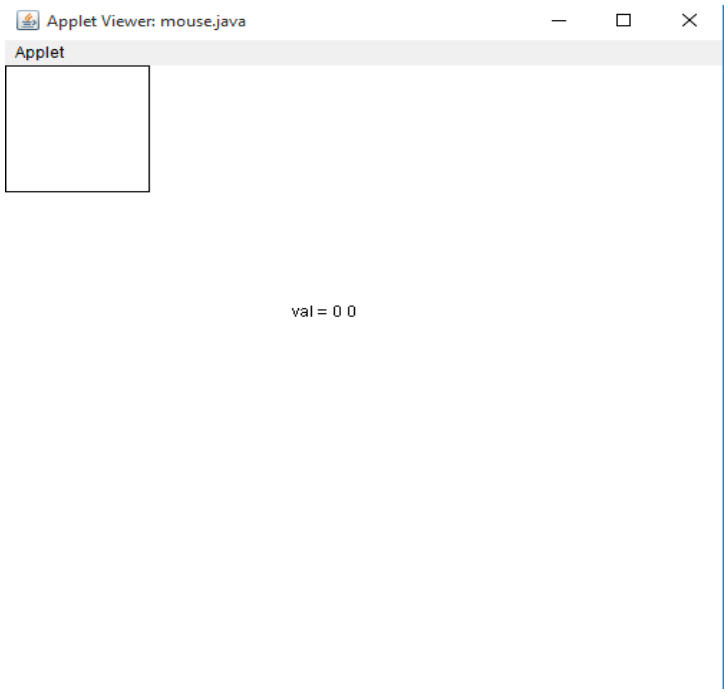
Output :



/*Develop an applet that display the position of the mouse at the upper left corner of the applet when it is dragged or moved. Draw a 10x10 pixel rectangle filed with black at the current mouse position. */

```
/*
   <applet code="mouse.java" width=500 height=500>
   </applet>
*/

import java.applet.*;
import java.awt.*;
import java.awt.event.*;

public class mouse extends Applet implements MouseMotionListener
{
                int x,y;

                public void init()
                {
                        addMouseMotionListener(this);
                }
                public void mouseMoved(MouseEvent e)
                {
                        x=e.getX();
                        y=e.getY();
                        repaint();
                }
                public void mouseDragged(MouseEvent e)
```

```
        {

        }
        public void paint(Graphics g)
        {
            g.drawString("val = "+x +" " +y,200,200);
            g.drawRect(x,y,100,100);
        }
}
```



/* Write a program to change background color as per mouse entered and exited the applet. */

```
/*
   <applet code="key.java" width=500 height=500> </applet>
*/

import java.applet.*;
import java.awt.*;
import java.awt.event.*;

public class mouse extends Applet implements MouseListener
{
                public void init()
                {
                        addMouseListener(this);

                }
                public void mouseEntered(MosueEvent e)
                {
                        setBackground(Color.BLUE);
                }
                public void mouseExited(MouseEvent e)
                {
                        setBackground(Color.MAGENTA);
                }
                public void mouseClicked(MouseEvent e)
                {

                }
                public void mouseReleased(MouseEvent e)
                {

                }
                public void mousePressed(MouseEvent e)
                {

                }
}
```

//Write a program to display two text field. Once you write in one field also //written in second text field using keytyped method.

```
/*
                <applet code=text height=600 width=600> </applet>
*/
import java.applet.*;
import java.awt.*;
import javax.swing.*;
import java.awt.event.*;
```

```
public class text extends JApplet implements TextListener
{
		TextField t1,t2;
		JLabel l1,l2;
		public void init()
		{
			setLayout(new FlowLayout());
			l1=new JLabel("Enter text:");
			add(l1);
			t1 = new TextField(15);
			 t1.addTextListener(this);
			add(t1);
		}
		public void textValueChanged(TextEvent e)
		{
			l1.setText(t1.getText());

		}
}
```

/* Write a program to display two text field. The focused field should be in different color and other should be in white color. */

```
/*  <applet code=focus height=600 width=600>
		</applet>  */
import java.applet.*;
import java.awt.*;
import javax.swing.*;
import java.awt.event.*;

public class focus extends JApplet implements FocusListener
{
		JTextField t1,t2;
		JLabel l1,l2;
		public void init()
		{
			setLayout(new FlowLayout());
			l1=new JLabel("Enter Name:");
			add(l1);
			t1 = new JTextField(15);
			t1.addFocusListener(this);
			add(t1);

			l2=new JLabel("Enter City:");
			add(l2);
			t2 = new JTextField(15);
			t2.addFocusListener(this);
			add(t2);
```

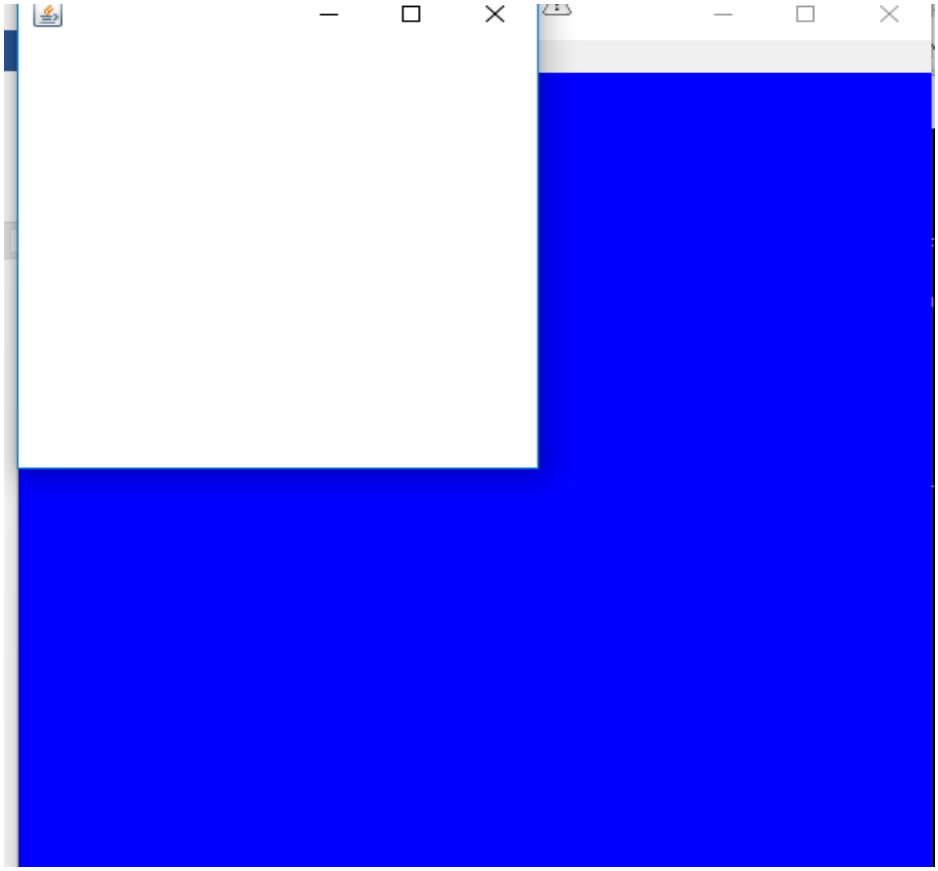
```
		}
		public void focusGained(FocusEvent e)
		{
			if(e.getSource()== t1)
			{
				t1.setBackground(Color.red);
			}
			else if(e.getSource() == t2)
			{
				t2.setBackground(Color.red);
			}
		}
		public void focusLost(FocusEvent e)
		{
			if(e.getSource()== t1)
			{
				t1.setBackground(Color.white);
			}
			else if(e.getSource() == t2)
			{
				t2.setBackground(Color.white);
			}
		}
}
```

//program to change background when frame switches to minimized and normal state.

```
/*
   <applet code="window.java" width=500 height=500> </applet>
*/
import java.applet.*;
import java.awt.*;
import java.awt.event.WindowListener;
import java.awt.event.WindowEvent;

public class window extends Applet implements WindowListener
{
		Frame f;
		public void init()
		{
			f = new Frame();
			f.addWindowListener(this);
			f.setSize(300,300);
			f.setVisible(true);

		}
		public void windowDeiconified (WindowEvent e)
		{
			setBackground(Color.BLUE);
```

```
        }
        public void windowIconified (WindowEvent e)
        {
                setBackground(Color.MAGENTA);
        }
        public void windowActivated (WindowEvent e)
        {
        }
        public void windowClosed (WindowEvent e)
        {
        }
        public void windowClosing (WindowEvent e)
        {
        }
        public  void windowDeactivated (WindowEvent e)
        {
        }
        public void windowOpened (WindowEvent e)
        {
        }
}
```

Output:



// Display scrollbar and label. Once scrollbar adjusted its value printed on Label

```
/*      <applet code=adjust height=600 width=600>
```

```
        </applet>  */
import java.applet.*;
import java.awt.*;
import javax.swing.*;
import java.awt.event.*;

public class adjust extends JApplet implements AdjustmentListener
{
        JScrollBar sb;
        JLabel l;
        public void init()
        {
                sb = new JScrollBar();
                sb.addAdjustmentListener(this);
                sb.setBounds(100,100,50,150);
                add(sb);

                l=new JLabel("text");
                add(l);
        }
        public void adjustmentValueChanged(AdjustmentEvent e)
        {
                l.setText(" " +sb.getValue());
        }
}
```