

Practical Question -13

13a –

```
/** Main.java */  
import java.awt.*;  
import java.awt.event.*;  
import javax.swing.*;  
public class Main {  
    JLabel l;  
    Main() {  
        JFrame f = new JFrame("Swing Frame");  
        l = new JLabel("", SwingConstants.CENTER);  
        l.setBounds(15, 110, 260, 30);  
        f.add(l);  
        f.addMouseListener(new MouseAdapter() {  
            @Override  
            public void mouseClicked(MouseEvent e) {  
                l.setText("Mouse Clicked");  
            }  
            @Override  
            public void mouseEntered(MouseEvent e) {  
                l.setText("Mouse Entered");  
            }  
            @Override  
            public void mouseExited(MouseEvent e) {  
                l.setText("Mouse Exited");  
            }  
        });  
        f.setSize(300, 300);  
        f.setLayout(null);  
    }  
}
```

```

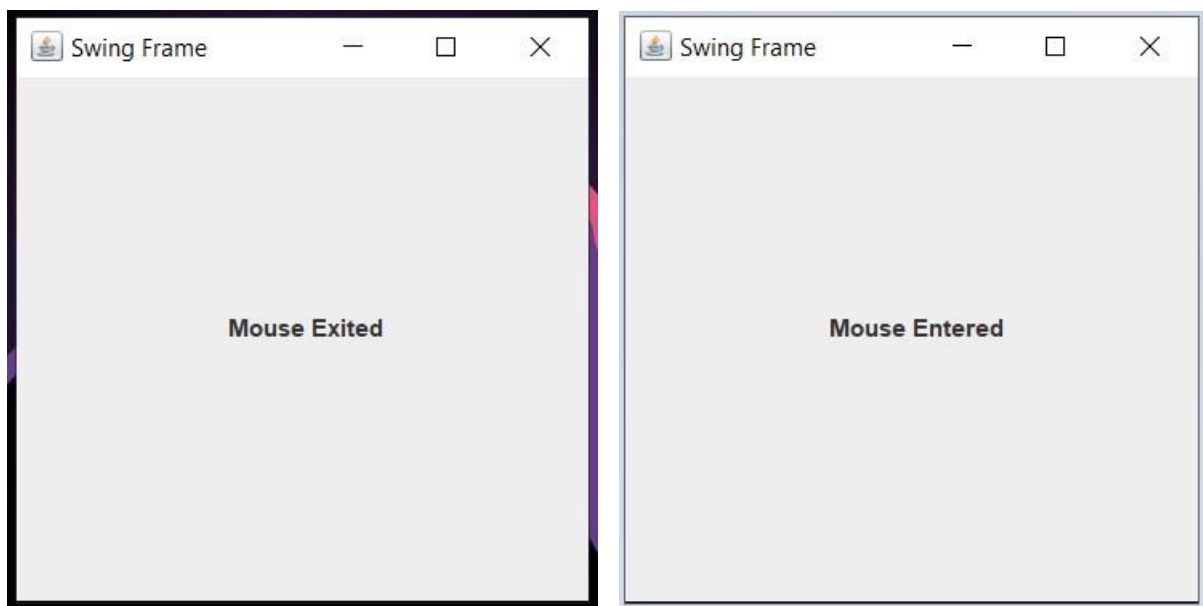
        f.setVisible(true);

        f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    }

    public static void main(String[] args) {
        SwingUtilities.invokeLater(new Runnable() {
            public void run() {
                new Main();
            }
        });
    }
}

```

Output -



13b –

```

/** Main.java */
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

public class Main {
    JLabel l;

    Main() {
        JFrame f = new JFrame("Swing Pink");
        l = new JLabel("This is some text", SwingConstants.CENTER);
    }
}

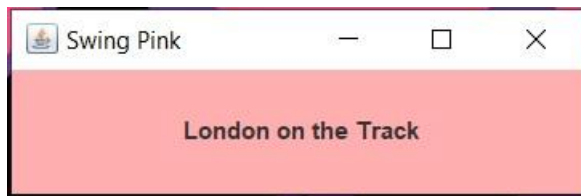
```

```

        l.setBounds(15, 15, 260, 30);
        f.add(l);
        f.getContentPane().setBackground(Color.PINK);
        f.setSize(300, 100);
        f.setLayout(null);
        f.setVisible(true);
        f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    }
    public static void main(String[] args) {
        SwingUtilities.invokeLater(new Runnable() {
            public void run() {
                new Main();
            }
        });
    }
}

```

Output –



13c –

```

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

public class Main {
    JButton btnRed, btnBlue;

    Main() {
        JFrame f = new JFrame("Swing Buttons");

        btnRed = new JButton("Red");

        btnRed.setBounds(16, 20, 250, 30);

        btnRed.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                f.getContentPane().setBackground(Color.RED);
            }
        });
    }
}

```

```

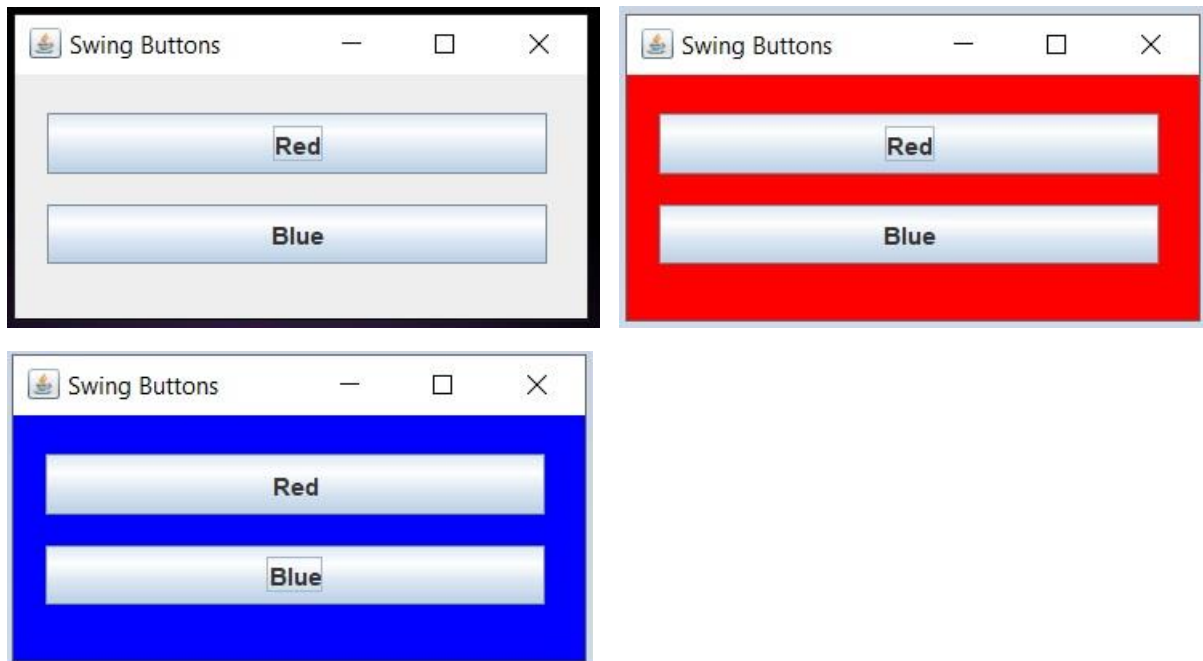
    }
});
f.add(btnRed);

btnBlue = new JButton("Blue");
btnBlue.setBounds(16, 65, 250, 30);
btnBlue.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        f.getContentPane().setBackground(Color.BLUE);
    }
});
f.add(btnBlue);
f.setSize(300, 160);
f.setLayout(null);
f.setVisible(true);
f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}

public static void main(String[] args) {
    SwingUtilities.invokeLater(new Runnable() {
        public void run() {
            new Main();
        }
    });
}
}

```

Output –



13d –

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

class KbdAdapter extends KeyAdapter {
    JLabel l;

    KbdAdapter(JLabel l) {
        this.l = l;
    }

    @Override
    public void keyTyped(KeyEvent e) {
        l.setText("Typed character is: " + e.getKeyChar());
    }

    @Override
    public void keyPressed(KeyEvent e) {
        System.out.println("Pressed character is: " + e.getKeyChar());
    }
}
```

```

@Override

public void keyReleased(KeyEvent e) {

    System.out.println("Released character is: " + e.getKeyChar());

}

}

public class Main {

    JLabel l;

    Main() {

        JFrame f = new JFrame("AWT Keyboard");

        l = new JLabel("", SwingConstants.CENTER);

        l.setBounds(15, 20, 250, 30);

        f.addKeyListener(new KbdAdapter(l));

        f.add(l);

        f.setSize(300, 110);

        f.setLayout(null);

        f.setVisible(true);

        f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

    }

    public static void main(String[] args) {

        SwingUtilities.invokeLater(new Runnable() {

            public void run() {

                new Main();

            }

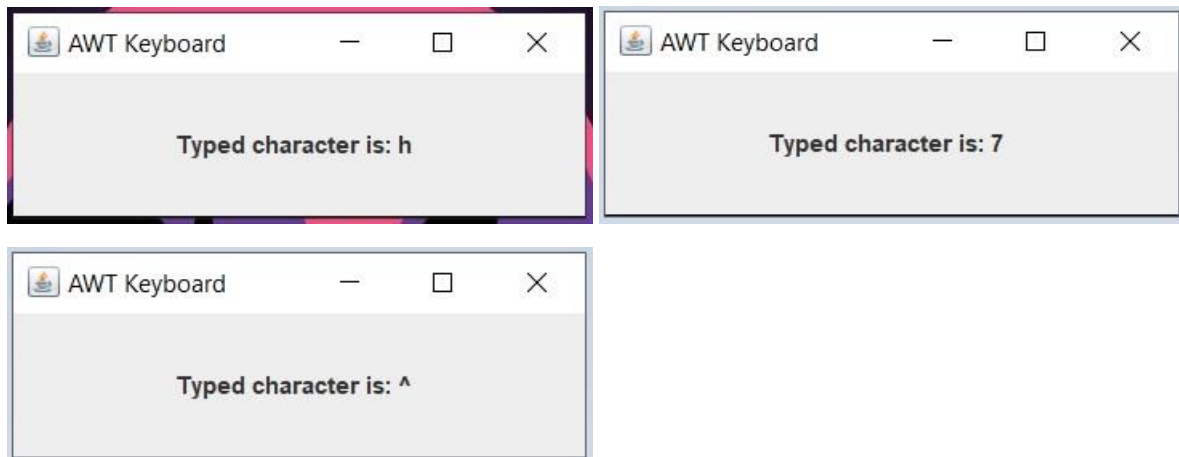
        });

    }

}

```

Output –



13e –

```
/** Main.java **/  
import java.awt.*;  
import java.awt.event.*;  
import javax.swing.*;  
public class Main implements ActionListener {  
    JButton btnInfo, btnCGPA;  
    Main() {  
        JFrame f = new JFrame("Student Details");  
        btnInfo = new JButton("A");  
        btnInfo.setBounds(18, 100, 450, 100);  
        btnInfo.addActionListener(this);  
        f.add(btnInfo);  
        btnCGPA = new JButton("B");  
        btnCGPA.setBounds(18, 270, 450, 100);  
        btnCGPA.addActionListener(this);  
        f.add(btnCGPA);  
        f.setSize(500, 500);  
        f.setLayout(null);  
        f.setVisible(true);  
    }  
}
```

```

        f.setLocationRelativeTo(null);

        f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    }

    public static void main(String[] args) {
        SwingUtilities.invokeLater(new Runnable() {
            public void run() {
                new Main();
            }
        });
    }

    @Override
    public void actionPerformed(ActionEvent e) {
        if (e.getSource() == btnInfo) {
            new Information(
                "SUDIPTO GHOSH",
                "BSc (Hons) Computer Science",
                "19/78003",
                "ARSD College"
            );
        } else if (e.getSource() == btnCGPA) {
            new CGPA("9.73");
        }
    }
}

/** Information.java */
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

class Information {
    JButton btnClose;

```



```
JPanel panelForm;

JLabel labelName, labelCourse, labelRollNo, labelCollege;

JTextField fieldName, fieldCourse, fieldRollNo, fieldCollege;

Information(String name, String course, String rollNo, String college) {

    JFrame f = new JFrame("Personal Information");

    labelName = new JLabel("Name:");

    labelName.setBounds(30, 30, 90, 23);

    labelCourse = new JLabel("Course:");

    labelCourse.setBounds(30, 60, 100, 23);

    labelRollNo = new JLabel("Roll No.:");

    labelRollNo.setBounds(30, 90, 80, 23);

    labelCollege = new JLabel("College:");

    labelCollege.setBounds(30, 120, 90, 23);

    fieldName = new JTextField(name);

    fieldName.setBounds(120, 30, 210, 23);

    fieldName.setEditable(false);

    fieldCourse = new JTextField(course);

    fieldCourse.setBounds(120, 60, 210, 23);

    fieldCourse.setEditable(false);

    fieldRollNo = new JTextField(rollNo);

    fieldRollNo.setBounds(120, 90, 210, 23);

    fieldRollNo.setEditable(false);

    fieldCollege = new JTextField(college);

    fieldCollege.setBounds(120, 120, 210, 23);

    fieldCollege.setEditable(false);

    btnClose = new JButton("Close");

    btnClose.setBounds(110, 160, 140, 30);

    btnClose.addActionListener(new ActionListener() {

        @Override

        public void actionPerformed(ActionEvent e) {

            f.dispose();
```

```

        }
    });

    panelForm = new JPanel();
    panelForm.setLayout(null);
    panelForm.add(labelName);
    panelForm.add(fieldName);
    panelForm.add(labelCourse);
    panelForm.add(fieldCourse);
    panelForm.add(labelRollNo);
    panelForm.add(fieldRollNo);
    panelForm.add(labelCollege);
    panelForm.add(fieldCollege);
    panelForm.add(btnClose);
    f.add(panelForm);
    f.setSize(380, 250);
    f.setVisible(true);
    f.setLayout(null);
    f.setLocationRelativeTo(null);
    f.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}
}

```

```

/** CGPA.java */
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

class CGPA {
    JLabel l;
    JButton btnClose;

    CGPA(String cgpa) {
        JFrame f = new JFrame("Previous Year CGPA");
    }
}

```

```
l = new JLabel("Your CGPA was: " + cgpa, SwingConstants.CENTER);
l.setBounds(20, 20, 250, 30);
btnClose = new JButton("Close");
btnClose.setBounds(90, 60, 100, 30);
btnClose.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        f.dispose();
    }
});
f.add(l);
f.add(btnClose);
f.setSize(310, 150);
f.setLayout(null);
f.setVisible(true);
f.setLocationRelativeTo(null);
f.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
}
}
```

Output –

