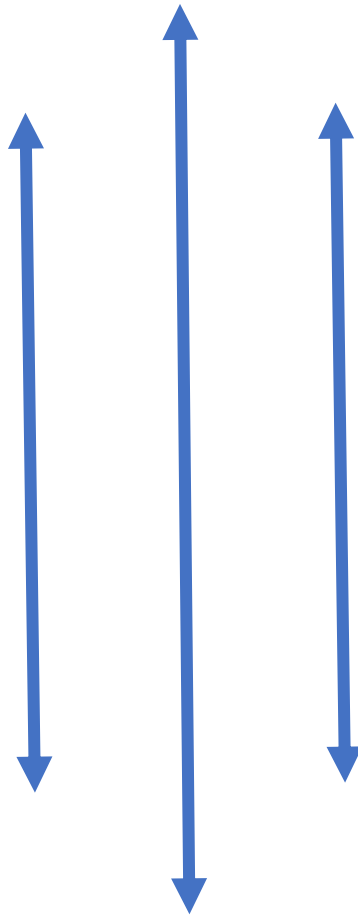


Paint Application

Report On

To Create A Paint Application By Inheriting

JFrame Class. 2(a)



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Introduction

My Project is:

To create a Paint Application by Inheriting JFrame class where user can select the color.

JColorChooser class should be used for creating the application.

Features of the Project

The feature of the Project is that user can choose any color they want from the **JColorChooser** panel and can draw a line. In simple language, the features of the Project is to create a Paint Application.

Description about my Code

In order to create my Paint Application, I have created a class called Paint which has inherits **JFrame** class for creating JFrame and has implements two events(interfaces) called **ActionListener** and **MouseMotionListener**.

I have imported 3 things i.e. **import javax.swing.***, **import java.awt.*** and **import java.awt.events**.

There is another external class called **MyColorChooser** in which main method is created. Inside the main method, frame is created having width and size equals to 700px. Title is also given for the frame i.e. "Paint Application."

In the Paint class I have created a constructor where **JButton**, **Container**, **Cursor** and **Color** objects has been created. The Layout of the Container is set to **FlowLayout**. **JButton** size set to width 200px and height 20px along with distance from x-axis is 25px and y-axis is 0px. Cursor is **HAND_CURSOR** which means when user hover over the Button , Cursor changes into a HAND.

Object of JButton i.e. b1 has assigned a event called **ActionListener(b1.addActionListener)**. Container is assigned with another event called **addMouseMotionListener**.

Three methods have been created and is override as they are abstract method. They are as follows: -

1. public void actionPerformed (ActionEvent arg0)

2. public void mouseDragged (MouseEvent arg0)

3. public void mouseMoved (MouseEvent arg0) hasn't been used.

Inside the **actionPerformed** (ActionEvent arg0) method which is of interface class ActionListener, I have created **JColorChooser** which takes 3 arguments i.e. component, String Title and initial color.

MouseDragged (ActionEvent arg0) method is of interface class MouseMotionListener. Inside it, I have created object of Graphics. **Graphics** object 'g' takes arguments 'col' which is object of JColorChooser which is used to draw a line in the frame with the help of below code: -

g.fillOval(arg0.getX(), arg0.getY(), width , height)

In this way, I have created a sample of Paint Application.

Paint application code

```
import javax.swing.*;

import java.awt.*;

import java.awt.event.*;

class Paint extends JFrame implements ActionListener, MouseMotionListener {

    Container c;

    JButton b1;

    Color col;

    Paint() {

        c = this.getContentPane();

        // Setting FlowLayout center

        FlowLayout fl = new FlowLayout(FlowLayout.CENTER);

        c.setLayout(fl);

        // Creating Button

        b1 = new JButton("Choose color");

        b1.setBounds(250, 0, 200, 30);

        // To set Cursor

        Cursor crs = new Cursor(Cursor.HAND_CURSOR);

        b1.setCursor(crs);

        // For font size of button

        Font f = new Font("Arial", Font.BOLD, 20);

        b1.setFont(f);

        b1.addActionListener(this);

        addMouseMotionListener(this);

        c.add(b1);

    }
```

```

@Override
public void actionPerformed(ActionEvent arg0) {
    // TODO Auto-generated method stub

    col = JColorChooser.showDialog(this, "Select Color", Color.blue);
    b1.setForeground(col);
}

@Override
public void mouseDragged(MouseEvent arg0) {
    // TODO Auto-generated method stub
    Graphics g = getGraphics();
    g.setColor(col);
    g.fillOval(arg0.getX(), arg0.getY(), 20, 20);
}

@Override
public void mouseMoved(MouseEvent arg0) {
    // TODO Auto-generated method stub

}

}

public class MyColorChooser {
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Paint frame = new Paint();
        frame.setTitle("Paint Application");
        frame.setVisible(true);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setBounds(500, 250, 700, 700);
    }
}

```

OOP features implemented

For creating this Paint Application, different OOP features has been implemented like: -

1.Object and Class

2.Inheritance

3.Abstraction and Encapsulation

4.Polymorphism

References

For Creating this Paint Application, I have taken help from the following sources: -

1. <https://www.javatpoint.com/>
2. Programming with JAVA (Textbook)
3. YouTube

THE End