

Program – 19

Aim: Design an applet to do the following tasks:

- a) To output the question "WHO IS THE PRIME MINISTER OF INDIA?"
- b) To accept the answer and print "CORRECT" and then stop if the answer is correct.
- c) To print "TRY AGAIN" and if the answer is not correct.
- d) To display the correct answer, if the answer is wrong even after third attempt.

Code:

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

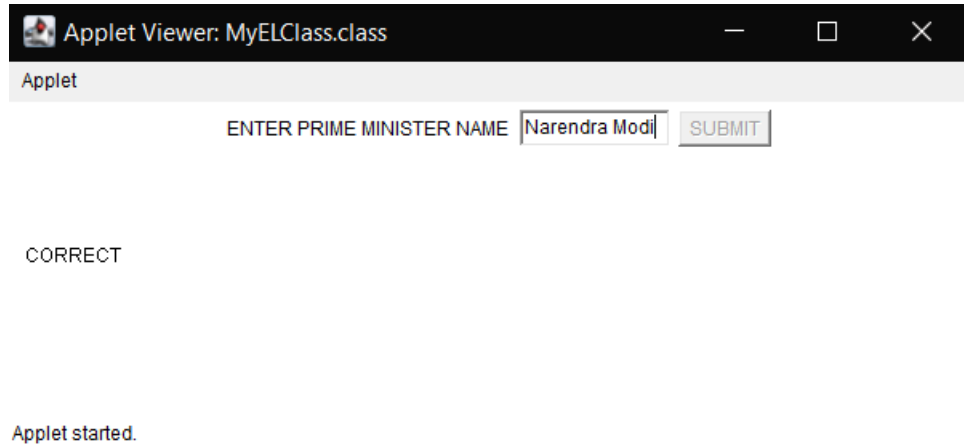
// <applet code=MyELClass width=600 height=600></applet>
public class MyELClass extends Applet implements ActionListener {
    String ans = "";
    Button sub;
    TextField tf1;
    int count = 0;

    public void init() {
        Label f = new Label("ENTER PRIME MINISTER NAME", Label.RIGHT);
        tf1 = new TextField(10);
        add(f);
        add(tf1);
        sub = new Button("SUBMIT");
        add(sub);
        sub.addActionListener(this);
    }

    public void actionPerformed(ActionEvent ae) {
        String name = tf1.getText();
        if (ae.getSource() == sub) {
            if (name.equals("Narendra Modi")) {
                ans = "CORRECT";
                sub.setEnabled(false);
            } else {
                ans = "INCORRECT";
                count++;
                if (count == 3) {
                    ans = "NAME OF PRIME MINISTER IS Sh. NARENDRA MODI";
                }
            }
        }
        repaint();
    }
}
```

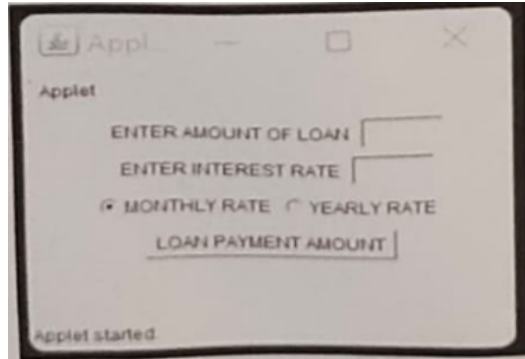
```
public void paint(Graphics g) {  
    g.drawString(ans, 10, 100);  
}  
}
```

Output:



Program – 20

Aim: Design a java program to write an applet that computes the payment of loan which is based on the amount of loan, interest rate and number of months. It takes one parameter from browser which is called Monthly Rate. If it is True then interest rate is per month else it is annual. (Use label, textfield, button, check box, checkbox group).



Code:

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

```
/* <applet code=MyELClass width=300 height=300></applet>
   <param name=N1 value=5>
*/
```

```
public class MyELClass extends Applet implements ItemListener, ActionListener {
    String s1;
    double loanAmount;
    double interestRate;
    double loanPayment;
    int n1; // Add declaration for n1
    TextField tf1, tf2;
    Button result;
    Checkbox cb1, cb2;
    CheckboxGroup cbg;
```

```
    public void init() {
        Label f = new Label("ENTER AMOUNT OF LOAN", Label.RIGHT);
        Label s = new Label("ENTER INTEREST RATE", Label.RIGHT);
        tf1 = new TextField(10);
        tf2 = new TextField(10);
        add(f);
        add(tf1);
        add(s);
        add(tf2);
```

```

cbg = new CheckboxGroup();
cb1 = new Checkbox("MONTHLY RATE", cbg, true);
cb2 = new Checkbox("YEARLY RATE", cbg, false);
result = new Button("CALCULATE LOAN PAYMENT AMOUNT");
add(cb1);
add(cb2);
add(result);
cb1.addItemListener(this);
cb2.addItemListener(this);
result.addActionListener(this);
s1 = getParameter("N1");
if (s1 != null) {
    n1 = Integer.parseInt(s1);
}
}

```

```

public void itemStateChanged(ItemEvent ie) {
    // No need for implementation here, as we're handling everything in actionPerformed
}

```

```

public void actionPerformed(ActionEvent ae) {
    if (ae.getSource() == result) {

        loanAmount = Double.parseDouble(tf1.getText());
        interestRate = Double.parseDouble(tf2.getText());

        if (interestRate == 0 ) {
            showStatus("Please enter valid interest rate and loan term." + loanAmount +
interestRate);
            return;
        }

        if (cb1.getState()) {
            interestRate /= 12/100;
        }
        else{
            interestRate /= 100;
        }

        loanPayment = loanAmount * interestRate * 1;

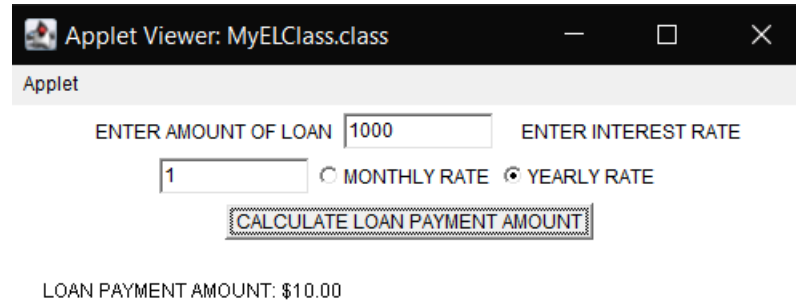
        repaint();

    }
}

```

```
public void paint(Graphics g) {  
    g.drawString("LOAN PAYMENT AMOUNT: $" + String.format("%.2f",  
loanPayment), 20, 120);  
}  
}
```

Output:



Applet Viewer: MyELClass.class

Applet

ENTER AMOUNT OF LOAN ENTER INTEREST RATE

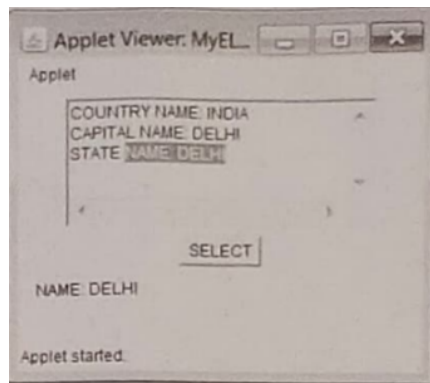
☐ MONTHLY RATE ☒ YEARLY RATE

LOAN PAYMENT AMOUNT: \$10.00

Applet started.

Program – 21

Aim: Design a java program to write an applet with following AWT components :textarea and button.



Code:

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

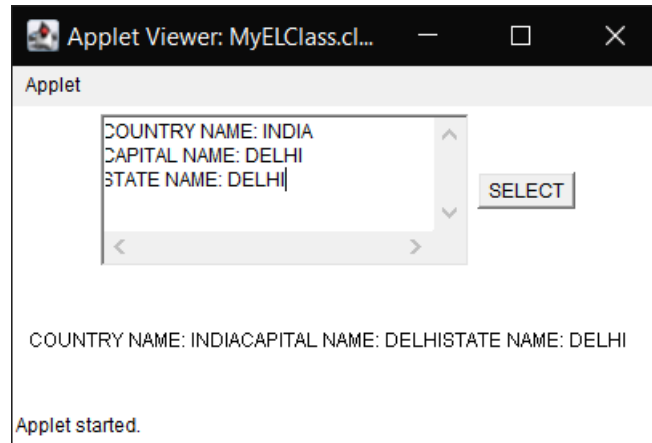
```
/* <applet code=MyELClass width=300 height=300></applet> */
public class MyELClass extends Applet implements ActionListener {
    String msg = "";
    String data = "";
    Button select;
    TextArea ta;

    public void init() {
        data = "COUNTRY NAME: INDIA\n" + "CAPITAL NAME: DELHI\n" +
            "STATE NAME: DELHI";
        ta = new TextArea(data, 5, 30);
        add(ta);
        select = new Button("SELECT");
        add(select);
        select.addActionListener(this);
    }

    public void actionPerformed(ActionEvent ae) {
        if (ae.getSource() == select) {
            msg = ta.getSelectedText();
        }
        repaint();
    }
}
```

```
public void paint(Graphics g) {  
    g.drawString(msg, 10, 150);  
}  
}
```

Output:



Program – 22

Aim: Design a java program to write a calculator applet. Use grid layout to arrange the buttons for digits for the +,-,*,/,% operations. Add text-field to display the result.

Code:

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

public class MyELClass extends Applet implements ActionListener {

    TextField result;
    Button buttons[];
    String operator = "";

    public void init() {
        result = new TextField(20);
        result.setEditable(false);
        add(result);

        buttons = new Button[19];
        int k = 0;
        for (int i = 0; i < 10; i++) {
            buttons[k] = new Button("" + i);
            buttons[k].addActionListener(this);
            add(buttons[k]);
            k++;
        }

        buttons[k] = new Button("0");
        buttons[k].addActionListener(this);
        add(buttons[k]);
        k++;

        buttons[k] = new Button(".");
        buttons[k].addActionListener(this);
        add(buttons[k]);
        k++;

        buttons[k] = new Button("+");
        buttons[k].addActionListener(this);
        add(buttons[k]);
        k++;

        buttons[k] = new Button("-");
        buttons[k].addActionListener(this);
        add(buttons[k]);
        k++;

        buttons[k] = new Button("*");
        buttons[k].addActionListener(this);
```



```

        add(buttons[k]);
        k++;

        buttons[k] = new Button("/");
        buttons[k].addActionListener(this);
        add(buttons[k]);
        k++;

        buttons[k] = new Button("%");
        buttons[k].addActionListener(this);
        add(buttons[k]);
        k++;

        buttons[k] = new Button("=");
        buttons[k].addActionListener(this);
        add(buttons[k]);
        k++;

        buttons[k] = new Button("C");
        buttons[k].addActionListener(this);
        add(buttons[k]);
        k++;

        setLayout(new GridLayout(5, 4));
    }

    public void actionPerformed(ActionEvent e) {
        String action = e.getActionCommand();
        if (Character.isDigit(action.charAt(0))) {
            result.setText(result.getText() + action);
        } else if (action.equals("+") || action.equals("-") || action.equals("*") || action.equals("/")
|| action.equals("%")) {
            operator = action;
            result.setText(result.getText() + action);
        } else if (action.equals("C")) {
            result.setText("");
            operator = "";
        } else if (action.equals(".")) {
            if (result.getText().indexOf(".") == -1) {
                result.setText(result.getText() + action);
            }
        } else if (action.equals("=")) {
            double number1 = Double.parseDouble(result.getText().substring(0,
result.getText().indexOf(operator)));
            double number2 =
Double.parseDouble(result.getText().substring(result.getText().indexOf(operator) + 1));

            double resultValue = 0;
            if (operator.equals("+")) {
                resultValue = number1 + number2;
            } else if (operator.equals("-")) {
                resultValue = number1 - number2;
            }
        }
    }

```

```

    } else if (operator.equals("*")) {
        resultValue = number1 * number2;
    } else if (operator.equals("/")) {
        resultValue = number1 / number2;
    } else if (operator.equals("%")) {
        resultValue = number1 % number2;
    }

    result.setText(Double.toString(resultValue));
}
}
}

```

Output:

