JAVA PRACTICAL FILE

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COURSE	**:**	**BSC (hons) Computer Science**
SEMESTER	**:**	**II**
SUBMITTED TO	**:**	**Ms Kanishka**

Ques 8. Write a program to create a frame using AWT. Implement mouseClicked( ), mouseEntered( ) and mouseExited( ) events. Frame should become visible when mouse enters it.

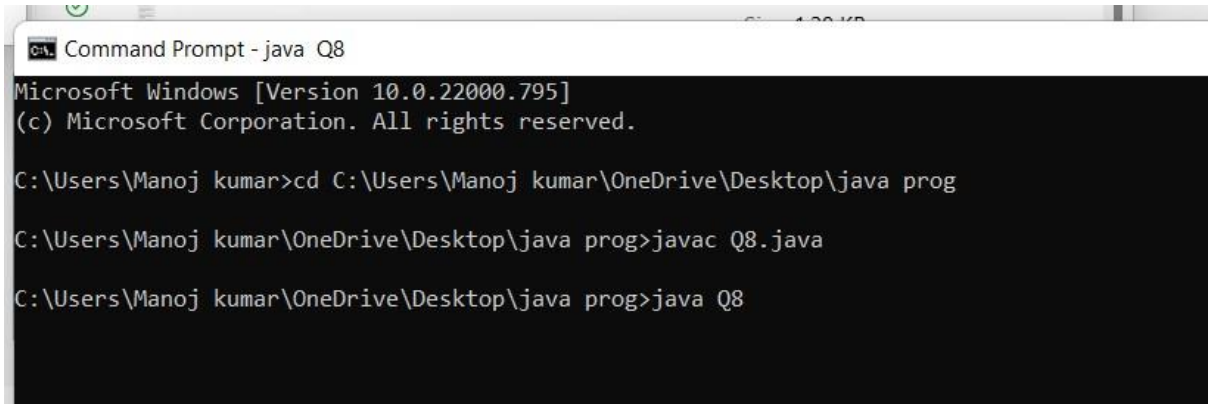
**************************CODE*******************************

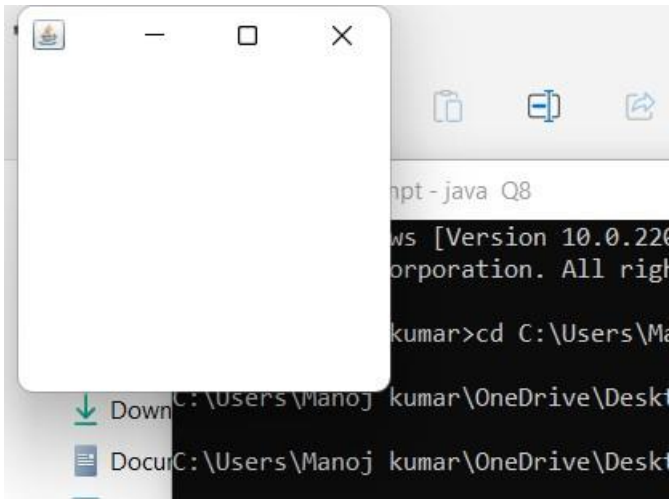
```
import java.util.*;
import java.awt.event.*;
import java.awt.*;
public class Q8 extends Frame{
   String msg="";
   public Q8()
   {
      addMouseListener(new MyMouseAdapter(this));
      addMouseMotionListener(new MyMouseAdapter(this));
      addWindowListener(new MyWindowAdapter());
   }
   public void paint(Graphics g)
   {
      g.drawString(msg, 20, 80);
   }
   public static void main(String[] args) {
      Q8 appwin = new Q8();
      appwin.setSize(new Dimension(200,200));
      appwin.setVisible(true);
   }
}
```

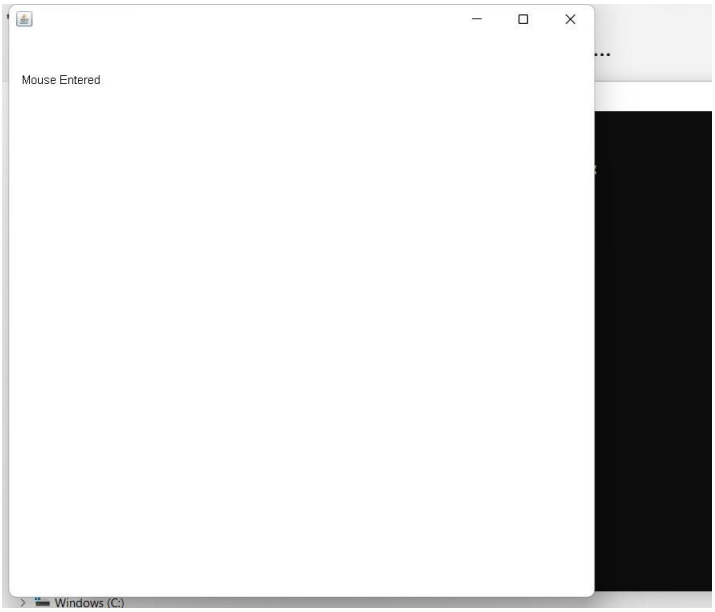
```
class MyMouseAdapter extends MouseAdapter{
    Q8 demo;
    public MyMouseAdapter(Q8 demo)
    {
        this.demo = demo;
    }
    public void mouseClicked(MouseEvent me)
    {
        demo.msg = "Mouse Clicked";
        demo.setSize(new Dimension(200,200));
        demo.repaint();
    }
    public void mouseEntered(MouseEvent me)
    {
        demo.msg = "Mouse Entered";
        demo.setSize(new Dimension(600,600));
        demo.repaint();
    }
    public void mouseExited(MouseEvent me)
    {
        demo.msg = "Mouse Exited";
        demo.setVisible(false);
        demo.repaint();
    }
}
```

```
class MyWindowAdapter extends WindowAdapter
{
   public void windowClosing(WindowEvent me)
   {
      System.exit(0);
   }
}
```

***********************OUTPUT********************************






Mouse Entered
Windows (C:)

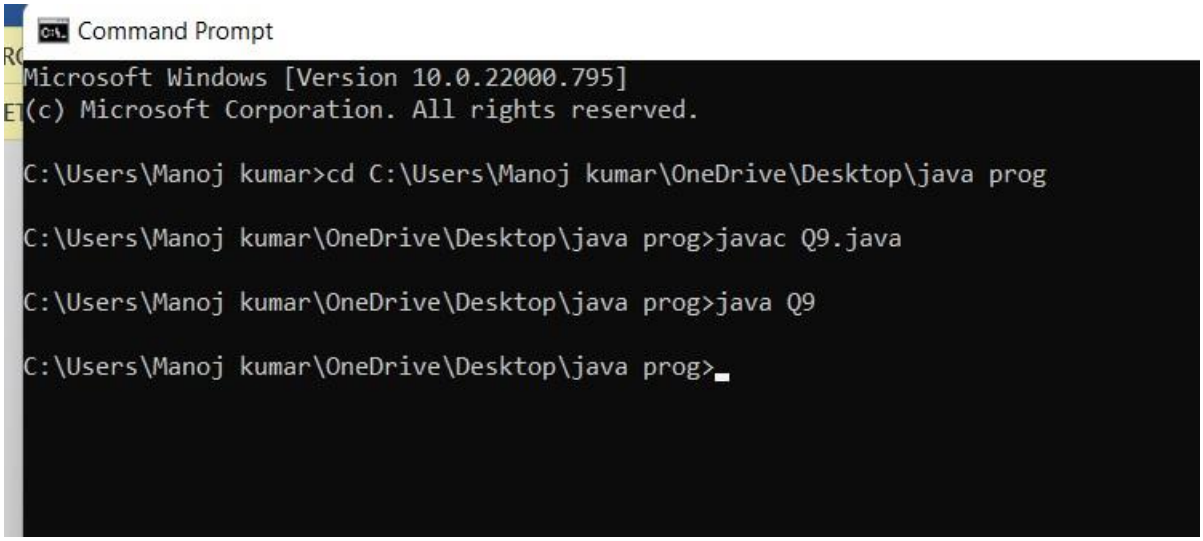
Ques 9. Using AWT, write a program to display a string in frame window with pink color as background.

**************************CODE********************************

```
import java.awt.event.*;
import java.awt.*;
public class Q9 extends Frame
{

public Q9()
{
   addWindowListener(new WindowAdapter()
   {
      public void windowClosing(WindowEvent we)
      {
         System.exit(0);
      }
   });
setSize(500,800);
setBackground(Color.PINK);
setForeground(Color.BLUE);
setVisible(true);
}
public void paint(Graphics g)
{

   g.drawString("HELLO",100,90);
```

```
}
public static void main(String args[])
{
   Q9 ob= new Q9();
   ob.setTitle("PRACTICAL 9");
   ob.setVisible(true);
}
}
```

************************OUTPUT**********************************



Ques 10. Using AWT, write a program to create two buttons named “Red” and “Blue”. When a button is pressed the background color should be set to the color named by the button’s label.

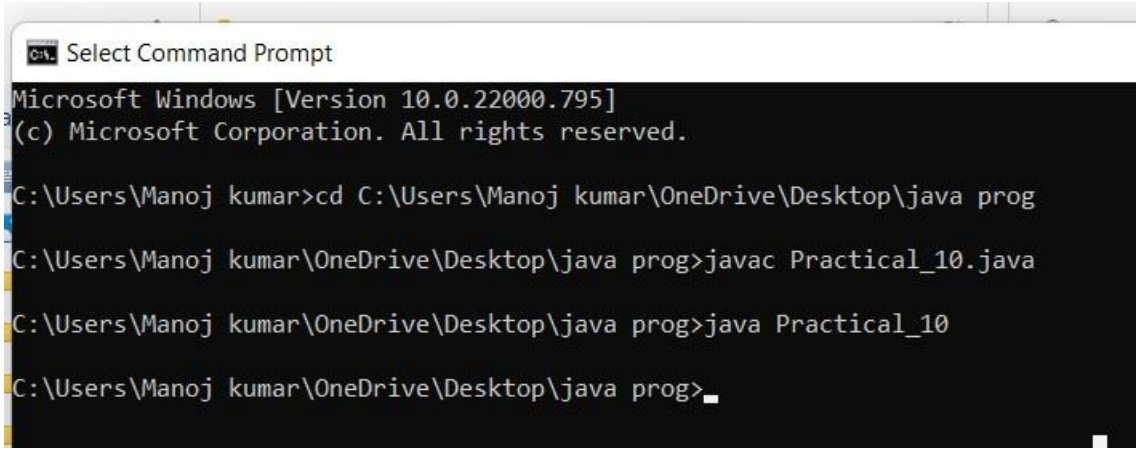
**************************CODE********************************

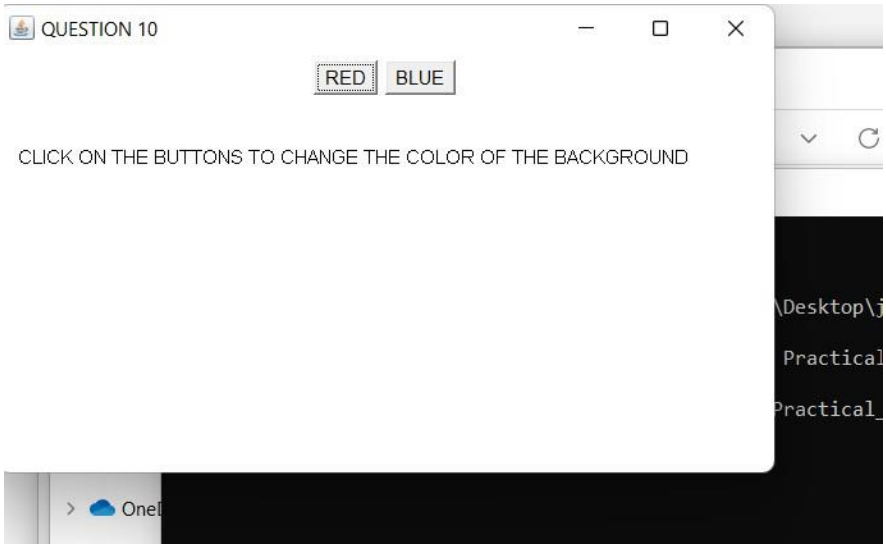
```
import java.awt.*;
import java.awt.event.*;
public class Practical_10 extends Frame implements ActionListener {
   Button red,blue;
public Practical_10()
{
   setLayout(new FlowLayout());

red=new Button("RED");
blue= new Button("BLUE");

add(red);
add(blue);

red.addActionListener(this);
blue.addActionListener(this);

addWindowListener(new WindowAdapter()
   {
      public void windowClosing(WindowEvent we)
      {
```

```
            System.exit(0);
        }
    });

}
public void actionPerformed(ActionEvent ae)
{
    String str=ae.getActionCommand();
    if(str.equals("RED"))
    {

    setBackground(Color.RED);    }
    else
    {

        setBackground(Color.BLUE);     }




repaint();
    }
    public void paint(Graphics p)
    {

        p.drawString("CLICK ON THE BUTTONS TO CHANGE THE COLOR
OF THE BACKGROUND ",20,100);
```

```
    }

    public static void main(String args[])
    {
        Practical_10 p=new Practical_10();
        p.setSize(new Dimension(500,300));
        p.setTitle("QUESTION 10");
        p.setVisible(true);
    }
}
```

**********OUTPUT**********




QUESTION 10
RED
BLUE
CLICK ON THE BUTTONS TO CHANGE THE COLOR OF THE BACKGROUND


QUESTION 10
RED
BLUE
CLICK ON THE BUTTONS TO CHANGE THE COLOR OF THE BACKGROUND


QUESTION 10
RED
BLUE

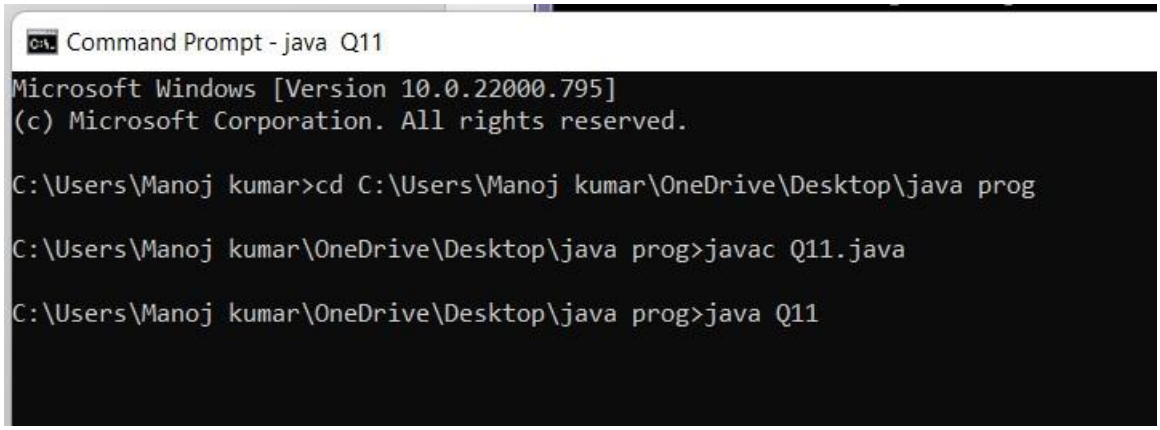
Ques 11. Using AWT, write a program which responds to KEY_TYPED event and updates the status window with message ("Typed character is: X"). Use adapter class for other two events.

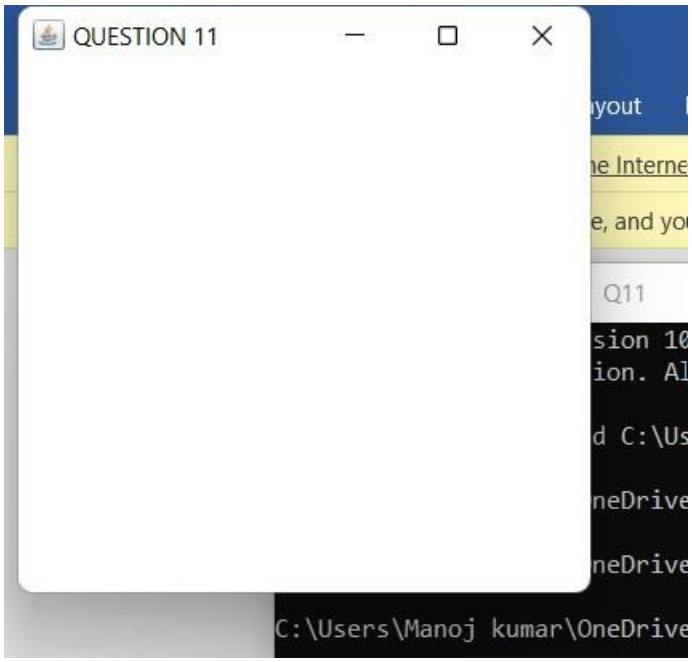
**************************CODE********************************

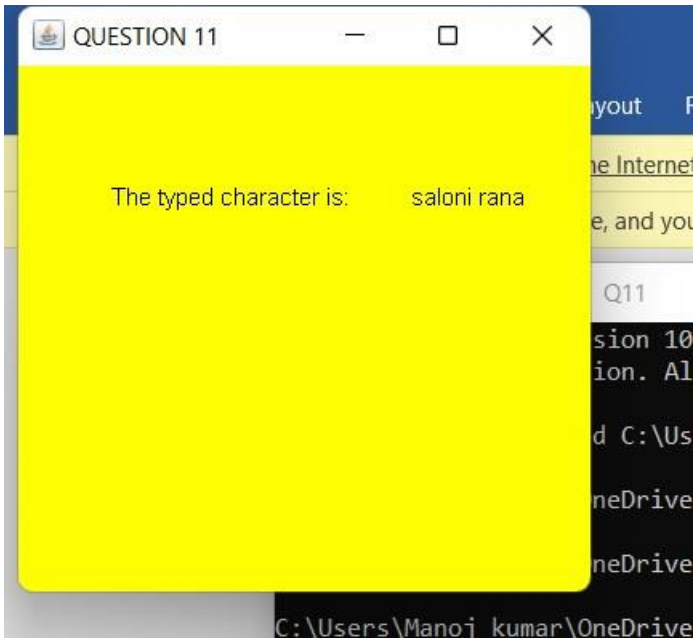
```
import java.awt.*;
import java.awt.event.*;
public class Q11 extends Frame  {
   String msg=" ";
   String keystate=" ";
   public Q11()
   {
      addKeyListener(new MyKeyAdapter (this));
      addWindowListener(new MyWindowAdapter ());
   }
   public void paint(Graphics g)
   {
      g.drawString(msg,200,100);
      g.drawString(keystate,50,100);
   }
   public static void main(String args[])
   {
     Q11 pq=new Q11();
pq.setSize(new Dimension(300,300));
      pq.setTitle("QUESTION 11");
      pq.setVisible(true);
   }
```

```
}
class MyKeyAdapter extends KeyAdapter
{
Q11 ref;
public MyKeyAdapter(Q11 ref)
{
    this.ref=ref;
}
public void keyTyped(KeyEvent ke)
{
    ref.keystate=(" The typed character is:");
   ref. msg=ref.msg+ke.getKeyChar();

        ref.setBackground(Color.YELLOW);
        ref.repaint();
}
}
class MyWindowAdapter extends WindowAdapter{
    public void windowClosing(WindowEvent we)
    {
        System.exit(0);
    }
}
```

**********OUTPUT**********


Command Prompt - java Q11
Microsoft Windows [Version 10.0.22000.795]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Manoj kumar>cd C:\Users\Manoj kumar\OneDrive\Desktop\java prog
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>javac Q11.java
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>java Q11


QUESTION 11


QUESTION 11
The typed character is: saloni rana

Ques 12. Using AWT, write a program to create two buttons labelled ‘A’ and ‘B’. When button ‘A’ is pressed, it displays your personal information (Name, Course, Roll No, College) and when button ‘B’ is pressed, it displays your CGPA in previous semester.

**************************CODE********************************

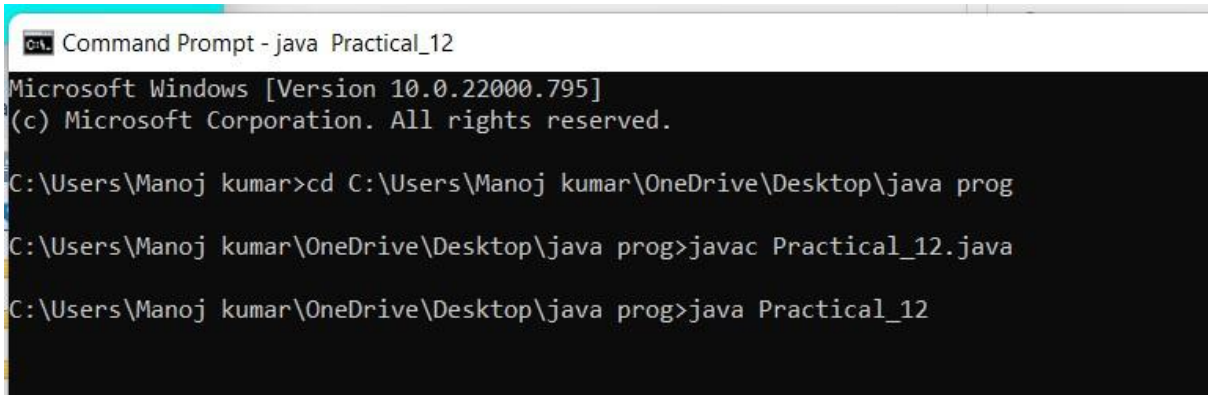
```
import java.awt.*;
import java.awt.event.*;
 class Practical_12 extends Frame implements ActionListener {
    Button a,b;
    Label l1,l2,l3,l4,l5;

public Practical_12()
{
    setLayout(new FlowLayout());
// CREATE BUTTONS
a=new Button("A");
b= new Button("B");
// CREATE LABELS
l1=new Label("Name: Saloni Rana");

l2=new Label("Roll Number:21570049");

l3=new Label("Course: BSc(h)Computer Science");

l4=new Label("College: Kalindi College");
```

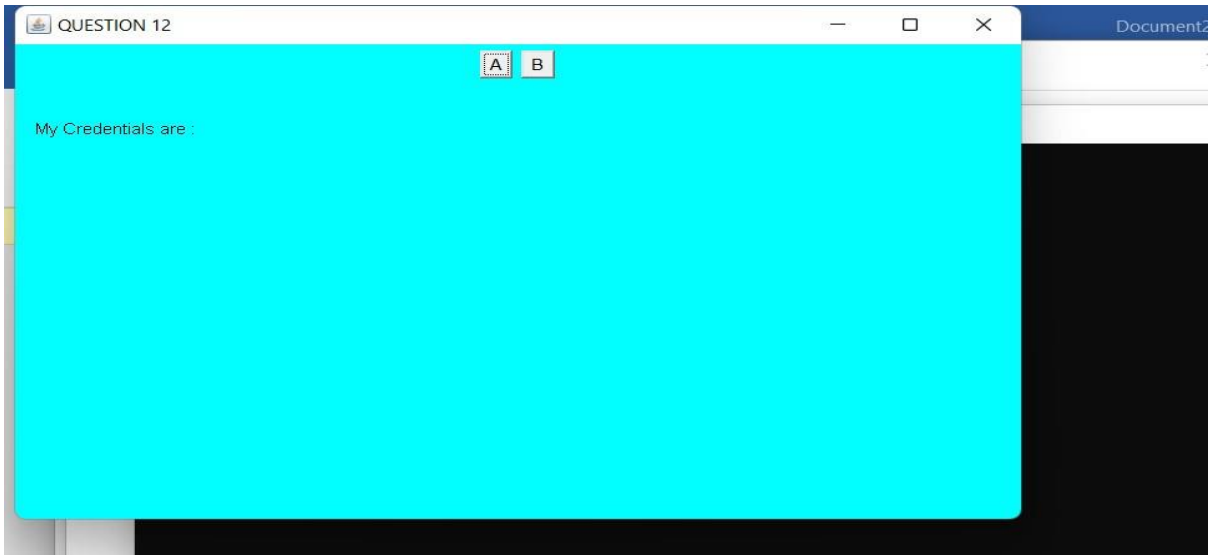
```
l5=new Label("CGPA: not available");

// ADD BUTTONS  TO THE FRAME
add(a);
add(b);

a.addActionListener(this);
b.addActionListener(this);

addWindowListener(new WindowAdapter()
   {
      public void windowClosing(WindowEvent we)
      {
         System.exit(0);
      }
   });

}
public void actionPerformed(ActionEvent ae)
{
   String str=ae.getActionCommand();
   if(str.equals("A"))
   {
      remove(l5);
    l1.setBounds(100,50,150,20);
```

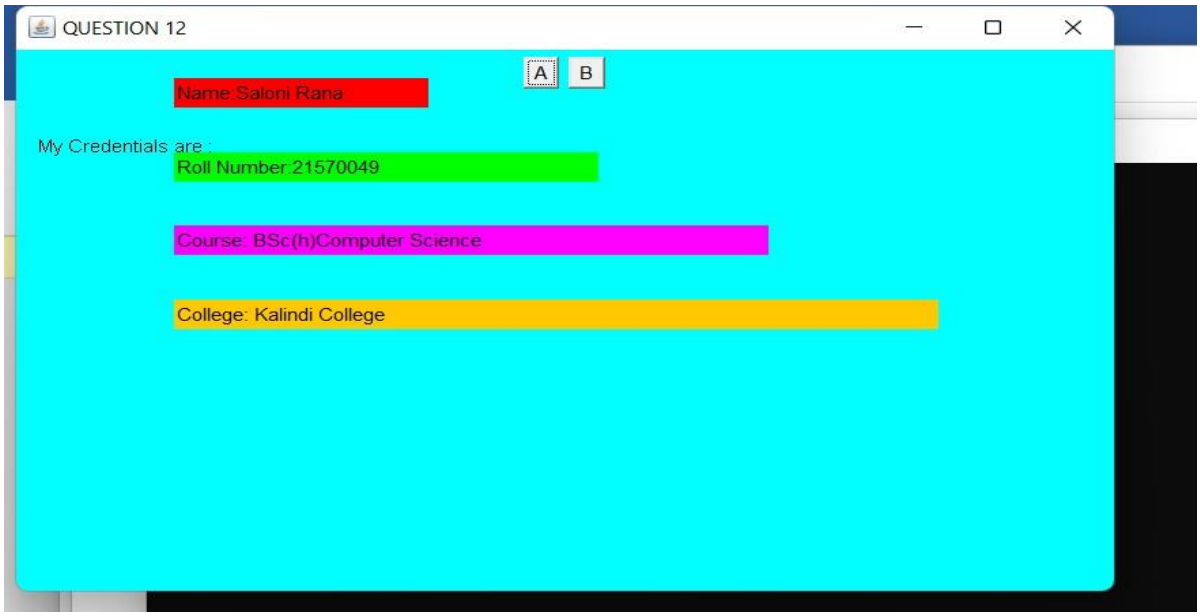
```
        l1.setBackground(Color.RED);
       l2.setBounds(100,100,250,20);
        l2.setBackground(Color.GREEN);
        l3.setBounds(100,150,350,20);
        l3.setBackground(Color.MAGENTA);
        l4.setBounds(100,200,450,20);
         l4.setBackground(Color.orange);
remove(l5);
add(l1);
add(l2);
add(l3);
add(l4);

    }

    else
    {
        l5.setBounds(100,250,500,20);
        l5.setBackground(Color.pink);
        remove(l1);
        remove(l2);
        remove(l3);
        remove(l4);
        add(l5);
    }
```

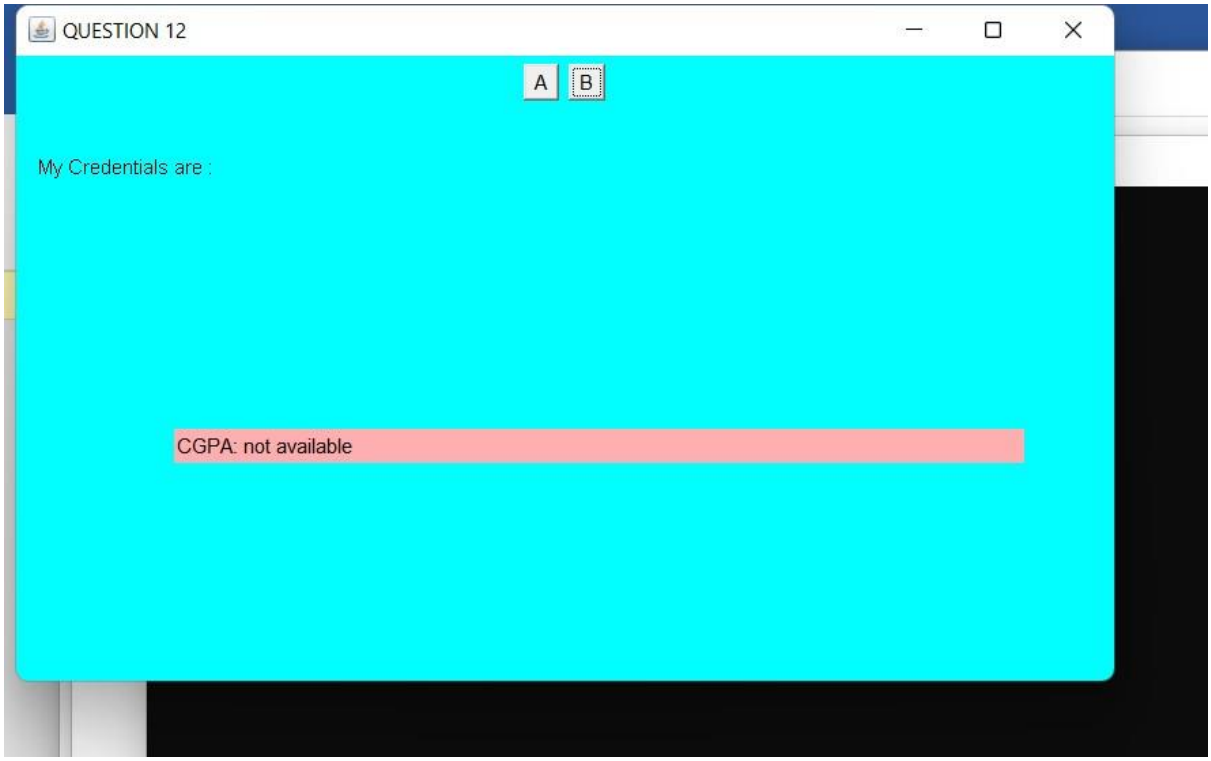
```
repaint();

    }
    public void paint(Graphics p)
    {

        p.drawString("My Credentials are :",20,100);

    }

    public static void main(String args[])
    {
        Practical_12 p=new Practical_12();
        p.setSize(new Dimension(200,100));
        p.setTitle("QUESTION 12");
        p.setBackground(Color.cyan);
        p.setVisible(true);
    }
}
```

**********OUTPUT**********


Command Prompt - java Practical_12
Microsoft Windows [Version 10.0.22000.795]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Manoj kumar>cd C:\Users\Manoj kumar\OneDrive\Desktop\java prog
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>javac Practical_12.java
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>java Practical_12


QUESTION 12
A
B
My Credentials are :


QUESTION 12
A
B
Name:Saloni Rana
My Credentials are :
Roll Number:21570049
Course: BSc(h)Computer Science
College: Kalindi College


QUESTION 12
A
B
My Credentials are :
CGPA: not available

Ques 13. Rewrite all the above GUI programs using Swing.

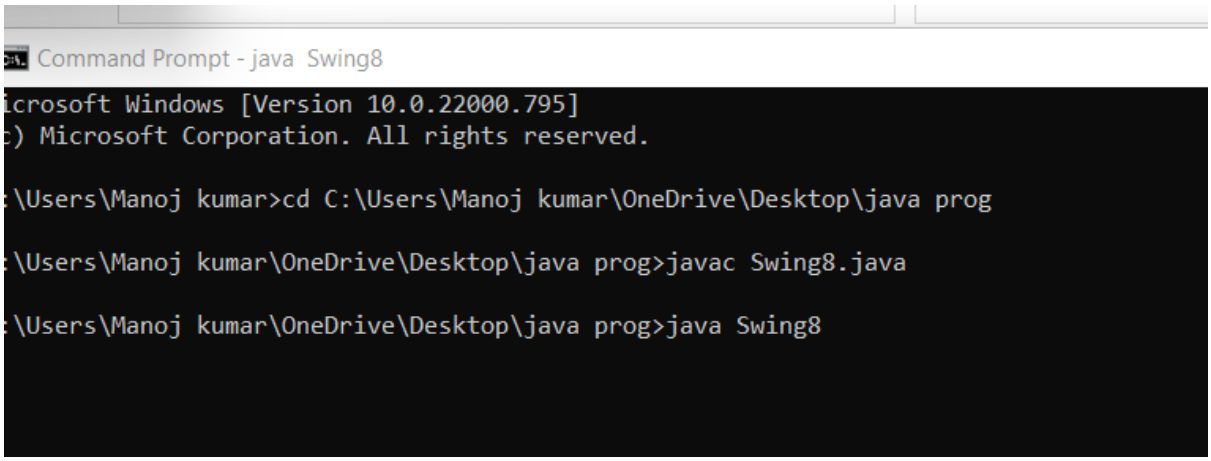
Ques 8:

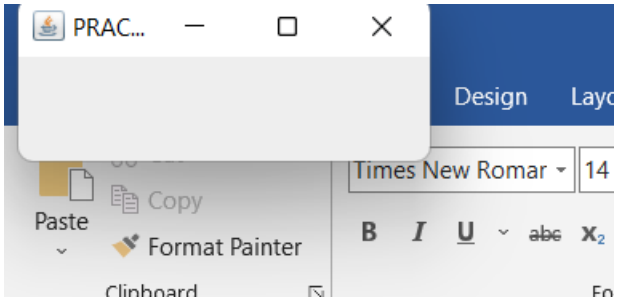
```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
class Swing8 extends JPanel {
        JLabel jlab =new JLabel();
        String msg="PRESS THE MOUSE BUTTON ";
        int mouseX=0, mouseY=0;
        Swing8()
        {


        JFrame jfrm=new JFrame("PRACTICAL QUESTIONS NOW,
USING SWING OPERATIONS");
        jfrm.setLayout(new FlowLayout());
        jfrm.setSize(220, 90);



        jfrm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        jfrm.addMouseListener(new MouseAdapter()
        {
        public void mouseClicked(MouseEvent me)
            {
          jlab.setText("CLICK RECEIVED");
          jfrm.getContentPane().setBackground(Color.RED);
```

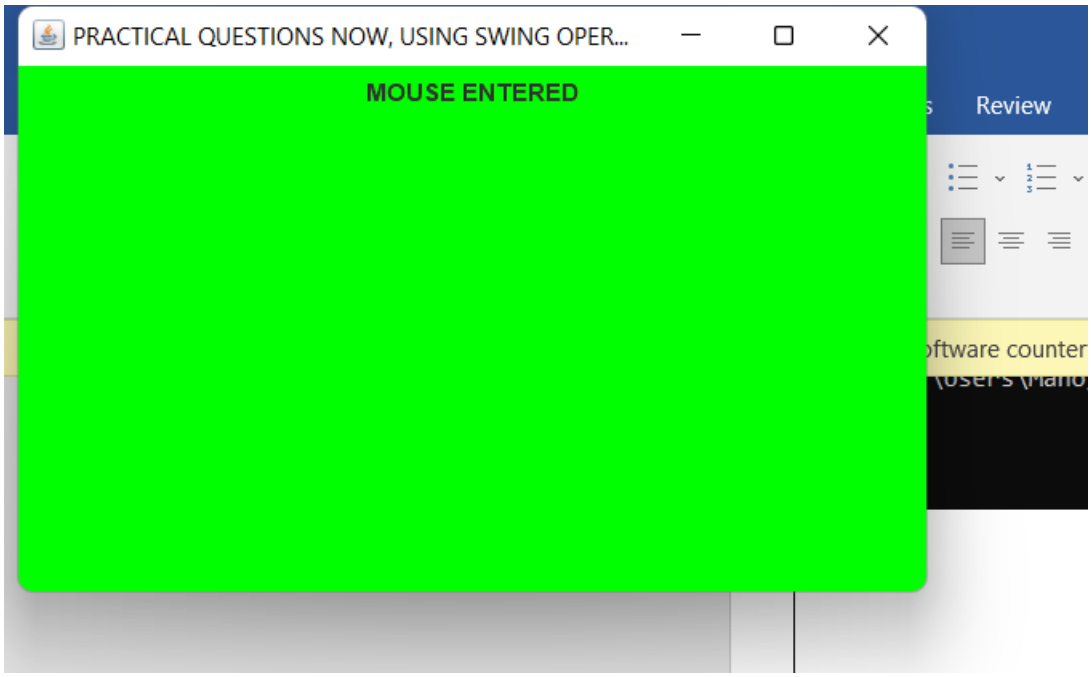
```
                jfrm.getContentPane().setForeground(Color.MAGENTA);
        jfrm.repaint();
    }
    public void mouseEntered(MouseEvent me)
    {
        mouseX=300;
        mouseY=300;
    jlab.setText("MOUSE ENTERED");
      jfrm.getContentPane(). setBackground(Color.GREEN);
            jfrm.getContentPane().setForeground(Color.PINK);
        jfrm.repaint();
    }
    public void mouseExited(MouseEvent me)
    {
        mouseX=300;
        mouseY=300;
        jlab.setText("MOUSE EXITED");
        jfrm.getContentPane().setBackground(Color.cyan);
        jfrm.getContentPane().setForeground(Color.BLUE);
        jfrm.repaint();
    }
});
jfrm.add(jlab);
jfrm.setVisible(true);
     }
```

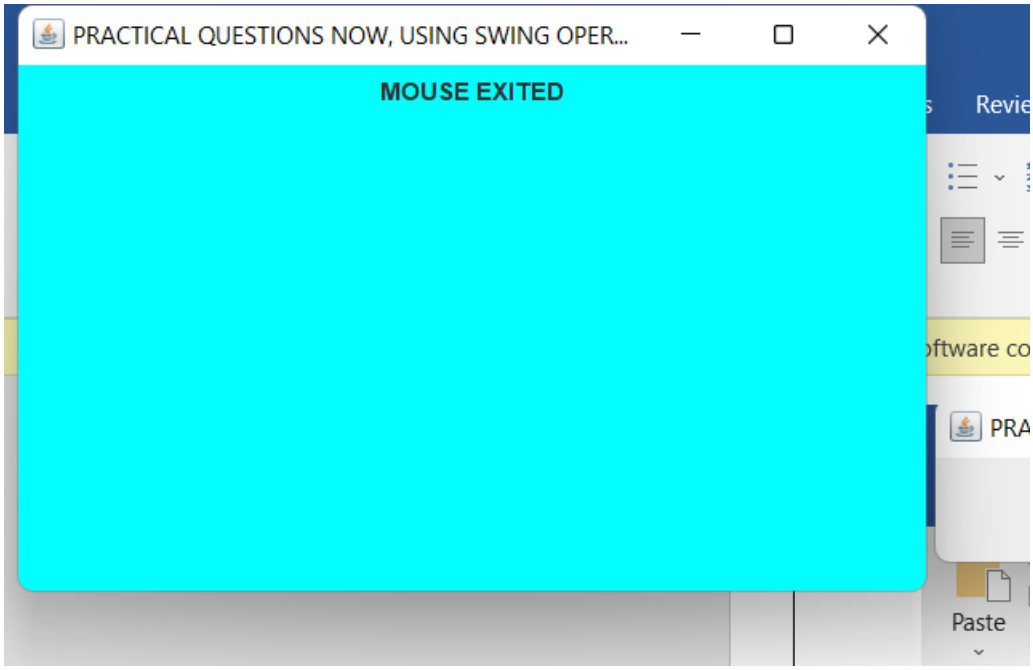
```
    protected void paintComponent(Graphics g)
    {
       super.paintComponent(g);
       g.drawString(msg,mouseX,mouseY);
    }
    public static void main(String[] args)
    {
       SwingUtilities.invokeLater(new Runnable()
       {
          public void run(){
             new Swing8();
          }
       });
       }
}
```

OUTPUT




PRAC...
Design
Times New Romar
14
Copy
Paste
Format Painter


PRACTICAL QUESTIONS NOW, USING SWING OPER...
MOUSE ENTERED
Review

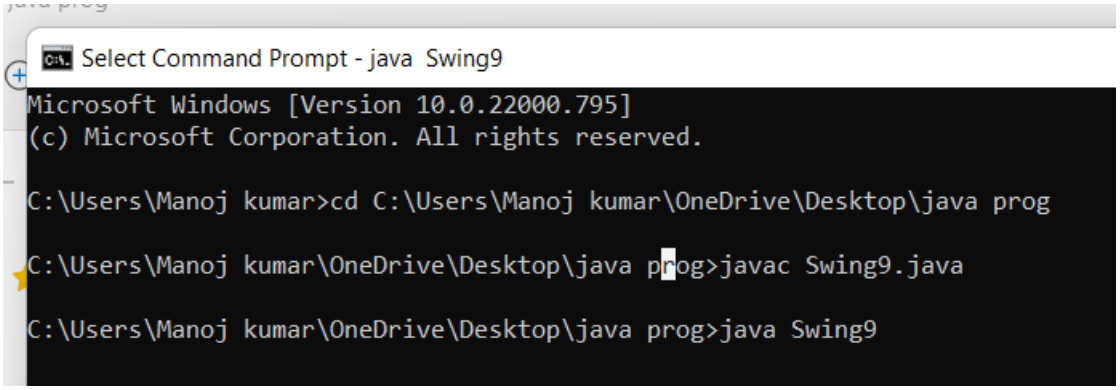

PRACTICAL QUESTIONS NOW, USING SWING OPER...
MOUSE EXITED
Paste

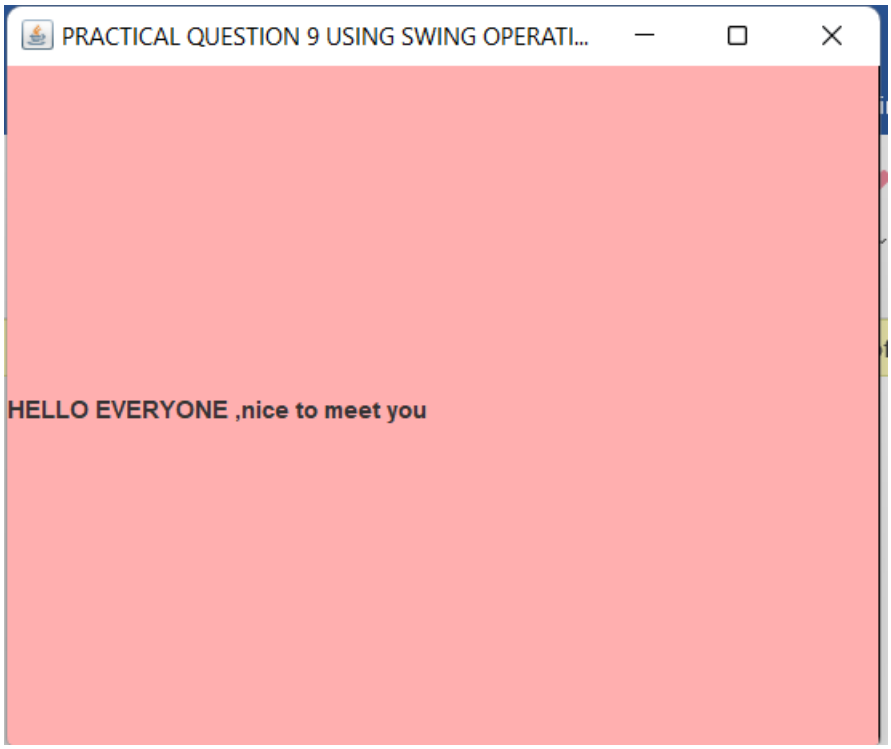
QUES 9

```
import java.awt.*;
import javax.swing.*;
 class Swing9 {
     Swing9()
     {
JFrame j=new JFrame("PRACTICAL QUESTION 9 USING SWING
OPERATION");
    j.setSize(200,200);
    j.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    JLabel jb= new JLabel("HELLO EVERYONE ,nice to meet you");
    j.add(jb);
    j.getContentPane().setBackground(Color.pink);
    j.setVisible(true);
     }
     public static void main(String args[])
     {
       SwingUtilities.invokeLater(new Runnable()
       {
          public void run()
          {
             new Swing9();
          }
       });
     }
```

}

OUTPUT


Select Command Prompt - java Swing9
Microsoft Windows [Version 10.0.22000.795]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Manoj kumar>cd C:\Users\Manoj kumar\OneDrive\Desktop\java prog
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>javac Swing9.java
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>java Swing9

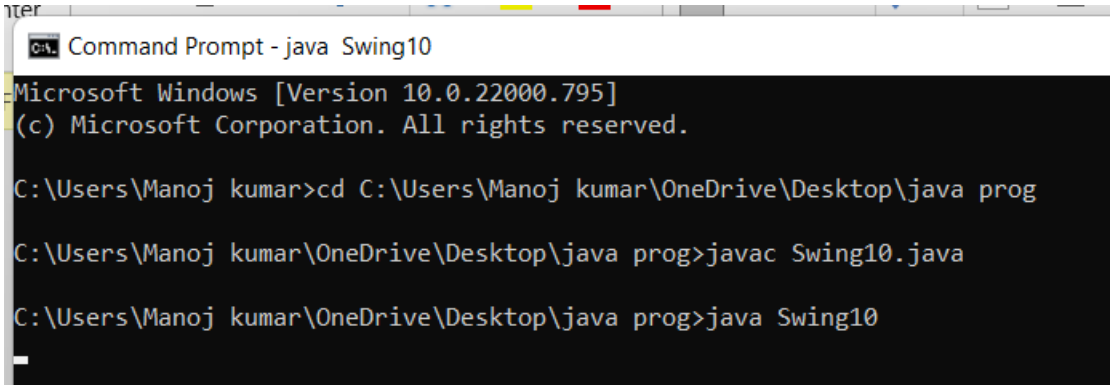

PRACTICAL QUESTION 9 USING SWING OPERATI...
HELLO EVERYONE ,nice to meet you

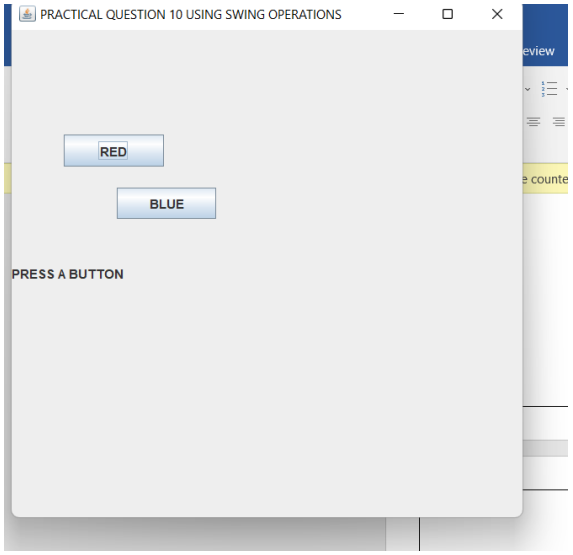
QUES 10

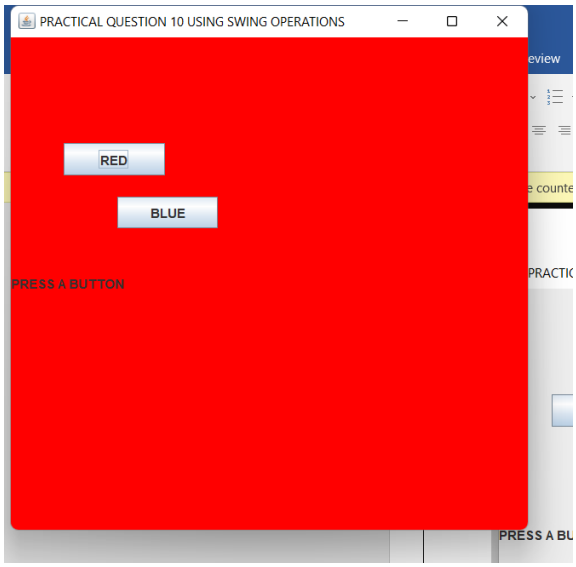
```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
class Swing10 {
   JLabel jb;
   Swing10()
   {
      JFrame jf=new JFrame("PRACTICAL QUESTION 10 USING SWING
OPERATIONS");
      jf.setSize(500,500);
      jf.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
JButton Red=new JButton("RED");
JButton Blue=new JButton("BLUE");
Red.addActionListener(new ActionListener ()
{
   public void actionPerformed(ActionEvent ae)
   {
      jf.getContentPane().setBackground(Color.RED);
   }
});
Blue.addActionListener(new ActionListener ()
{
   public void actionPerformed(ActionEvent ae)
   {
      jf.getContentPane().setBackground(Color.BLUE);
```

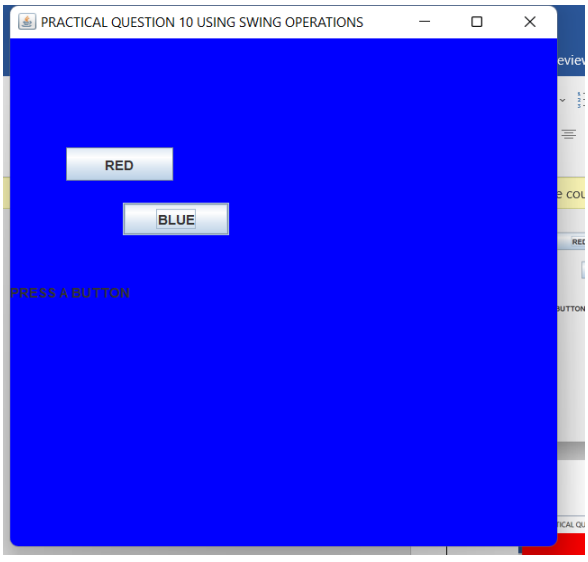
```
    }
});
Red.setBounds(50,100,95,30);
Blue.setBounds(100,150,95,30);
jf.add(Red);
jf.add(Blue);
JLabel l=new JLabel("PRESS A BUTTON");
jf.add(l);
jf.setVisible(true);
    }
    public static void main(String[] args)
    {
        SwingUtilities.invokeLater(new Runnable()
        {
            public void run()
            {
                new Swing10();
            }
        });
        }
}
```

OUTPUT


Command Prompt - java Swing10
Microsoft Windows [Version 10.0.22000.795]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Manoj kumar>cd C:\Users\Manoj kumar\OneDrive\Desktop\java prog
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>javac Swing10.java
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>java Swing10


PRACTICAL QUESTION 10 USING SWING OPERATIONS
RED
BLUE
PRESS A BUTTON


PRACTICAL QUESTION 10 USING SWING OPERATIONS
RED
BLUE
PRESS A BUTTON


PRACTICAL QUESTION 10 USING SWING OPERATIONS
RED
BLUE
PRESS A BUTTON

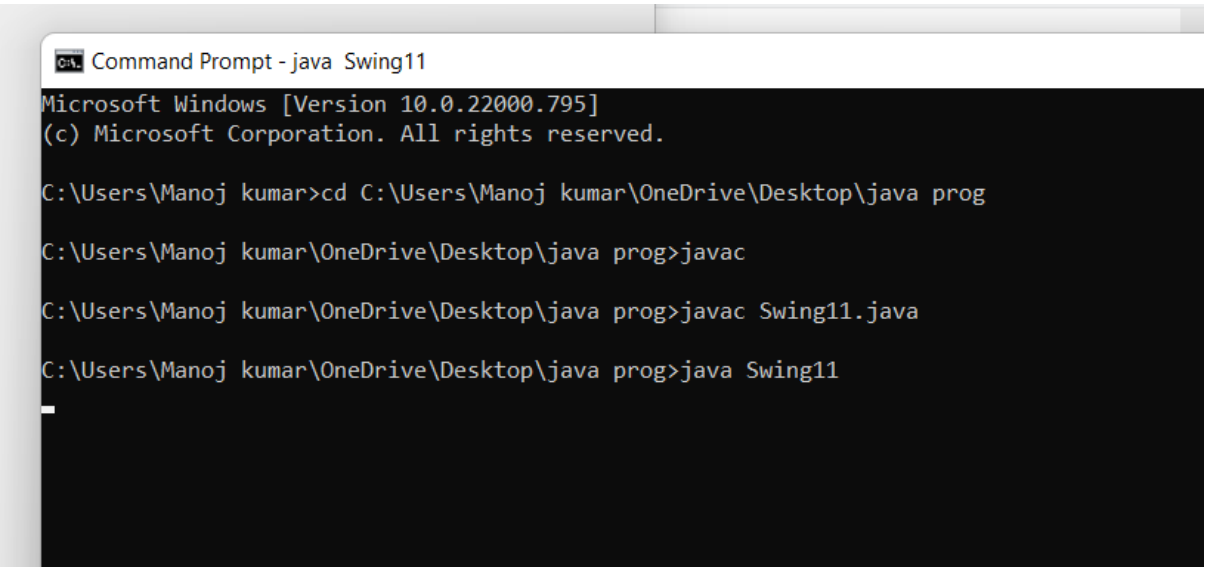
QUES 11

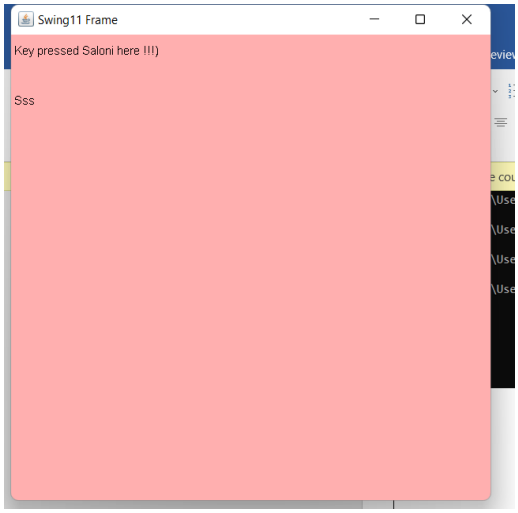
```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

public class Swing11 extends JFrame {
    String msg = "";
    String keystate = "";

    Swing11() {
        setTitle("Swing11 Frame ");
        setSize(500, 500);
        setLayout(new FlowLayout());
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        addKeyListener(new Myclass(this));
        addKeyListener(new Myclass(this));
        addKeyListener(new KeyAdapter() {
            public void keyTyped(KeyEvent ke) {
                keystate="Typed Character is:";
                msg = msg   + ke.getKeyChar();
                getContentPane().setBackground(Color.PINK);
                repaint();
            }
        });
        setVisible(true);
```

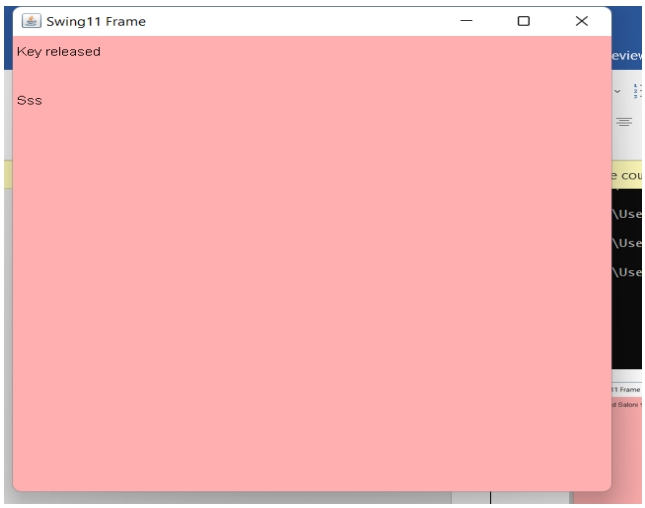
```
    }

    public void paint(Graphics g) {
        super.paint(g);
        g.drawString(msg, 10, 100);
        g.drawString(keystate, 10, 50);
    }

    public static void main(String args[]) {
        SwingUtilities.invokeLater(new Runnable() {
            public void run() {
                new Swing11();
            }
        });
    }
}

class Myclass extends KeyAdapter {
    Swing11 a;

    public Myclass(Swing11 a) {
        this.a = a;
    }

    public void keyPressed(KeyEvent ke) {
```

```
        a.keystate = "Key pressed (Saloni here !!!)";
        a.repaint();
    }

    public void keyReleased(KeyEvent ke) {
        a.keystate = "Key released";
        a.repaint();
    }
}
```

OUTPUT







QUES 12

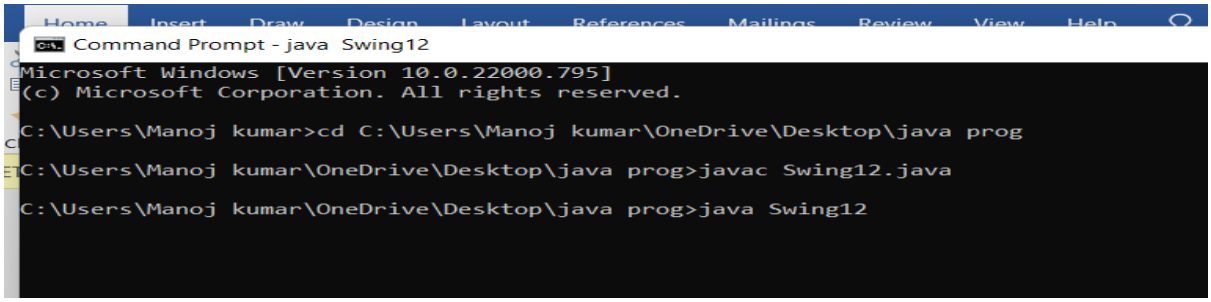
```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

 class Swing12 extends JFrame   {
    JButton a,b;
    JLabel l1,l2,l3,l4,l5;
    String str=" ";
 Swing12()
{
    setTitle("PRACTICAL QUESTION 12 USING SWING OPERATION ");
        setLayout(new FlowLayout());
setSize(220,90);
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

// CREATE BUTTONS
a=new JButton("A");
b= new JButton("B");

// CREATE LABELS
l1=new JLabel("Name:Saloni Rana");

l2=new JLabel("Roll Number:21570049");

l3=new JLabel("Course: Bsc(h)Computer Science");
```

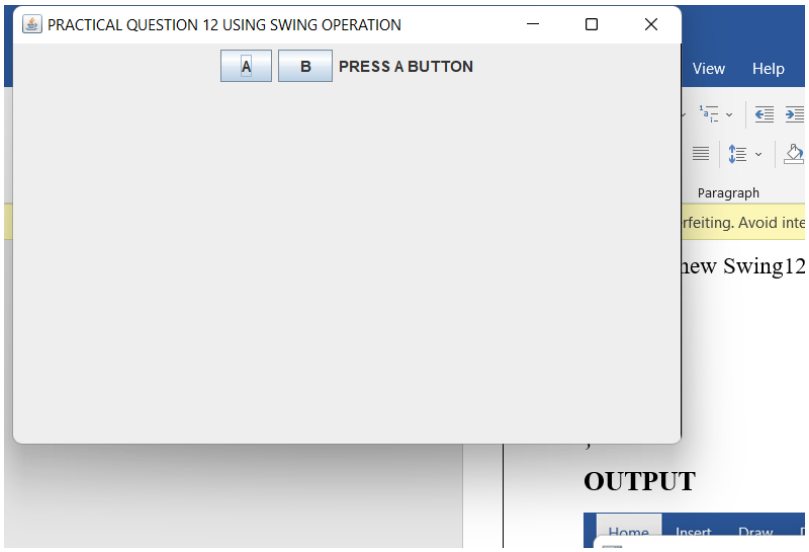
```
l4=new JLabel("College: Kalindi College");

l5=new JLabel("CGPA: N/A");



a.addActionListener(new ActionListener ()
{
    public void actionPerformed(ActionEvent ae)
    {
        str=" A is Pressed";
        l1.setBounds(100,50,150,20);

        l2.setBounds(100,100,250,20);

         l3.setBounds(100,150,350,20);

         l4.setBounds(100,200,450,20);

   remove(l5);
 add(l1);
add(l2);
  add(l3);
 add(l4);
 getContentPane(). setBackground(Color.magenta);
 repaint();
    }
```

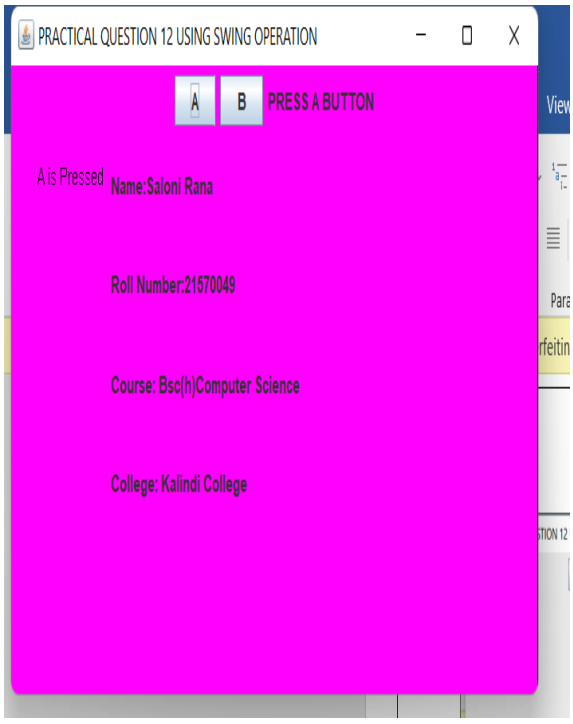
```
});
{

}
b.addActionListener(new ActionListener ()
{
   public void actionPerformed(ActionEvent ae)
   {
      str=" B is Pressed";
      l5.setBounds(100,250,500,20);

      remove(l1);
      remove(l2);
      remove(l3);
      remove(l4);
      add(l5);
      getContentPane().setBackground(Color.pink);
      repaint();
   }
});
add(a);
add(b);
JLabel jb=new JLabel("PRESS A BUTTON",JLabel.CENTER);
add(jb);
setVisible(true);

}
```

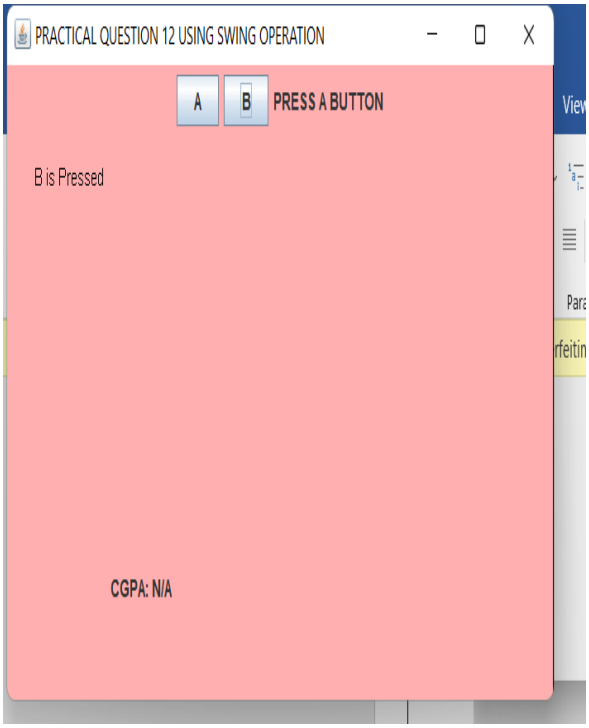
```
public void paint(Graphics p)
    {
        super.paint(p);
        p.drawString(str,30,90);


    }

    public static void main(String args[])
    {
        SwingUtilities.invokeLater(new Runnable()
        {
            public void run()
            {
                new Swing12();
            }
        });
    }
}
```

OUTPUT


Command Prompt - java Swing12
Microsoft Windows [Version 10.0.22000.795]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Manoj kumar>cd C:\Users\Manoj kumar\OneDrive\Desktop\java prog
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>javac Swing12.java
C:\Users\Manoj kumar\OneDrive\Desktop\java prog>java Swing12


PRACTICAL QUESTION 12 USING SWING OPERATION
A
B
PRESS A BUTTON
View
Help
Paragraph
ew Swing12
OUTPUT


PRACTICAL QUESTION 12 USING SWING OPERATION
A
B
PRESS A BUTTON
A is Pressed
Name:Saloni Rana
Roll Number:21570049
Course: Bsc(h)Computer Science
College: Kalindi College


PRACTICAL QUESTION 12 USING SWING OPERATION
A
B
PRESS A BUTTON
B is Pressed
CGPA: N/A