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Lab-4

Q-1)

Code:

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

public class q1 extends Applet implements ActionListener {
    TextField nameField, id;
    String name1 = " ";
    String id1 = "";
    String id2 = "";
    String name2 = "";

    public void init() {
        Label l1 = new Label("Enter your name ");
        Label l2 = new Label("Enter your id ");

        Button b1 = new Button("submit");
        nameField = new TextField(20);

        b1.addActionListener(this);
        id = new TextField(20);
        add(l1);
        add(nameField);
        add(l2);
        add(id);
        setSize(300, 200);
        add(b1);
    }

    public void actionPerformed(ActionEvent e) {

        name1 = nameField.getText();
        id1 = id.getText();
        name2 = "hello " + name1;
        id2 = "id: " + id1;
        repaint();
    }
}
```

```

    }

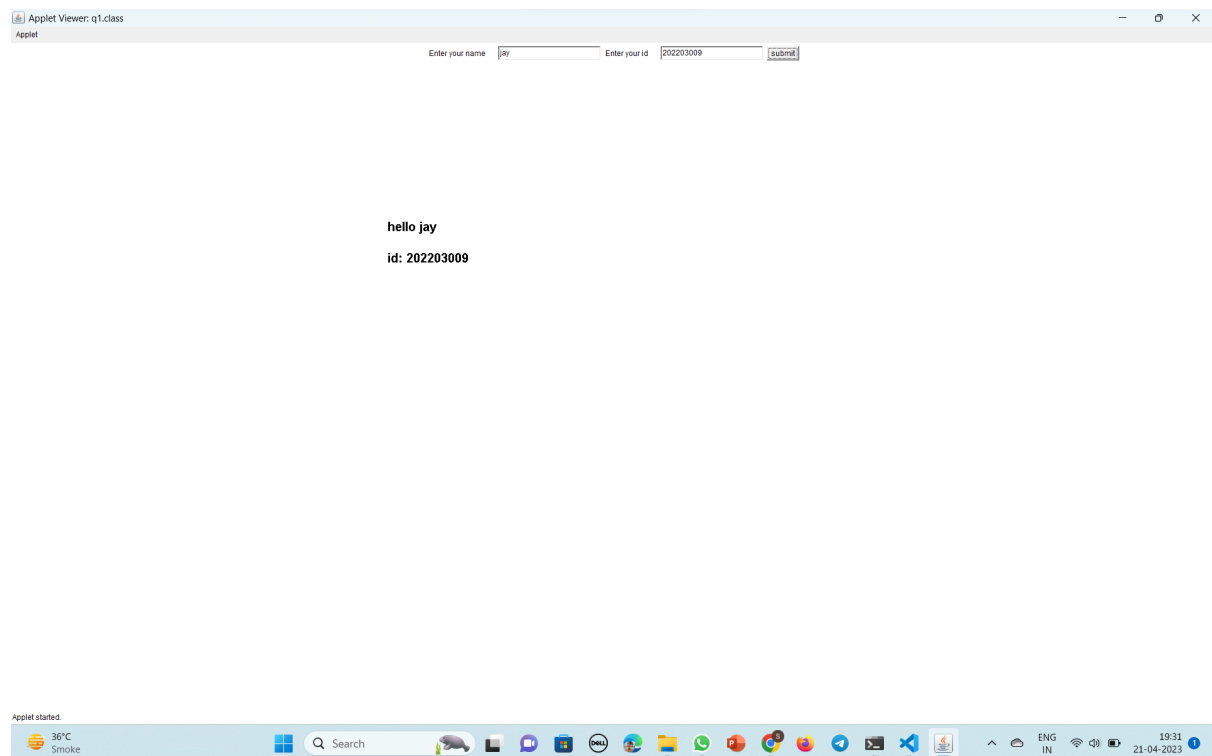
    public void paint(Graphics g) {
        Font font = new Font("Arial", Font.BOLD, 20);
        g.setFont(font);

        System.out.println(name1);

        g.drawString(name2, 600, 300);
        g.drawString(id2, 600, 350);
    }
}

```

## Output:



Q-2)

CODE:

```

import java.applet.Applet;
import java.awt.Choice;
import java.awt.Color;

```

```
import java.awt.event.ItemEvent;
import java.awt.event.ItemListener;

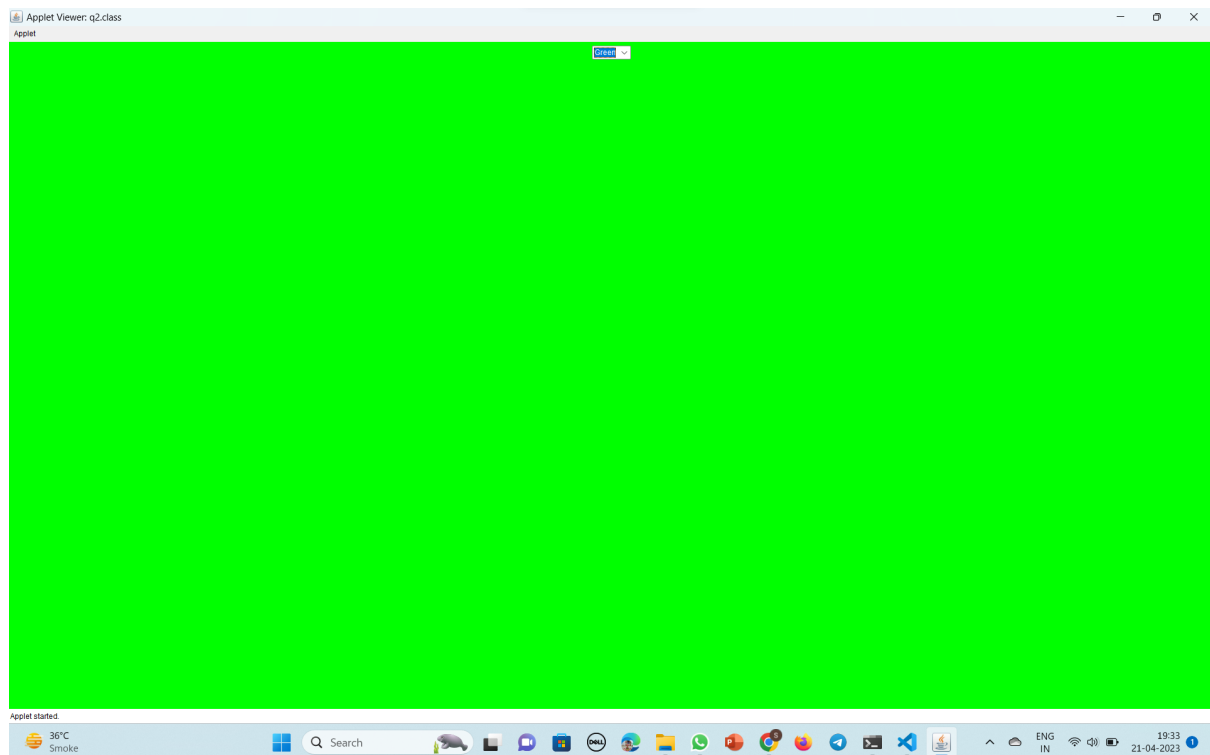
public class q2 extends Applet implements ItemListener {

    Choice colorChoice;

    public void init() {
        colorChoice = new Choice();
        colorChoice.add("Red");
        colorChoice.add("Green");
        colorChoice.add("Blue");
        colorChoice.addItemListener(this);
        add(colorChoice);
    }

    public void itemStateChanged(ItemEvent e) {
        String colorString = colorChoice.getSelectedItem();
        Color color = null;
        switch (colorString) {
            case "Red":
                color = Color.RED;
                break;
            case "Green":
                color = Color.GREEN;
                break;
            case "Blue":
                color = Color.BLUE;
                break;
            default:
                color = Color.WHITE;
        }
        setBackground(color);
    }
}
```

Output:



Q-3)

CODE:

```
import java.applet.*;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class q3 extends Applet implements ActionListener {
    String operator = "";
    String st = "";
    double result = 0.0;
    double num1;
    double num2;
    double sum = 0.0;
    double mul = 1.0;
    double div = 1.0;
    double minus = 0.0;
    FlowLayout f1 = new FlowLayout(FlowLayout.LEFT, 20, 20);
    TextField t1 = new TextField(20);
    TextField t2 = new TextField(20);
    Button b1 = new Button("1");
    Button b2 = new Button("2");
    Button b3 = new Button("3");
    Button b4 = new Button("4");
```

```
Button b5 = new Button("5");
Button b6 = new Button("6");
Button b7 = new Button("7");
Button b8 = new Button("8");
Button b9 = new Button("9");
Button b0 = new Button("0");
Button bmi = new Button("-");
Button bpl = new Button("+");
Button bdi = new Button("/");
Button bmu = new Button("*");
Button beq = new Button("=");
Button bc = new Button("C");

public void init() {
    this.setLayout(f1);
    add(t1);
    add(t2);
    add(b9);
    add(b8);
    add(b7);
    add(b6);
    add(b5);
    add(b4);
    add(b3);
    add(b2);
    add(b1);
    add(b0);
    add(bmi);
    add(bmu);
    add(bdi);
    add(bpl);
    add(beq);
    add(bc);

    b1.addActionListener(this);
    b2.addActionListener(this);
    b3.addActionListener(this);
    b4.addActionListener(this);
    b5.addActionListener(this);
    b6.addActionListener(this);
    b7.addActionListener(this);
    b8.addActionListener(this);
    b9.addActionListener(this);
```

```

        b0.addActionListener(this);
        bmu.addActionListener(this);
        bmi.addActionListener(this);
        bpl.addActionListener(this);
        bdi.addActionListener(this);
        beq.addActionListener(this);
        bc.addActionListener(this);
    }

    public void actionPerformed(ActionEvent e) {

        String buttonLabel = e.getActionCommand();

        if ("0123456789.".indexOf(buttonLabel) >= 0) {
            t1.setText(buttonLabel);
        } else if (buttonLabel.equals("C")) {
            t1.setText("");
        } else if (buttonLabel.equals("+")) {
            num1 = Double.parseDouble(t1.getText());
            operator = "+";
            sum = sum + num1;
            System.out.println(sum);
            t1.setText("");
        } else if (buttonLabel.equals("-")) {
            num1 = Double.parseDouble(t1.getText());
            operator = "-";
            minus = minus - num1;
            t1.setText("");
        } else if (buttonLabel.equals("*")) {
            num1 = Double.parseDouble(t1.getText());
            operator = "*";
            mul = mul * num1;
            t1.setText("");
        } else if (buttonLabel.equals("/")) {
            num1 = Double.parseDouble(t1.getText());
            operator = "/";
            div = div / num1;
            t1.setText("");
        } else if (buttonLabel.equals("=")) {
            num2 = Double.parseDouble(t1.getText());
            if (operator.equals("+")) {
                result = sum + num2;
            } else if (operator.equals("-")) {

```

```

        result = minus - num2;
    } else if (operator.equals("*")) {
        result = mul * num2;
    } else if (operator.equals("/")) {
        result = div / num2;
    }
    t1.setText("" + result);
}
}
}

```

Output:

