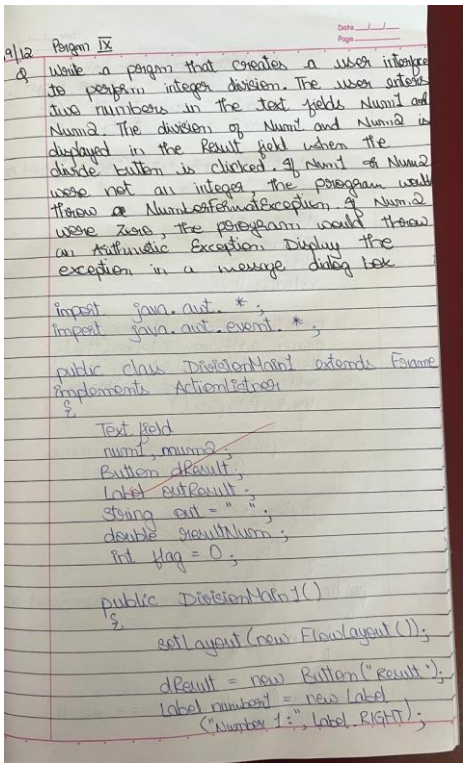
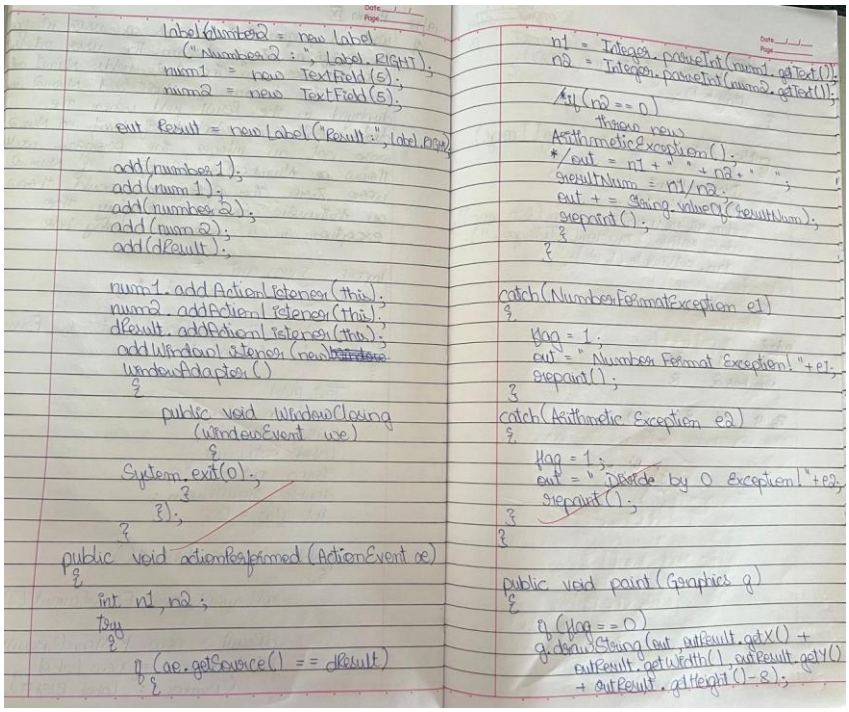
Program 9

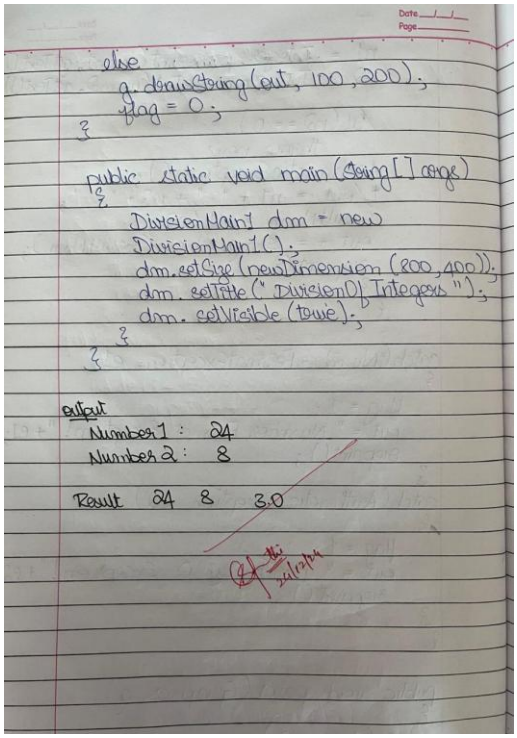
Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num2 were not an integer, the program would throw a NumberFormatException. If Num2 were Zero, the program would throw an Arithmetic Exception Display the exception in a message dialog box.



```
9/12 Program IX
Q. Write a program that creates a user interface
to perform integer division. The user enters
two numbers in the text fields Num1 and
Num2. The division of Num1 and Num2 is
displayed in the Result field when the
divide button is clicked. If Num1 or Num2
were not an integer, the program would
throw a NumberFormatException. If Num2
were Zero, the program would throw
an Arithmetic Exception Display the
exception in a message dialog box

import java.awt.*;
import java.awt.event.*;

public class DivisionMain1 extends Frame
implements ActionListener
{
    TextField
    num1, num2;
    Button dResult;
    Label outResult;
    String out = " ";
    double resultNum;
    int flag = 0;

    public DivisionMain1()
    {
        setLayout(new FlowLayout());

        dResult = new Button("Result");
        Label number1 = new Label
            ("Number 1:", Label.RIGHT);
```



```
        Label number2 = new Label
            ("Number 2:", Label.RIGHT);
        num1 = new TextField(5);
        num2 = new TextField(5);

        out Result = new Label("Result:", Label.RIGHT);

        add(number1);
        add(num1);
        add(number2);
        add(num2);
        add(dResult);

        num1.addActionListener(this);
        num2.addActionListener(this);
        dResult.addActionListener(this);
        addWindowListener(new WindowAdapter()
        {
            public void windowClosing
                (WindowEvent we)
            {
                System.exit(0);
            }
        });
    }
    public void actionPerformed(ActionEvent ae)
    {
        int n1, n2;
        try
        {
            if(ae.getSource() == dResult)

            n1 = Integer.parseInt(num1.getText());
            n2 = Integer.parseInt(num2.getText());

            if(n2 == 0)
                throw new
            ArithmeticException();
            out = n1 + " " + n2 + " ";
            resultNum = n1/n2;
            out += String.valueOf(resultNum);
            repaint();
        }

        catch(NumberFormatException e1)
        {
            flag = 1;
            out = "Number Format Exception!" + e1;
            repaint();
        }
        catch(ArithmeticException e2)
        {
            flag = 1;
            out = "Divide by 0 exception!" + e2;
            repaint();
        }
    }

    public void paint(Graphics g)
    {
        if(flag == 0)
        g.drawString(out, outResult.getX() +
            outResult.getWidth(), outResult.getY()
            + outResult.getHeight()-8);
```



CODE:

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

public class DivisionMain1 extends Frame implements ActionListener

{

TextField num1,num2;
 Button dResult;

Label outResult;
 String out="";
double resultNum;
int flag=0;


public DivisionMain1()

{

setLayout(new FlowLayout());


dResult = new Button("RESULT");

Label number1 = new Label("Number 1:",Label.RIGHT);
 Label number2 = new Label("Number 2:",Label.RIGHT);
```

```
 num1=new TextField(5);
num2=new TextField(5);
outResult = new Label("Result:",Label.RIGHT);


add(number1);
add(num1);
 add(number2);
 add(num2);
add(dResult);
 add(outResult);


num1.addActionListener(this);
num2.addActionListener(this);
 dResult.addActionListener(this);
 addWindowListener(new WindowAdapter()
{
public void windowClosing(WindowEvent we)
{
System.exit(0);
}
});
}
public void actionPerformed(ActionEvent ae)
{
int n1,n2;
 try
{
if (ae.getSource() == dResult)
{
n1=Integer.parseInt(num1.getText());
n2=Integer.parseInt(num2.getText());


/*if(n2==0)
```

```
throw new ArithmeticException();
*/ out=n1+" "+n2+" ";

resultNum=n1/n2;
out+=String.valueOf(resultNum);
repaint();

}

}

catch(NumberFormatException e1)

{

flag=1;

out="Number Format Exception! "+e1;
repaint();

}

catch(ArithmeticException e2)

{

flag=1;

out="Divide by 0 Exception! "+e2;
repaint();

}

}

public void paint(Graphics g)

{

if(flag==0)
g.drawString(out,outResult.getX()+outResult.getWidth(),outResult.getY()+outResult.
getHeight()-8);

else g.drawString(out,100,200);
flag=0;

}

public static void main(String[] args)

{

DivisionMain1 dm=new DivisionMain1();
dm.setSize(new Dimension(800,400));
dm.setTitle("DivisionOfIntegers");
```

```
dm.setVisible(true);
}
}
```

OUTPUT: