

(Practical 1)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 1:

// Design an application to demonstrate the Radio Button and Check box.

import java.awt.\*;

class PracticalNo\_1Q1 extends Frame{

public PracticalNo\_1Q1(){

Frame myFrame = new Frame("Radion Button & Checkbox");

myFrame.setLayout(new FlowLayout());

myFrame.setTitle("Radio & Checkbox Button");

myFrame.setSize(500, 500);

myFrame.setVisible(true);

myFrame.setResizable(true);

Label infoOfProgrammer = new Label("// Programmer: Harsh Kale");

Font myFont = new Font("Lucida Console", Font.BOLD, 17);

Font myNewFont = new Font("Arial", Font.BOLD, 17);

Label myLable = new Label("This is a program Demonstrating the Radion button and Check box!");

myLable.setFont(myFont);

Checkbox myCheckboxOne = new Checkbox("Python", true);

myCheckboxOne.setFont(myNewFont);

Checkbox myCheckboxTwo = new Checkbox("JavaScript", true);

myCheckboxTwo.setFont(myNewFont);

CheckboxGroup myCheckboxGroup = new CheckboxGroup();

Checkbox radioBtnOne = new Checkbox("Genuis Programmer", true, myCheckboxGroup);

radioBtnOne.setFont(myNewFont);

Checkbox radioBtnTwo = new Checkbox("Hello world Programmer", true, myCheckboxGroup);

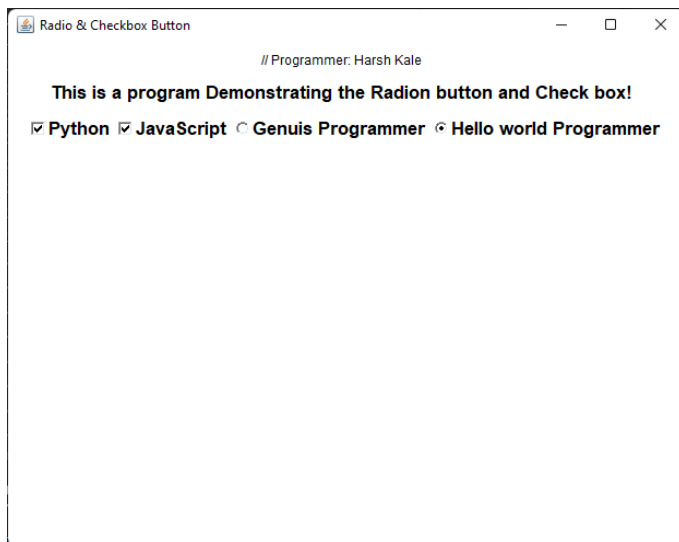
radioBtnTwo.setFont(myNewFont); Component[] myObjects = {infoOfProgrammer, myLable,  
myCheckboxOne, myCheckboxTwo, radioBtnOne, radioBtnTwo};

for(int i = 0; i < myObjects.length; i++){

```
        myFrame.add(myObjects[i]);
    }
}

public static void main(String[] args) {
    new PracticalNo_1Q1();
}
}
```

Output:



(Practical 1)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 2:

// Design an application to create a form with the use of text field, text area, button and label.

import java.awt.\*;

public class PracticalNo\_1Q2 extends Frame {

    public PracticalNo\_1Q2(){

        setLayout(new FlowLayout());

        setTitle("Application of Text Field, Text Area, Button and Label!");

        setSize(700, 700);

        setVisible(true);

        Font ff1 = new Font("Times New Roman", Font.BOLD, 12);

        Font ff2 = new Font("Arial", Font.ITALIC, 17);

        Label label1 = new Label("Application of Textfield, Textarea, Button and Label! By Developer Harsh Kale");

        label1.setFont(ff1);

        label1.setBounds(15, 40, 450, 30);

        Label label2 = new Label("Form", Label.CENTER);

        label2.setFont(ff2);

        label2.setBounds(210, 90, 80, 20);

        Label ln = new Label("Enter Your Name: ", Label.LEFT);

        TextField tfn = new TextField();

        ln.setBounds(30, 140, 110, 20);

        tfn.setBounds(180, 140, 250, 20);

        Label rollno = new Label("Enter Your Roll No.: ", Label.LEFT);

        TextField tfrn = new TextField();

        rollno.setBounds(30, 180, 150, 20);

        tfrn.setBounds(180, 180, 250, 20);

        Label addrs = new Label("Enter Your Address: ", Label.LEFT);

```

        TextArea taddress = new TextArea();
        addrs.setBounds(30, 220, 170, 20);
        taddress.setBounds(180, 250, 250, 125);
        Button submit = new Button("Submit!");
        Button reset = new Button("Reset!!");
        submit.setBounds(200, 425, 100, 30);
        reset.setBounds(200, 455, 100, 30);
        add(label1);
        add(label2);
        add(ln);
        add(rollno);
        add(tfn);
        add(tfrn);
        add(addrs);
        add(taddress);
        add(submit);
        add(reset);
    }

    public static void main(String[] args) {
        System.out.println("Hello, world Programmer! Harsh Moreshwar Kale");
        new PracticalNo_1Q2();
    }
}

```

Output:

The screenshot shows a Java Swing window titled "Application of Text Field, Text Area, Button and Label". Inside the window, there is a form titled "Form". The form contains three labels: "Enter Your Name:", "Enter Your Roll No:", and "Enter Your Address:". Each label is followed by an input field. The "Enter Your Address:" label is followed by a text area. At the bottom of the form, there are two buttons: "Submit!" and "Reset!".

(Practical 1)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 3:

// Develop a program using Label to display the message "Welcome to Java Programming".

import java.awt.\*;

public class PracticalNo\_1Q3 extends Frame {

    public PracticalNo\_1Q3(){

        setTitle("Displaying the \"Welcome to Java Programming\" message on the frame!");

        setSize(700, 700);

        setVisible(true);

        Font ff = new Font("Arial", Font.ITALIC, 20);

        Label l = new Label("Welcome to Java Programming", Label.LEFT);

        l.setFont(ff);

        add(l);

    }

    public static void main(String[] args) {

        System.out.println("Developer Harsh Moreshwar Kale!");

        new PracticalNo\_1Q3();

    }

}

Output:



(Practical 1)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 4:

// Develop a Program to Select Multiple Languages known to User.

import java.awt.\*;

public class PracticalNo\_1Q4 extends Frame{

    public PracticalNo\_1Q4(){

        setLayout(new FlowLayout());

        setTitle("Advance Java Program!");

        setSize(700, 700);    setVisible(true);

        Label l = new Label("Select from the following! which language you used in your daily life!");

        Checkbox cmr = new Checkbox("Marathi (मराठी)");

        Checkbox chi = new Checkbox("Hindi");

        Checkbox csk = new Checkbox("Sanskrit");

        Checkbox cpy = new Checkbox("Python");

        Checkbox cc = new Checkbox("C");

        add(l);    add(cmr);    add(chi);    add(csk);    add(cpy);    add(cc);

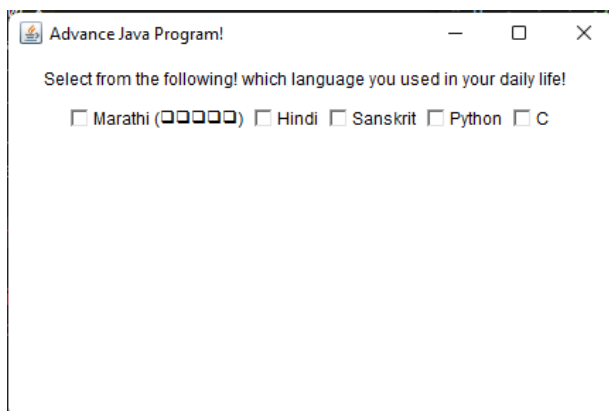
    }

    public static void main(String[] args) {

        System.out.println("Developer Harsh Moreshwar Kale");

        new PracticalNo\_1Q4();    }}

Output:



(Practical 1)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 5:

// Develop a Program to Create 3 buttons with caption ok, reset, cancel.

import java.awt.\*;

public class PracticalNo\_1Q5 extends Frame{

    public PracticalNo\_1Q5(){

        setLayout(new FlowLayout());

        setTitle("Advance Java Programming By Harsh Kale!");

        setSize(700, 700);

        setVisible(true);

        Label l = new Label("Developer Harsh Moreshwar Kale, Click through the following buttons!");

        Button ok = new Button("OK");

        Button reset = new Button("RESET");

        Button cancel = new Button("CANCEL");

        add(l);    add(ok);    add(reset);    add(cancel);

    }

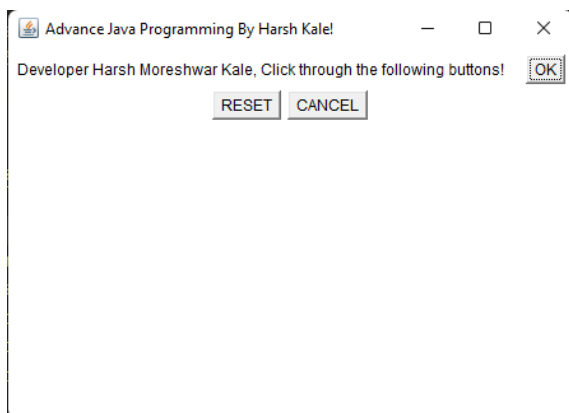
    public static void main(String[] args) {

        System.out.println("Developer Harsh Moreshwar Kale!");

        new PracticalNo\_1Q5();

    }}

Output:



(Practical 2)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 1:

// Write a java program to show following output in list!

import java.awt.\*;

public class PracticalNo\_2Q1 extends Frame {

    public PracticalNo\_2Q1(){

        setLayout(new FlowLayout());

        setTitle("Demo of List in Advance Java Programming!");

        setSize(700, 700);

        setVisible(true);

        Label l = new Label("Here is the program of list in advance java programming by Harsh Kale!");

        List list = new List(3, false);

        list.add("Summer");

        list.add("Winter");

        list.add("Rainy");    add(l);    add(list);

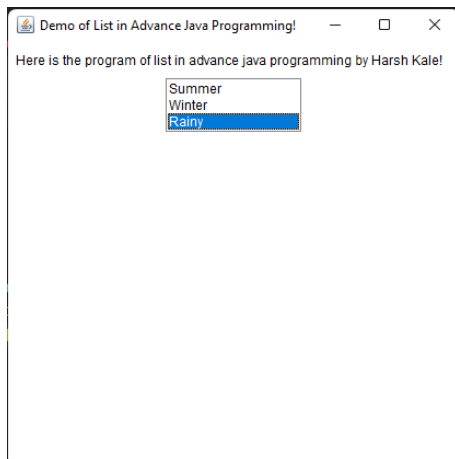
    }

    public static void main(String[] args) {

        System.out.println("Developer Harsh Moreshwar Kale!");

        new PracticalNo\_2Q1();    }}

Output:





(Practical 2)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 2:

// Develop an application using list components to add names of 10 different cities.abstract

import java.awt.\*;

public class PracticalNo\_2Q2 extends Frame {

    public PracticalNo\_2Q2(){

        setLayout(new FlowLayout());

        setTitle("List Components In Advance Java Programming");

        setSize(700, 700);

        setVisible(true);

        Label l = new Label("This Program is created by Harsh Kale!");

        List list = new List(4, false);

        list.add("Latur");    list.add("Barshi");    list.add("Solapur");    list.add("Nanded");

        add(l);

        add(list);

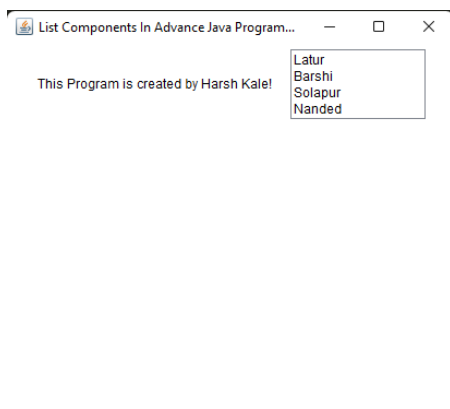
    }

    public static void main(String[] args) {

        System.out.println("Developer Harsh Moreshwar Kale");

        new PracticalNo\_2Q2();    }    }

Output:



(Practical 2)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 3:

// Develop an application select multiple names of news paper.

import java.awt.\*;

public class PracticalNo\_2Q3 extends Frame {

public PracticalNo\_2Q3(){

setLayout(new FlowLayout());

setTitle("Program of List Components in Advance Java Programming!");

setSize(700, 700);

setVisible(true);

Label l = new Label("This is a program of compoenents to select the names of news papers by Harsh Kale!");

List list = new List(4, true);

list.add("Lokmat");

list.add("The New Indian Times");

list.add("The Hindu"); list.add("Dyandeep"); list.add("Maradhi Paper"); add(l);  
add(list);

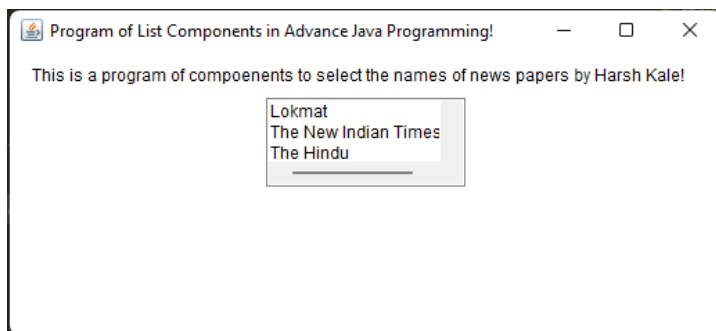
}

public static void main(String[] args) {

System.out.println("Developer Harsh Moreshwar Kale");

new PracticalNo\_2Q3(); }}

Output:



(Practical 3)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 1:

// Write a java program to demonstrate the use of grid layout of 5 \* 5

import java.awt.\*;

public class PracticalNo\_3Q1 extends Frame {

PracticalNo\_3Q1(){

setLayout(new GridLayout(5, 5));

setTitle("Program of Grid Layout In Advance Java Programin by Harsh kale");

setSize(700, 700);

setVisible(true);

for(int i = 1; i <= 20; i++){

add(new Label("Cell " + i));

}

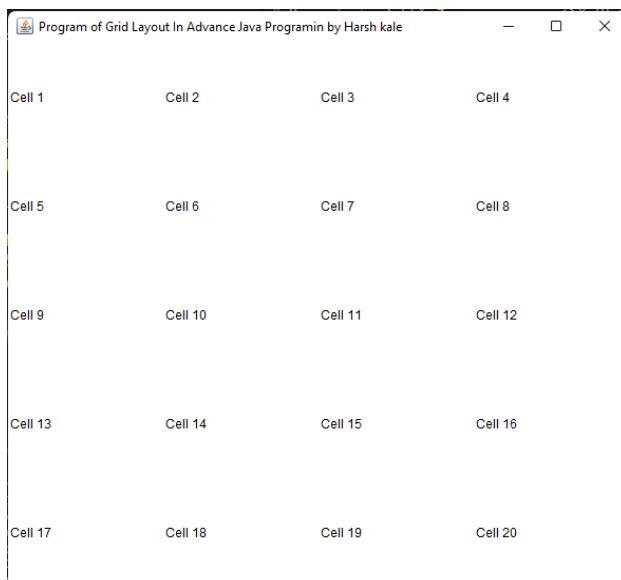
}

public static void main(String[] args) {

System.out.println("Developer Harsh Moreshwar Kale");

new PracticalNo\_3Q1(); }}

Output:



(Practical 3)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 2:

// Write a java program to display the No. of buttons from 0 to 9.

import java.awt.\*;

public class PracticalNo\_3Q2 extends Frame{

PracticalNo\_3Q2(){

setLayout(new GridLayout(3, 3));

setTitle("Program of Grid layout in Advance Java Programing by Harsh Kale!");

setSize(700, 700); setVisible(true);

for(int i = 0; i <= 9; i++){

add(new Button("Harsh " + i));

}

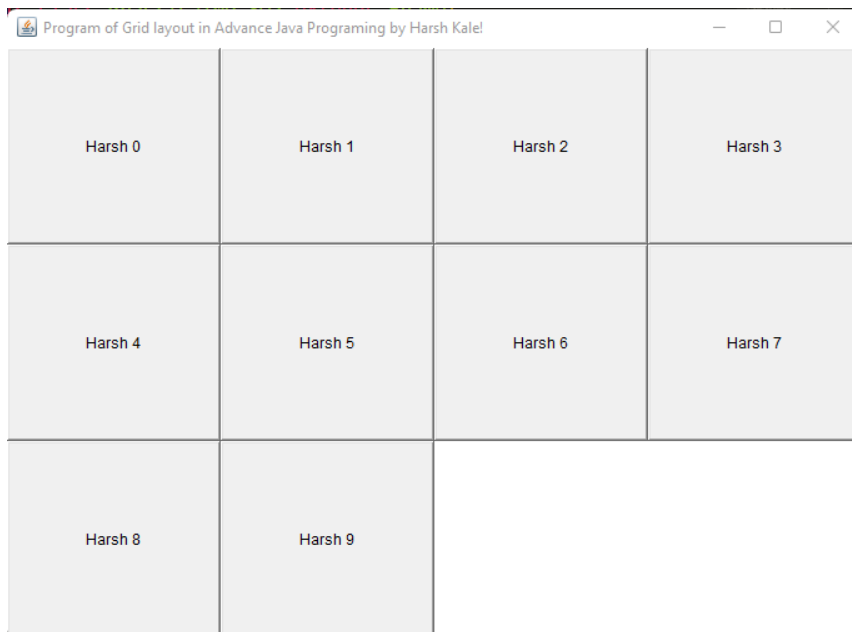
}

public static void main(String[] args) {

System.out.println("Developer Harsh Moreshwar Kale!");

new PracticalNo\_3Q2(); }}

Output:



(Practical 3)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 3:

// Write a java program to display the No. of buttons from 0 to 0.

import java.awt.\*;

public class PracticalNo\_3Q3 extends Frame{

PracticalNo\_3Q3(){

setLayout(new GridLayout(3, 2, 20, 20));

setTitle("Program of Grid Layout in Advance Java Programing by Harsh Kale!");

setSize(700, 700);

setVisible(true);

for(int i = 0; i <= 7; i++){

Button btn = new Button("Harsh " + i);      add(btn);

}

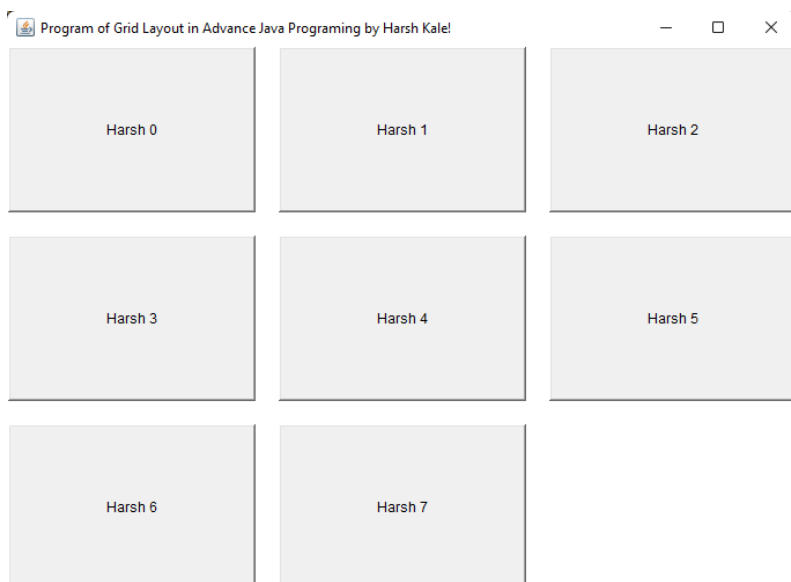
}

public static void main(String[] args) {

System.out.println("Developer Harsh Moreshwar Kale!");

new PracticalNo\_3Q3(); } }

Output:



(Practical 3)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 4: // Write a java program to display the use of border layout.!

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

```
public class PracticalNo_3Q4 extends Frame{
```

```
    PracticalNo_3Q4(){
```

```
        setTitle("Program of border layout in advance java programming");
```

```
        setSize(700, 700);    setVisible(true);
```

```
        setLayout(new BorderLayout(10, 10));
```

```
        Button northButton = new Button("North");    add(northButton, BorderLayout.NORTH);
```

```
        Button southButton = new Button("South");    add(southButton, BorderLayout.SOUTH);
```

```
        Button eastButton = new Button("East");    add(eastButton, BorderLayout.EAST);
```

```
        Button wesButton = new Button("West");    add(wesButton, BorderLayout.WEST);
```

```
        Button centerButton = new Button("Center");    add(centerButton, BorderLayout.CENTER);
```

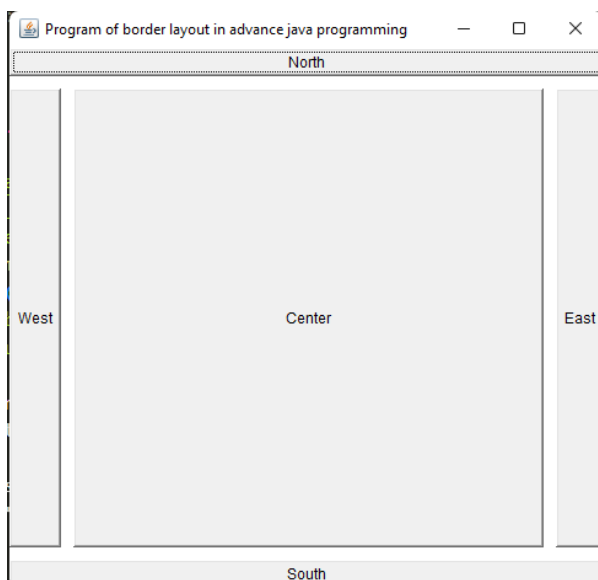
```
    }
```

```
    public static void main(String[] args) {
```

```
        System.out.println("Developer Harsh Moreshwar Kale!");
```

```
        new PracticalNo_3Q4();    }}
```

Output:



(Practical 4)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 1:

// Write the Output of the following program!

```
import java.awt.*; import java.awt.event.*; import javax.swing.*;

public class PracticalNo_4Q1 extends JFrame implements ActionListener{

    CardLayout card; JButton btn1, btn2, btn3; Container c;

    PracticalNo_4Q1(){

        c = getContentPane(); card = new CardLayout(40, 30); c.setLayout(card);

        btn1 = new JButton("ReactJS"); btn2 = new JButton("NodeJS");

        btn3 = new JButton("VueJS"); btn1.addActionListener(this);

        btn2.addActionListener(this); btn3.addActionListener(this);

        c.add("A", btn1); c.add("B", btn2); c.add("C", btn3);

    }

    public void actionPerformed(ActionEvent e){ card.next(c); }

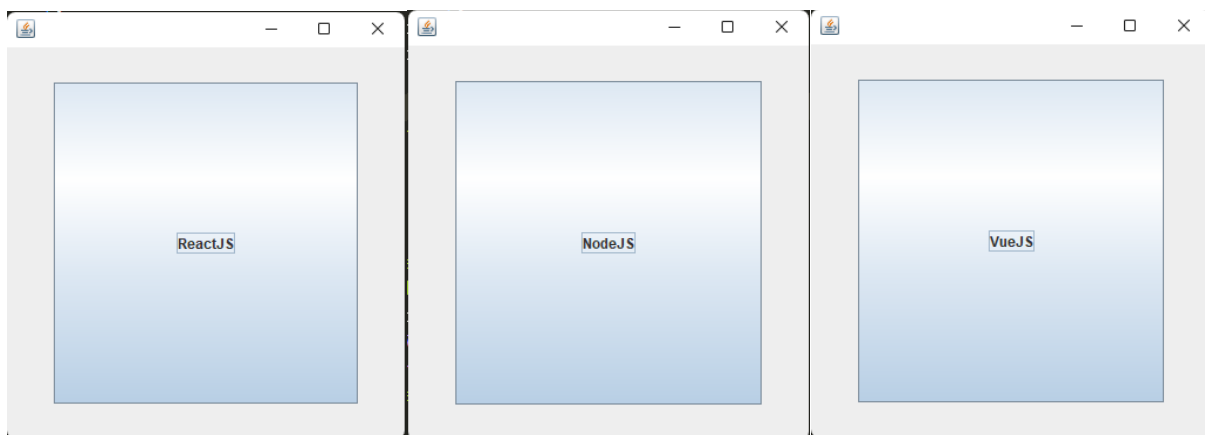
    public static void main(String[] args) {

        System.out.println("Developer Harsh Moreshwar Kale!");

        PracticalNo_4Q1 p = new PracticalNo_4Q1();

        p.setSize(700, 700); p.setVisible(true); p.setDefaultCloseOperation(EXIT_ON_CLOSE); }}
```

Output:



(Practical 4)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 2:

// Write a java program to display the output of the following code.

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

```
import javax.swing.*;
```

```
public class PracticalNo_4Q2 extends JFrame {
```

```
    PracticalNo_4Q2() {
```

```
        Label l = new Label("GridBagLayout Program by Harsh Kale!");
```

```
        add(l);
```

```
        GridBagLayout grid = new GridBagLayout();    GridBagConstraints gbc = new GridBagConstraints();
```

```
        setLayout(grid);
```

```
        setTitle("GridBag Layout Program By Harsh Kale");
```

```
        GridBagLayout layout = new GridBagLayout();
```

```
        this.setLayout(layout);
```

```
        gbc.fill = GridBagConstraints.HORIZONTAL;
```

```
        gbc.gridx = 0;
```

```
        gbc.gridy = 0;
```

```
        this.add(new Button("Button One"), gbc);
```

```
        gbc.gridx = 1;
```

```
        gbc.gridy = 0;
```

```
        this.add(new Button("Button two"), gbc);
```

```
        gbc.fill = GridBagConstraints.HORIZONTAL;
```

```
        gbc.ipady = 20;
```

```
        gbc.gridx = 0;
```

```
        gbc.gridy = 1;
```

```
        this.add(new Button("Button Three"), gbc);
```

```
        gbc.gridx = 1;
```

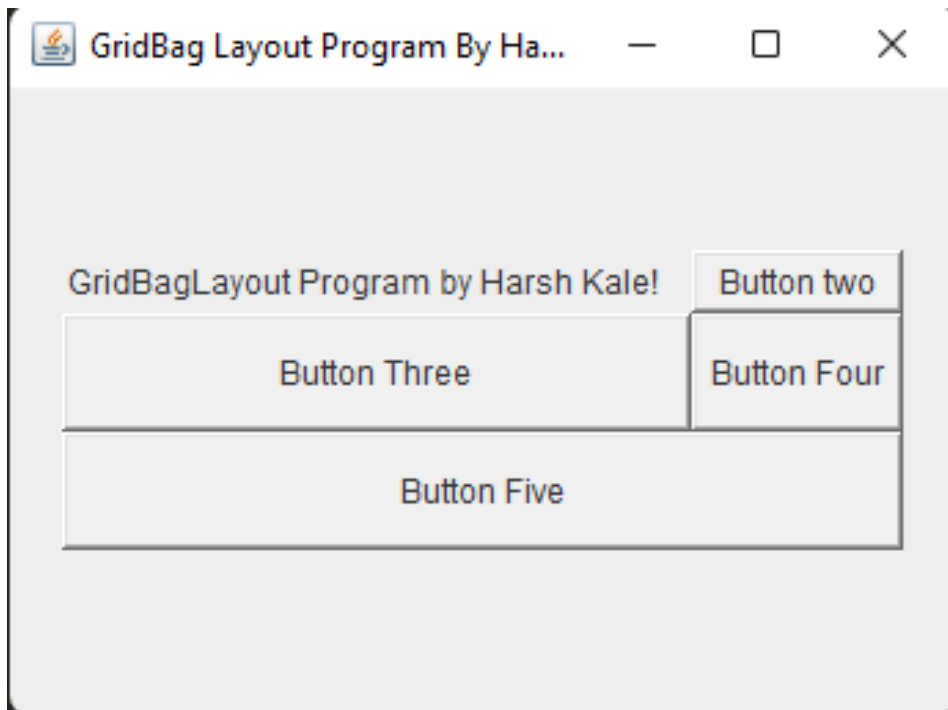
```
        gbc.gridy = 1;
```



```
this.add(new Button("Button Four"), gbc);  
gbc.gridx = 0;  
gbc.gridy = 2;  
gbc.fill = GridBagConstraints.HORIZONTAL;  
gbc.gridwidth = 2;  
this.add(new Button("Button Five"), gbc);  
setSize(700, 700);  
setPreferredSize(getSize());  
setVisible(true);  
setDefaultCloseOperation(EXIT_ON_CLOSE);  
}
```

```
public static void main(String[] args) {  
    System.out.println("Developer Harsh MOreshwar Kale!");  
    new PracticalNo_4Q2();  
}
```

Output:



(Practical 4)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 3:

// Write a java program to display following output of GridBagLayout.

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

```
import javax.swing.*;
```

```
public class PracticalNo_4Q3 extends JFrame {
```

```
    PracticalNo_4Q3(){
```

```
        setSize(700, 700);
```

```
        setPreferredSize(getSize());
```

```
        setVisible(true);
```

```
        setDefaultCloseOperation(EXIT_ON_CLOSE);
```

```
        GridBagLayout grid = new GridBagLayout();
```

```
        GridBagConstraints gbc = new GridBagConstraints();
```

```
        setLayout(grid);
```

```
        setTitle("GridBag Layout Example By Harsh Kale");
```

```
        gbc.fill = GridBagConstraints.HORIZONTAL;
```

```
        gbc.gridx = 0;    gbc.gridy = 0;    this.add(new Label("Name: "), gbc);
```

```
        gbc.gridx = 1;
```

```
        gbc.gridy = 0;
```

```
        this.add(new TextField("Harsh", 1), gbc);
```

```
        gbc.fill = GridBagConstraints.HORIZONTAL;
```

```
        gbc.gridx = 0;
```

```
        gbc.gridy = 1;
```

```
        gbc.weightx=0;
```

```
        gbc.weighty=0;
```

```
        this.add(new Label("Message"), gbc);
```

```
        gbc.gridx = 1; gbc.gridy = 1;
```

```
        this.add(new TextArea(3, 5), gbc);    gbc.gridx = 0;    gbc.gridy = 2;
```

```
gbc.fill = GridBagConstraints.HORIZONTAL;

gbc.gridwidth = 2;

gbc.gridheight=1;

gbc.insets= new Insets (30, 0, 10, 0); this.add(new JButton("Submit"), gbc);
}

public static void main(String[] args) {

    System.out.println("Developer Harsh Moreshwar Kale!");

    new PracticalNo_4Q3();

}

}
```

Output:



(Practical 5)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 1:

// Write a java program to create menu of different colors and disable menu item for Black Color.

import java.awt.\*;

public class PracticalNo\_5Q1 extends Frame{

    MenuBar mb;    Menu colorNameMenu;

    MenuItem redItem, orangeItem, blueItem, blackItem;

    PracticalNo\_5Q1(){

        setTitle("Advane Java Menu Program By Harsh Kale");

        setSize(700, 700);    mb = new MenuBar();

        colorNameMenu = new Menu("Colors");

        redItem = new MenuItem("Red");

        orangeItem = new MenuItem("Orange");

        blueItem = new MenuItem("Blue");

        blackItem = new MenuItem("Black");

        blackItem.setEnabled(false);    colorNameMenu.add(redItem);

        colorNameMenu.add(orangeItem);    colorNameMenu.add(blueItem);

        colorNameMenu.add(blackItem);    mb.add(colorNameMenu);

        setMenuBar(mb);    setVisible(true);

    }

    public static void main(String[] args) { System.out.println("Developer Harsh Moreshwar Kale");  
    new PracticalNo\_5Q1(); } }

Output:



(Practical 5)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

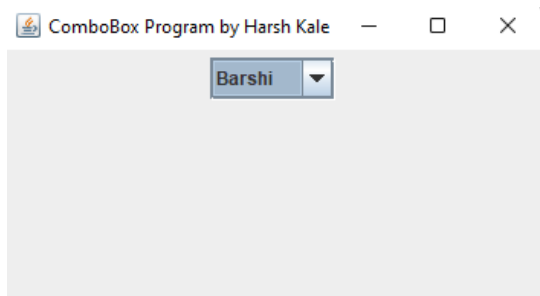
// Question 2:

// Find an error and correct it also display the output after corrections.

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

public class PracticalNo_5Q2 extends Frame{
    MenuBar mb;  MenuItem m1, m2, m3;  Menu mn;
    MenuShortcut ms;
    PracticalNo_5Q2(){
        setTitle("Menubar Program By Harsh Kale!");
        setSize(700, 700);    setLayout(null);
        ms = new MenuShortcut(KeyEvent.VK_X);
        mn = new Menu("File");    mb = new MenuBar();
        m1 = new MenuItem("Open with VS Code");
        m2 = new MenuItem("Auto Save");
        m3 = new MenuItem("Harsh Kale");
        mn.add(m1);    mn.add(m2);    mn.addSeparator();    mn.add(m3);
        mb.add(mn);    setMenuBar(mb);    setVisible(true);
    }
    public static void main(String[] args) {
        System.out.println("Developer Harsh Moreshwar Kale");
        new PracticalNo_5Q2();    }}
```

Output:



(Practical 6)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 1:

// Write a Program for Following output!

```
import java.awt.FlowLayout; import javax.swing.*.*;

public class PracticalNo_6Q1 extends JFrame {

    PracticalNo_6Q1(){

        super("ComboBox Program by Harsh Kale");    setSize(700, 700);

        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        String cities[] = {"Solapur", "Barshi", "Latur", "Banglore"};

        JComboBox<String> comboBox = new JComboBox<>(cities);

        JScrollPane scrollPane = new JScrollPane(comboBox);

        add(scrollPane);    setVisible(true);

        setLayout(new FlowLayout());

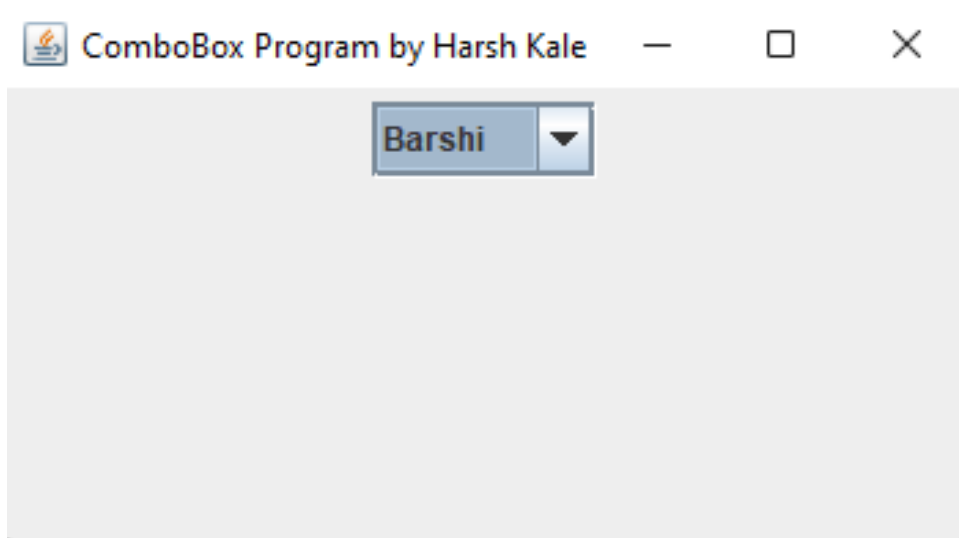
    }

    public static void main(String[] args) {

        System.out.println("Developer Harsh Kale");

        new PracticalNo_6Q1();    }}
```

Output:



(Practical 6)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 2:

// Program using JComboBox to select different states of India or programming languages.

```
import java.awt.*; import javax.swing.JComboBox; import javax.swing.JFrame;
```

```
import javax.swing.JScrollPane;
```

```
public class PracticalNo_6Q2 extends JFrame{
```

```
    PracticalNo_6Q2(){
```

```
        super("ComboBox Program by Harsh Kale");    setSize(700, 700);
```

```
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
        String cities[] = {"C", "C++", "C#", "Java", "Python", "R"};
```

```
        JComboBox<String> comboBox = new JComboBox<>(cities);
```

```
        JScrollPane scrollPane = new JScrollPane(comboBox);
```

```
        add(scrollPane);    setVisible(true);    setLayout(new FlowLayout());
```

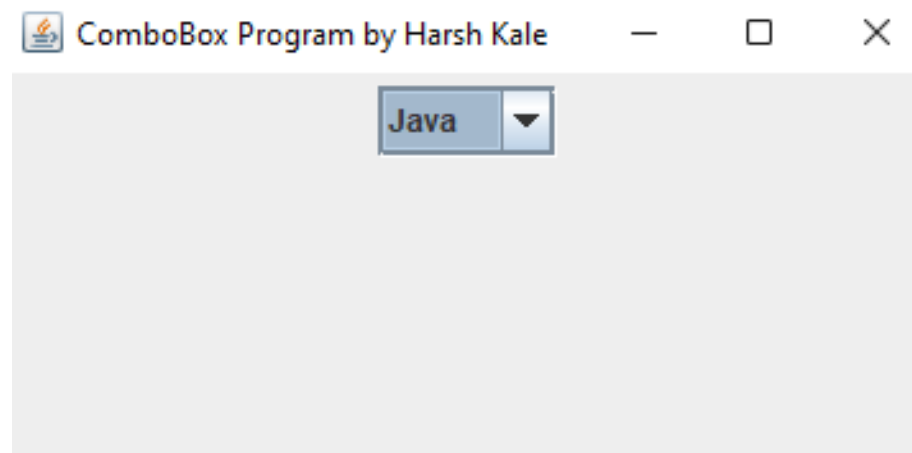
```
    }
```

```
    public static void main(String[] args) {
```

```
        System.out.println("Developer Harsh Kale");
```

```
        new PracticalNo_6Q2();    }}
```

Output:



(Practical 6)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 3:

// Program using JScrollPane in Advance Java Programming.

```
import javax.swing.*; import java.awt.*;
```

```
public class PracticalNo_6Q3 extends JFrame {
```

```
    PracticalNo_6Q3(){
```

```
        super("ScrollPane Program in Advance Java Programming By Harsh Kale!");
```

```
        setLayout(new BorderLayout());    setSize(400, 400);
```

```
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
        JTextArea t = new JTextArea();
```

```
        for(int i = 0; i < 100; i++){    t.append("Hello, world programmer Harsh Kale \n");    }
```

```
        JScrollPane scrollPane = new JScrollPane(t);
```

```
        add(scrollPane, BorderLayout.CENTER);    setVisible(true);
```

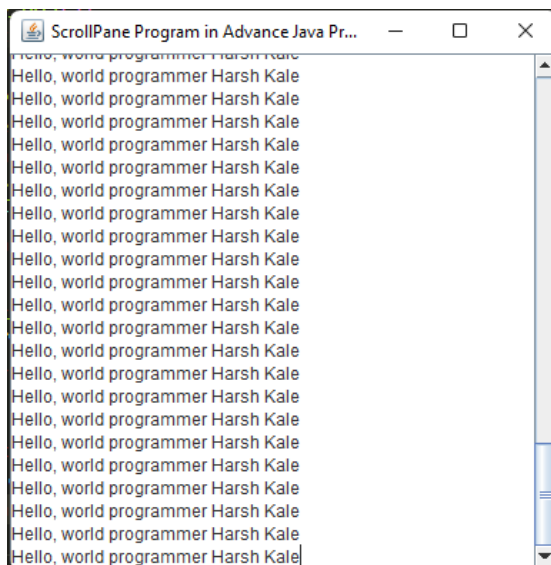
```
    }
```

```
    public static void main(String[] args) {
```

```
        System.out.println("Developer Harsh Kale");    new PracticalNo_6Q3();
```

```
    }}
```

Output:





(Practical 7)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 1:

// Write a Program for JTree Component!

```
import javax.swing.*; import javax.swing.tree.*;
```

```
public class PracticalNo_7Q1 extends JFrame{
```

```
    PracticalNo_7Q1(){
```

```
        setTitle("JTree Program By Harsh Kale!");    setVisible(true);
```

```
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
        DefaultMutableTreeNode root = new DefaultMutableTreeNode("root");
```

```
        DefaultMutableTreeNode n1 = new DefaultMutableTreeNode("Node first");
```

```
        DefaultMutableTreeNode n2 = new DefaultMutableTreeNode("Node second");
```

```
        DefaultMutableTreeNode n3 = new DefaultMutableTreeNode("Node third");
```

```
        DefaultMutableTreeNode n4 = new DefaultMutableTreeNode("Node fourth");
```

```
        n1.add(n3);    n1.add(n4);
```

```
        root.add(n1);    root.add(n2);
```

```
        JTree tree = new JTree(root);    JScrollPane scrollPane = new JScrollPane(tree);
```

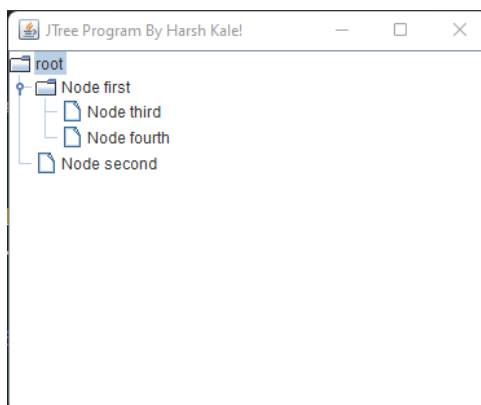
```
        getContentPane().add(scrollPane);    pack();    setSize(700, 700);
```

```
    }
```

```
    public static void main(String[] args) {
```

```
        System.out.println("Developer Harsh Moreshwar Kale");    new PracticalNo_7Q1();    }}
```

Output:



(Practical 7)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 1: Write a Program for Following output.

```
import javax.swing.*; import javax.swing.tree.*;

public class PracticalNo_7Q2 extends JFrame {

    PracticalNo_7Q2() {    setTitle("JTree Program By Harsh Kale");    setVisible(true);

        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        DefaultMutableTreeNode rootNode = new DefaultMutableTreeNode("India");
        DefaultMutableTreeNode node1 = new DefaultMutableTreeNode("Maharashtra");
        DefaultMutableTreeNode node2 = new DefaultMutableTreeNode("Gujrat");
        DefaultMutableTreeNode node11 = new DefaultMutableTreeNode("Mumbai");
        DefaultMutableTreeNode node12 = new DefaultMutableTreeNode("Pune");
        DefaultMutableTreeNode node13 = new DefaultMutableTreeNode("Nashik");
        DefaultMutableTreeNode node14 = new DefaultMutableTreeNode("Nagpur");
        DefaultMutableTreeNode node15 = new DefaultMutableTreeNode("Latur");

        node1.add(node11);    node1.add(node12);    node1.add(node13);    node1.add(node14);
        node1.add(node15);    rootNode.add(node1);    rootNode.add(node2);

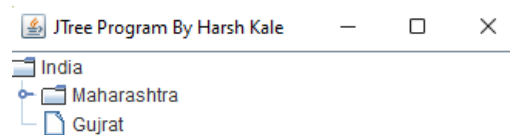
        JTree tree = new JTree(rootNode);    JScrollPane scrollPane = new JScrollPane(tree);

        getContentPane().add(scrollPane);    pack();

    }

    public static void main(String[] args) { System.out.println("Developer Harsh Kale!"); new
    PracticalNo_7Q2(); }}
```

Output:



(Practical 7)

// Programmer: Harsh Moreshwar Kale Created Date: 13/09/2023

// Question 3: Program to show root directory and its sub folder of your system.

```
import java.awt.*; import java.io.*; import javax.swing.*; import javax.swing.tree.*;
```

```
public class PracticalNo_7Q3 {
```

```
    public static void main(String[] args) {
```

```
        SwingUtilities.invokeLater(() -> {
```

```
            JFrame frame = new JFrame("JTree Program");
```

```
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
            File rootDir = new File("D:/");
```

```
            DefaultMutableTreeNode root = new DefaultMutableTreeNode(rootDir);
```

```
            DefaultTreeModel treeModel = new DefaultTreeModel(root);        addSubfolders(root, rootDir);
```

```
            JTree tree = new JTree(treeModel);
```

```
            tree.setPreferredSize(new Dimension(300, 200));
```

```
            frame.add(tree, BorderLayout.CENTER);
```

```
            frame.pack(); // Use pack() to set the frame size based on its contents
```

```
            frame.setVisible(true);
```

```
        }); }
```

```
private static void addSubfolders(DefaultMutableTreeNode parent, File dir) {
```

```
    File[] subDirs = dir.listFiles();
```

```
    if (subDirs != null) {
```

```
        for (File subDir : subDirs) {
```

```
            if (subDir.isDirectory()) {
```

```
                DefaultMutableTreeNode child = new DefaultMutableTreeNode(subDir);
```

```
                parent.add(child);
```

```
                addSubfolders(child, subDir);
```

```
            }    }    } }}
```

(Practical 8)

// Programmer: Harsh Moreshwar Kale Created Date: 13/09/2023

// Question 1: Develop a program to demonstrate the use of JTable.

```
import javax.swing.*; import javax.swing.table.DefaultTableModel; import java.awt.*;

public class PracticalNo_8Q1 {

    public static void main(String[] args) {

        SwingUtilities.invokeLater(() -> {

            JFrame frame = new JFrame("JTable Program By Harsh Kale");

            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

            String[] columnNames = {"Name", "Age", "Country"};

            Object[][] data = {

                {"Harsh", 70, "Latur"},

                {"Sanket", 25, "Sambhaji-Nagar"},

                {"Wadkar", 35, "Moti Nagar"},

                {"Omkar", 28, "Chincholi"},

                {"Kale", 40, "Barshi"}

            };

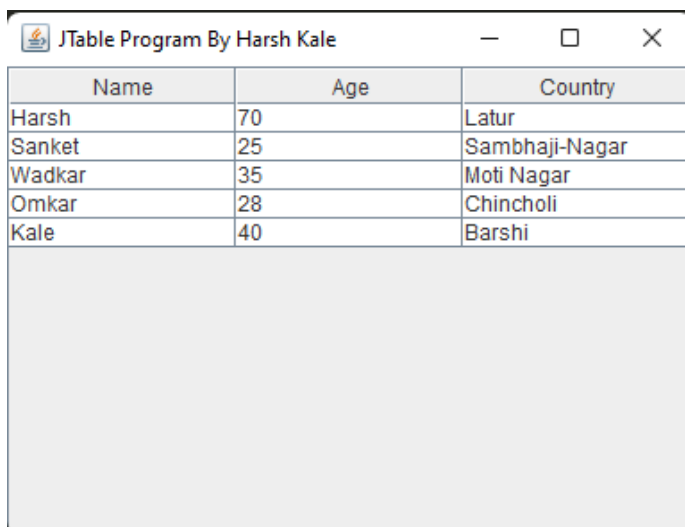
            DefaultTableModel model = new DefaultTableModel(data, columnNames);

            JTable table = new JTable(model);        JScrollPane scrollPane = new JScrollPane(table);

            frame.add(scrollPane, BorderLayout.CENTER);

            frame.pack();        frame.setSize(400, 300);        frame.setVisible(true);    });    }}
```

Output:



Name	Age	Country
Harsh	70	Latur
Sanket	25	Sambhaji-Nagar
Wadkar	35	Moti Nagar
Omkar	28	Chincholi
Kale	40	Barshi

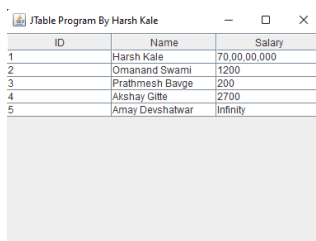
(Practical 8)

// Programmer: Harsh Moreshwar Kale Created Date: 13/09/2023

// Question 2: Program to show root directory and its sub folder of your system.

```
import javax.swing.JFrame; import javax.swing.JScrollPane;
import javax.swing.JTable; import javax.swing.SwingUtilities;
import javax.swing.table.DefaultTableModel; import java.awt.*;
public class PracticalNo_8Q2 { public static void main(String[] args) {
    System.out.println("Developer Harsh Moreshwar Kale");
    SwingUtilities.invokeLater(() -> {
        JFrame frame = new JFrame("JTable Program By Harsh Kale");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        // Create sample data for the table
        String[] columnNames = {"ID", "Name", "Salary"};
        Object[][] data = {
            {1, "Harsh Kale", "70,00,00,000"},
            {2, "Omanand Swami", "1200"},
            {3, "Prathmesh Bavge", "200"},
            {4, "Akshay Gitte", "2700"},
            {5, "Amay Devshatwar", "Infinity"}
        };
        // Create a DefaultTableModel
        DefaultTableModel model = new DefaultTableModel(data, columnNames);
        JTable table = new JTable(model);
        JScrollPane scrollPane = new JScrollPane(table);
        frame.add(scrollPane, BorderLayout.CENTER);
        frame.pack();
        frame.setSize(400, 300);
        frame.setVisible(true);
    });
}
```

Output:



ID	Name	Salary
1	Harsh Kale	70,00,00,000
2	Omanand Swami	1200
3	Prathmesh Bavge	200
4	Akshay Gitte	2700
5	Amay Devshatwar	Infinity

(Practical 8)

// Programmer: Harsh Moreshwar Kale Created Date: 13/09/2023

// Question 3: Program to show table view of 10 students. (Name, Percentage, Grade).

```
import javax.swing.*; import javax.swing.table.DefaultTableModel; import java.awt.*;

public class PracticalNo_8Q3 {

    public static void main(String[] args) {

        SwingUtilities.invokeLater(() -> {

            JFrame frame = new JFrame("Student Table View");

            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

            // Define column names

            String[] columnNames = {"Name", "Percentage", "Grade"};

            // Create sample data for 10 students

            Object[][] data = {

                {"Student 1", 85.5, "A"},          {"Student 2", 78.0, "B"},          {"Student 3", 92.3, "A"},

                {"Student 4", 63.7, "C"},          {"Student 5", 77.8, "B"},          {"Student 6", 88.2, "A"},

                {"Student 7", 72.5, "B"},          {"Student 8", 95.1, "A"},          {"Student 9", 61.9, "C"},

                {"Student 10", 84.6, "B"}          };

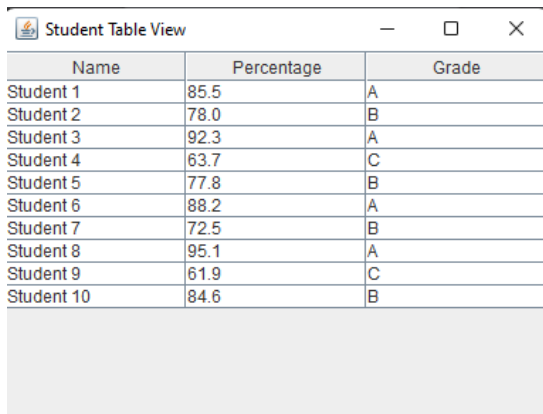
            DefaultTableModel model = new DefaultTableModel(data, columnNames);

            JTable table = new JTable(model);      JScrollPane scrollPane = new JScrollPane(table);

            frame.add(scrollPane, BorderLayout.CENTER);      frame.pack();

            frame.setSize(400, 300);      frame.setVisible(true);      });    }}
```

Output:



Name	Percentage	Grade
Student 1	85.5	A
Student 2	78.0	B
Student 3	92.3	A
Student 4	63.7	C
Student 5	77.8	B
Student 6	88.2	A
Student 7	72.5	B
Student 8	95.1	A
Student 9	61.9	C
Student 10	84.6	B

(Practical 9)

// Programmer: Harsh Moreshwar Kale Created Date: 13/09/2023

// Question 1: Write a program to launch a JProgressBar.

```
import javax.swing.*; import java.awt.event.ActionEvent; import java.awt.event.ActionListener;

public class PracticalNo_9Q1 {    public static void main(String[] args) {

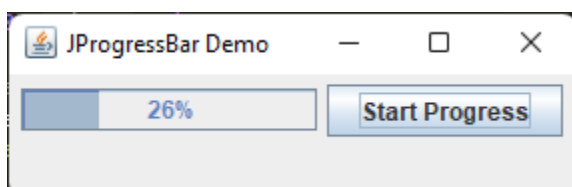
    SwingUtilities.invokeLater(() -> {

        JFrame frame = new JFrame("JProgressBar By Harsh Kale!");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setSize(300, 100);        JProgressBar progressBar = new JProgressBar(0, 100);
        progressBar.setStringPainted(true);        JButton startButton = new JButton("Start Progress");
        startButton.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                Thread taskThread = new Thread(new Runnable() {
                    public void run() {
                        for (int i = 0; i <= 100; i++) {
                            final int progressValue = i;
                            SwingUtilities.invokeLater(new Runnable() {
                                public void run() {
                                    progressBar.setValue(progressValue);
                                }
                            });
                        }
                    }
                });
                try {
                    Thread.sleep(100); // Simulate some work
                } catch (InterruptedException ex) {
                    ex.printStackTrace();
                }
                taskThread.start();
            }
        });

        JPanel panel = new JPanel();        panel.add(progressBar);
        panel.add(startButton);        frame.add(panel);        frame.setVisible(true);

    });
}
```

Output:



(Practical 9)

// Programmer: Harsh Moreshwar Kale

// Created Date: 13/09/2023

// Question 2:

// Develop a Program to Demonstrate the use of JProgressBar.

```
import javax.swing.*;
```

```
import java.awt.event.ActionEvent;
```

```
import java.awt.event.ActionListener;
```

```
public class PracticalNo_9Q2 {
```

```
    private static JProgressBar progressBar;
```

```
    private static JButton startButton;
```

```
    public static void main(String[] args) {
```

```
        SwingUtilities.invokeLater(() -> {
```

```
            JFrame frame = new JFrame("JProgressBar Program By Harsh Kale");
```

```
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
            frame.setSize(300, 100);
```

```
            progressBar = new JProgressBar(0, 100);
```

```
            progressBar.setStringPainted(true);
```

```
            startButton = new JButton("Download MugBit!");
```

```
            startButton.addActionListener(new ActionListener() {
```

```
                public void actionPerformed(ActionEvent e) {
```

```
                    startProgress();          }      });
```

```
            JPanel panel = new JPanel();
```

```
            panel.add(progressBar);          panel.add(startButton);
```

```
            frame.add(panel);          frame.setVisible(true);      });  }
```

```
    private static void startProgress() {
```

```
        startButton.setEnabled(false); // Disable the button while the task is running
```

```
        SwingWorker<Void, Integer> worker = new SwingWorker<Void, Integer>() {
```

```
            @Override          protected Void doInBackground() throws Exception {
```

```
                for (int i = 0; i <= 100; i++) {
```



```

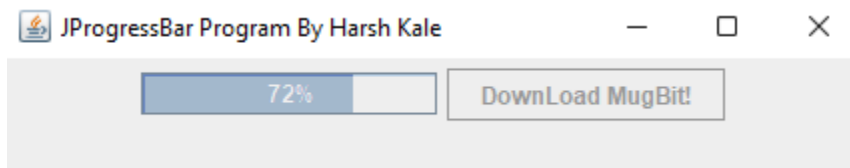
        Thread.sleep(100); // Simulate work (100 milliseconds)
        publish(i); // Publish progress
    }
    return null;
}

@Override
protected void process(java.util.List<Integer> chunks) {
    int latestProgress = chunks.get(chunks.size() - 1);
    progressBar.setValue(latestProgress); // Update progress bar
}

@Override
protected void done() {
    progressBar.setValue(0); // Reset progress bar
    startButton.setEnabled(true); // Enable the button after the task is done
}
}; worker.execute(); }}

```

Output:



(Practical 9)

// Programmer: Harsh Moreshwar Kale Created Date: 13/09/2023

// Question 3: Write a program using JProgressBar to show the progress of progressbar when user clicks on JButton.

```
import javax.swing.*; import java.awt.event.ActionEvent; import java.awt.event.ActionListener;

public class PracticalNo_9Q3 {

    private static JProgressBar progressBar;    private static JButton startButton;

    private static JButton pauseButton;    private static SwingWorker<Void, Integer> worker;

    public static void main(String[] args) {

        SwingUtilities.invokeLater(() -> {

            JFrame frame = new JFrame("Progress Bar with Start and Pause By Harsh Kale!");
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

            frame.setSize(300, 100);    progressBar = new JProgressBar(0, 100);

            progressBar.setStringPainted(true);    startButton = new JButton("Download Mugbit!");
            startButton.addActionListener(new ActionListener() {

                public void actionPerformed(ActionEvent e) {    startProgress();    }    });

            pauseButton = new JButton("Pause");
            pauseButton.addActionListener(new ActionListener() {

                public void actionPerformed(ActionEvent e) {    pauseProgress();    }    });

            JPanel panel = new JPanel();

            panel.add(progressBar);    panel.add(startButton);    panel.add(pauseButton);

            frame.add(panel);    frame.setVisible(true);    }); }

    private static void startProgress() {

        startButton.setEnabled(false); // Disable the "Start" button while the task is running

        pauseButton.setEnabled(true); // Enable the "Pause" button

        worker = new SwingWorker<Void, Integer>() {

            @Override

            protected Void doInBackground() throws Exception {

                for (int i = 0; i <= 100; i++) {

                    if (isCancelled()) {    break;    }

                }

            }

        }

    }

}
```

```

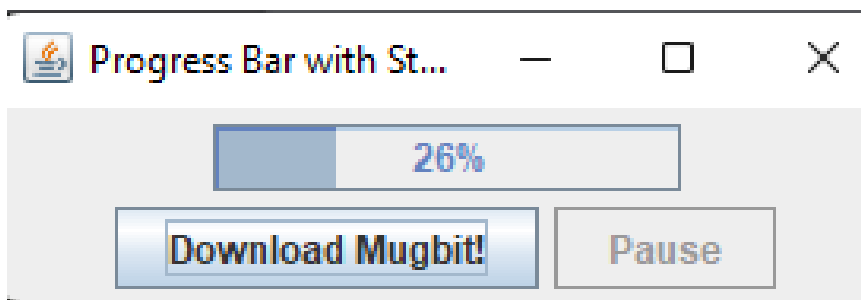
        Thread.sleep(100); publish(i);        }        return null;    }

@Override
protected void process(java.util.List<Integer> chunks) {
    int latestProgress = chunks.get(chunks.size() - 1);
    progressBar.setValue(latestProgress); // Update progress bar
}

@Override
protected void done() {
    progressBar.setValue(0); // Reset progress bar
    startButton.setEnabled(true); // Enable the "Start" button
    pauseButton.setEnabled(false); // Disable the "Pause" button
}
};
worker.execute();
}
private static void pauseProgress() {    if (worker != null) {
    worker.cancel(true); // Cancel the task
    startButton.setEnabled(true); // Enable the "Start" button
    pauseButton.setEnabled(false); // Disable the "Pause" button
}
}
}

```

Output:



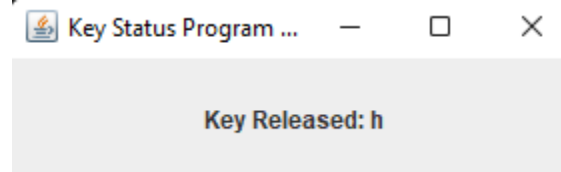
## (Practical 10)

// Programmer: Harsh Moreshwar Kale Created Date: 22/09/2023

// Question 1: Write a Program to demonstrate status of key on Applet Window such as KeyPressed, KeyReleased, KeyUp, KeyDown.

```
import javax.swing.*; import java.awt.event.*;
public class PracticalNo_10Q1 extends JFrame implements KeyListener {
    private JLabel keyStatusLabel;
    public PracticalNo_10Q1() {
        setTitle("Key Status Program in Advance Java by Harsh Kale");
        setSize(300, 100);        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        keyStatusLabel = new JLabel("Key Status: ");
        keyStatusLabel.setHorizontalAlignment(JLabel.CENTER);
        getContentPane().add(keyStatusLabel);        addKeyListener(this);
    }
    public void keyTyped(KeyEvent e) {
        keyStatusLabel.setText("Key Typed: " + e.getKeyChar());
    }
    public void keyPressed(KeyEvent e) {
        keyStatusLabel.setText("Key Pressed: " + e.getKeyChar());
    }
    public void keyReleased(KeyEvent e) {
        keyStatusLabel.setText("Key Released: " + e.getKeyChar());
    }
    public static void main(String[] args) {
        SwingUtilities.invokeLater(new Runnable() {
            public void run() { System.out.println("Developer Harsh Kale");
                PracticalNo_10Q1 app = new PracticalNo_10Q1();
                app.setVisible(true); } }); }
}
```

Output:



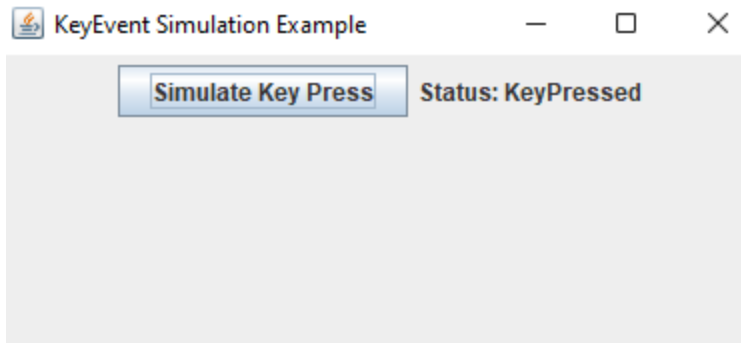
(Practical 10)

// Programmer: Harsh Moreshwar Kale Created Date: 22/09/2023

// Question 2: Write a program to generate KeyEvent when a key is pressed and display "KeyPressed" message.

```
import javax.swing.*; import java.awt.*; import java.awt.event.*;
public class PracticalNo_10Q2 {
    public static void main(String[] args) {
        JFrame frame = new JFrame("KeyEvent Simulation Example");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setSize(400, 200);
        JPanel panel = new JPanel();          frame.add(panel);
        JButton simulateButton = new JButton("Simulate Key Press");
        panel.add(simulateButton);
        JLabel statusLabel = new JLabel("Status: ");
        panel.add(statusLabel);
        frame.setVisible(true);
        simulateButton.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                try {
                    System.out.println("Developer Harsh Kale");
                    Robot robot = new Robot();
                    // Press the space key to trigger event!!
                    robot.keyPress(KeyEvent.VK_A);
                    robot.keyRelease(KeyEvent.VK_A);
                    statusLabel.setText("Status: KeyPressed");
                } catch (AWTException ex) {
                    ex.printStackTrace(); }}    });    }
```

Output:



(Practical 10)

// Programmer: Harsh Moreswar Kale Created Date: 22/09/2023

// Question 3: Develop a program which will implement special keys such as function keys and arrow keys.

import javax.swing.\*; import java.awt.event.\*;

public class PracticalNo\_10Q3 extends JFrame implements KeyListener {

private JTextArea textArea;

public PracticalNo\_10Q3() {

setTitle("Special Keys Example"); setSize(400, 400);

setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

textArea = new JTextArea(); textArea.addKeyListener(this);

getContentPane().add(textArea); }

public void keyPressed(KeyEvent e) {

int keyCode = e.getKeyCode();

if (keyCode == KeyEvent.VK\_F1) {

textArea.append("F1 key pressed\n");

} else if (keyCode == KeyEvent.VK\_F2) {

textArea.append("F2 key pressed\n");

} else if (keyCode == KeyEvent.VK\_UP) {

textArea.append("Up arrow key pressed\n");

} else if (keyCode == KeyEvent.VK\_DOWN) {

textArea.append("Down arrow key pressed\n");

} else if (keyCode == KeyEvent.VK\_LEFT) {

textArea.append("Left arrow key pressed\n");

} else if (keyCode == KeyEvent.VK\_RIGHT) {

textArea.append("Right arrow key pressed\n");

} }

public void keyReleased(KeyEvent e) {

// Handle keyReleased event (not used in this example) }

public static void main(String[] args) {

SwingUtilities.invokeLater(new Runnable() {

public void run() {

System.out.println("Developer Harsh Kale");

PracticalNo\_10Q3 example = new PracticalNo\_10Q3();

example.setVisible(true);

} }); }

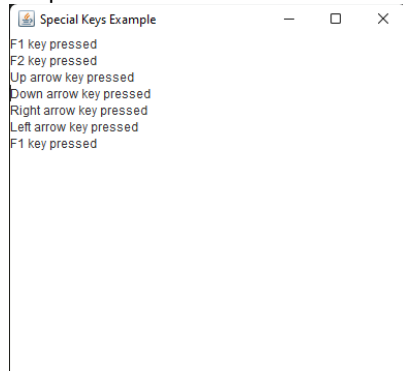
@Override

public void keyTyped(KeyEvent e) {

// TODO Auto-generated method stub

throw new UnsupportedOperationException("Unimplemented method 'keyTyped' done by harsh kale in future!"); }

Output:



(Practical 10)

// Programmer: Harsh Moreshwar Kale Created Date: 22/09/2023

// Question 4: Develop a program to accept two numbers and display product of two numbers when user pressed "Multiply" Button.

```
import javax.swing.*; import java.awt.*; import java.awt.event.*;
public class PracticalNo_10Q4 extends JFrame {
    private JTextField num1Field;    private JTextField num2Field;
    private JButton multiplyButton;   private JLabel resultLabel;
    public PracticalNo_10Q4() {
        setTitle("Multiplication App By Harsh Kale");
        setSize(300, 150);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        JPanel panel = new JPanel();
        panel.setLayout(new GridLayout(3, 2));
        JLabel num1Label = new JLabel("Enter Number 1:");    num1Field = new
JTextField(10);
        JLabel num2Label = new JLabel("Enter Number 2:");    num2Field = new
JTextField(10);
        resultLabel = new JLabel("Result: ");
        multiplyButton = new JButton("Multiply");
        multiplyButton.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) { calculateProduct();} });
        panel.add(num1Label);    panel.add(num1Field);    panel.add(num2Label);
        panel.add(num2Field);    panel.add(multiplyButton);
        panel.add(resultLabel);
        getContentPane().add(panel);    }
    private void calculateProduct() {
        try {
            double num1 = Double.parseDouble(num1Field.getText());
            double num2 = Double.parseDouble(num2Field.getText());
            double product = num1 * num2;
            resultLabel.setText("Result: " + product);
        } catch (NumberFormatException ex) {
            resultLabel.setText("Result: Invalid input");
        }
    }
    public static void main(String[] args) {
        SwingUtilities.invokeLater(new Runnable() {
            public void run() {
                System.out.println("Developer Harsh Kale!");
                PracticalNo_10Q4 app = new PracticalNo_10Q4();
                app.setVisible(true);    }    });    }}
```

Output:

