



PORT CITY INTERNATIONAL UNIVERSITY

REPORT

Course Title: - Object Oriented Programming Sessional

Course Code: - 212

Name of Report: - Mid Report

Submitted To

Name of Lecturer: -Md. Muhtadir Rahman

Department: -CSE

Port City International University

Submitted By

Name of Student: -Sakhawat Hossain

Program: -B.sc in CSE

Batch: -21(B)

ID: -CSE 02107065

Date: -21/12/2021

INDEX

Problem No	Name of Problem	Page No
01	Java Editor & Environment Setup	01-03
02	Calculator using Java Swing	03-21
03	Integer Division	21-29
04	Java Applet	30
05	Digital Clock	31-33

Problem Statement:-01 Java Editor Installation & Environment Setup

How to Install NetBeans on Windows

Step 1: Install JDK

To use NetBeans for Java programming, you need to first install Java Development Kit (JDK). See "JDK - How to Install ".

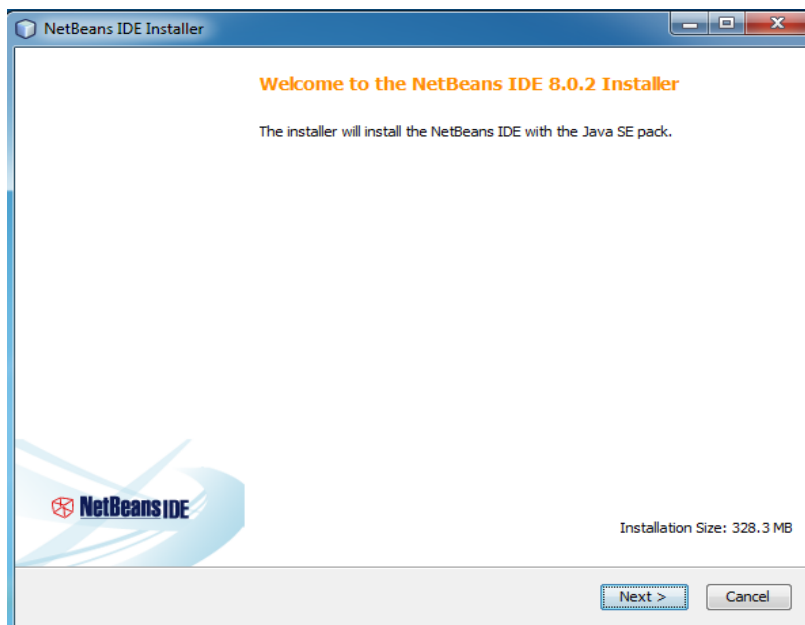
Step 2: Download

Download "NetBeans IDE" installer from <http://netbeans.org/downloads/index.html> . There are many "bundles" available. For beginners, choose the 1st entry "Java SE" (e.g., "netbeans-8.2-javase-windows.exe " 95MB).

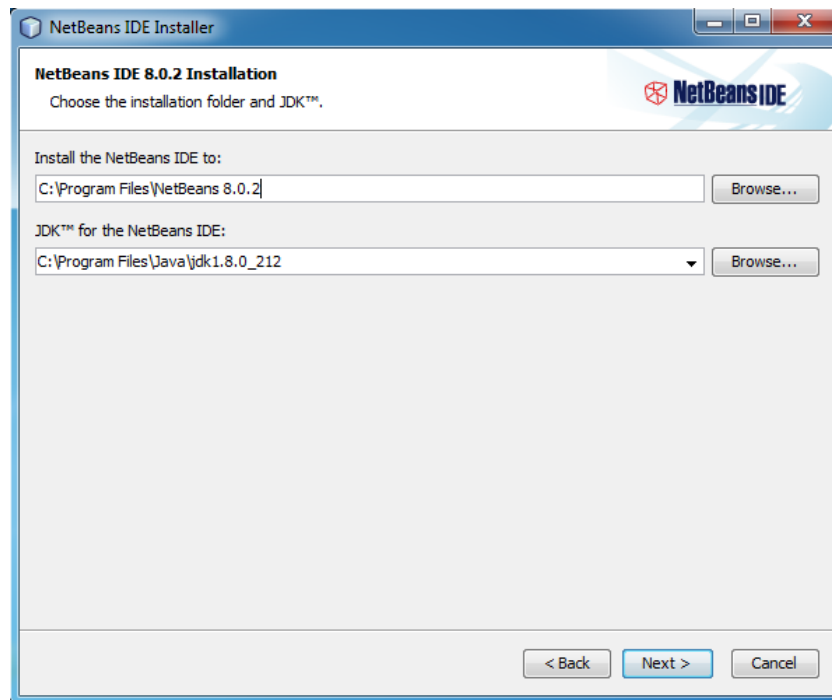
Step 3: Run the Installer

Run the downloaded installer.

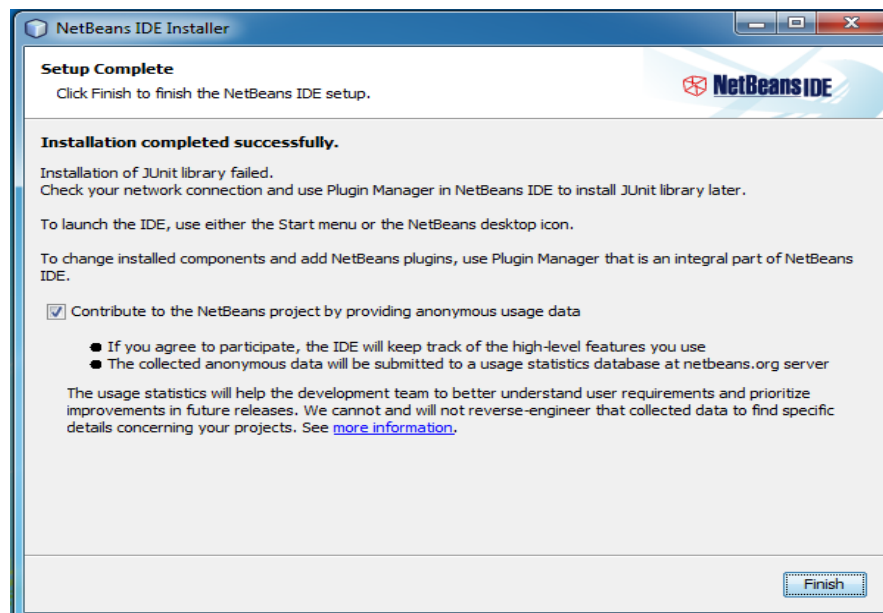
- Start the installation process:



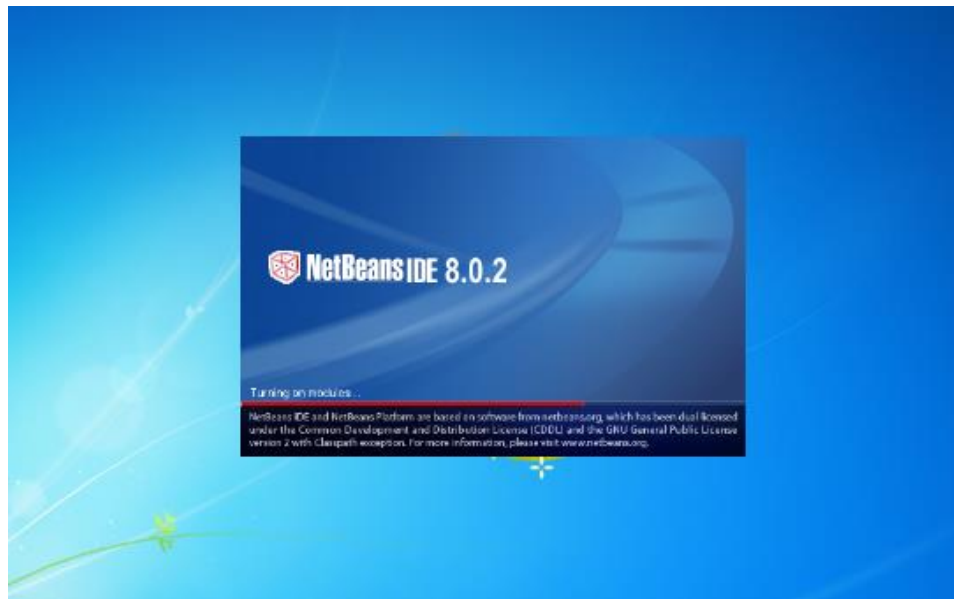
- Choose the location for installing NetBeans IDE 8.2. Also, select the location where the JDK is installed on your computer



- Wait for some few minutes to let the installation complete. Then Click on Finish



- Download And Install Netbeans Ide 8.2 On Windows 10 64-Bit. Netbean Icon



Problem Statement:- 02 Calculator Using Java Swing

Source Code:-

```
package Calculate;

public class Calculator extends javax.swing.JFrame {

    double firstnum;

    double secondnum;

    double result;

    String operations;

    String answer

    public Calculator() {

        initComponents();

    }

}
```

```
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {
    jScrollPane1 = new javax.swing.JScrollPane();
    jTextArea1 = new javax.swing.JTextArea();
    jButton1 = new javax.swing.JButton();
    jButton2 = new javax.swing.JButton();
    jButton3 = new javax.swing.JButton();
    jButton4 = new javax.swing.JButton();
    jButton5 = new javax.swing.JButton();
    jButton6 = new javax.swing.JButton();
    jButton7 = new javax.swing.JButton();
    jButton8 = new javax.swing.JButton();
    jButton9 = new javax.swing.JButton();
    jButton10 = new javax.swing.JButton();
    jButton11 = new javax.swing.JButton();
    jButton12 = new javax.swing.JButton();
    jButton13 = new javax.swing.JButton();
    jButton14 = new javax.swing.JButton();
    jButton15 = new javax.swing.JButton();
    jButton16 = new javax.swing.JButton();
    jButton17 = new javax.swing.JButton();
    jButton18 = new javax.swing.JButton();
    jButton19 = new javax.swing.JButton();

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    jTextArea1.setColumns(20);
    jTextArea1.setRows(5);
    jScrollPane1.setViewportView(jTextArea1);
```

```

jButton1.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton1.setText("7");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});

jButton2.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton2.setText("C");
jButton2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton2ActionPerformed(evt);
    }
});

jButton3.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton3.setText("4");
jButton3.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton3ActionPerformed(evt);
    }
});

jButton4.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton4.setText("1");
jButton4.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton4ActionPerformed(evt);
    }
});

```

```
});  
jButton5.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N  
jButton5.setText("%");  
jButton5.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton5ActionPerformed(evt);  
    }  
});  
jButton6.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N  
jButton6.setText("/");  
jButton6.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton6ActionPerformed(evt);  
    }  
});  
  
jButton7.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N  
jButton7.setText("8");  
jButton7.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton7ActionPerformed(evt);  
    }  
});
```



```
jButton8.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton8.setText("5");
jButton8.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton8ActionPerformed(evt);
    }
});
```

```
jButton9.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton9.setText("2");
jButton9.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton9ActionPerformed(evt);
    }
});
```

```
jButton10.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton10.setText("0");
jButton10.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton10ActionPerformed(evt);
    }
});
```

```
jButton11.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton11.setText("*");
jButton11.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        jButton11ActionPerformed(evt);
    }
});

jButton12.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton12.setText("x");

jButton13.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton13.setText("9");
jButton13.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton13ActionPerformed(evt);
    }
});

jButton14.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton14.setText("6");
jButton14.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton14ActionPerformed(evt);
    }
});

jButton15.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jButton15.setText("3");
jButton15.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton15ActionPerformed(evt);
    }
}
```

```
});
```

```
jButton16.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
```

```
jButton16.setText(".");
```

```
jButton16.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        jButton16ActionPerformed(evt);
```

```
    }
```

```
});
```

```
jButton17.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
```

```
jButton17.setText("+");
```

```
jButton17.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        jButton17ActionPerformed(evt);
```

```
    }
```

```
});
```

```
jButton18.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
```

```
jButton18.setText("-");
```

```
jButton18.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        jButton18ActionPerformed(evt);
```

```
    }
```

```
});
```

```
jButton19.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
```

```
jButton19.setText("=");
```

```
jButton19.addActionListener(new java.awt.event.ActionListener() {
```

```
public void actionPerformed(java.awt.event.ActionEvent evt) {  
    jButton19ActionPerformed(evt);  
}  
});  
  
javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());  
getContentPane().setLayout(layout);  
layout.setHorizontalGroup(  
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
        .addGroup(layout.createSequentialGroup()  
            .addGap(10, 10, 10)  
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 342,  
                    javax.swing.GroupLayout.PREFERRED_SIZE)  
                .addGroup(layout.createSequentialGroup()  
                    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING,  
                        false)  
                        .addGroup(layout.createSequentialGroup()  
                            .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE, 75,  
                                javax.swing.GroupLayout.PREFERRED_SIZE)  
                            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)  
                            .addComponent(jButton10, javax.swing.GroupLayout.DEFAULT_SIZE,  
                                javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))  
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING,  
                            layout.createSequentialGroup()  
                                .addComponent(jButton4, javax.swing.GroupLayout.PREFERRED_SIZE, 75,  
                                    javax.swing.GroupLayout.PREFERRED_SIZE)  
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)  
                                .addComponent(jButton9, javax.swing.GroupLayout.DEFAULT_SIZE,  
                                    javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
```

```
.addGroup(javax.swing.GroupLayout.Alignment.LEADING,
layout.createSequentialGroup())

    .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

    .addComponent(jButton8, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE))

    .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
layout.createSequentialGroup())

    .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

    .addComponent(jButton6, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

    .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
layout.createSequentialGroup())

    .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

    .addComponent(jButton7, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)))

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(layout.createSequentialGroup())

            .addComponent(jButton11, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

            .addComponent(jButton12, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGroup(layout.createSequentialGroup())

            .addComponent(jButton13, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
```

```
.addComponent(jButton17, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGroup(layout.createSequentialGroup())

.addComponent(jButton14, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addComponent(jButton18, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGroup(layout.createSequentialGroup())

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(jButton15, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addComponent(jButton16, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addComponent(jButton19, javax.swing.GroupLayout.PREFERRED_SIZE, 75,
javax.swing.GroupLayout.PREFERRED_SIZE))))

.addContainerGap(20, Short.MAX_VALUE))

);

layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup())

.addContainerGap()

.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 79,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

.addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jButton6, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
.addComponent(jButton11, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(jButton12, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

            .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton7, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton13, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton17, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

            .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton8, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton14, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton18, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addGroup(layout.createSequentialGroup()

                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

                    .addComponent(jButton4, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addComponent(jButton9, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
        .addComponent(jButton15, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

        .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(jButton10, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(jButton16, javax.swing.GroupLayout.PREFERRED_SIZE, 60,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGap(0, 0, Short.MAX_VALUE)

        .addComponent(jButton19, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

        .addContainerGap()

    );

    pack();
} // </editor-fold>
```

```
private void jButton7ActionPerformed(java.awt.event.ActionEvent evt) {
    String Enternumber = jtxtDisplay.getText()+jBtn7.getText();
    jtxtDisplay.setText(Enternumber);
}
```

```
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    jtxtDisplay.setText("");
}
```

```
private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {
    String Enternumber = jtxtDisplay.getText() + jBtn4.getText();
```



```
jtxtDisplay.setText(Enternumber);
}

private void jButton19ActionPerformed(java.awt.event.ActionEvent evt) {
    String answer;
    secondnum = Double.parseDouble(jtxtDisplay.getText());
    if(operation == "+")
    {
        result = firstnum + secondnum;
        answer = String.format("%.0f",result);
        jtxtDisplay.setText(answer);
    }
    else if(operations == "-")
    {
        result = firstnum - secondnum;
        answer = String.format("%.0f",result);
        jtxtDisplay.setText(answer);
    }
    else if(operations == "*")
    {
        result = firstnum * secondnum;
        answer = String.format("%.0f",result);
        jtxtDisplay.setText(answer);
    }
    else if(operations == "/")
    {
        result = firstnum / secondnum;
        answer = String.format("%.0f",result);
        jtxtDisplay.setText(answer);
    }
}
```

```
    }  
    else if(operations == "%")  
    {  
        result = firstnum % secondnum;  
        answer = String.format("%.0f",result);  
        jtxtDisplay.setText(answer);  
    }  
}  
  
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jtxtDisplay.getText() + jBtn1.getText();  
    jtxtDisplay.setText(Enternumber);  
}  
  
private void jButton13ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jtxtDisplay.getText() + jBtn13.getText();  
    jtxtDisplay.setText(Enternumber);  
}  
  
private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jtxtDisplay.getText() + jBtn3.getText();  
    jtxtDisplay.setText(Enternumber);  
}  
  
private void jButton8ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jtxtDisplay.getText() + jBtn8.getText();  
    jtxtDisplay.setText(Enternumber);  
}
```

```
private void jButton14ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jtxtDisplay.getTex() + jBtn14.getTex();  
    jtxtDisplay.setTex(Enternumber);  
}
```

```
private void jButton9ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jtxtDisplay.getTex() + jBtn9.getTex();  
    jtxtDisplay.setTex(Enternumber);  
}
```

```
private void jButton15ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jtxtDisplay.getTex() + jBtn15.getTex();  
    jtxtDisplay.setTex(Enternumber);  
}
```

```
private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {  
    firstnum = Double.parseDouble(jtxtDisplay.getText());  
    jtxtDisplay.setText("");  
    operations = "%";  
}
```

```
private void jButton6ActionPerformed(java.awt.event.ActionEvent evt) {  
    firstnum = Double.parseDouble(jtxtDisplay.getText());  
    jtxtDisplay.setText("");  
    operations = "/";  
}
```

```
private void jButton11ActionPerformed(java.awt.event.ActionEvent evt) {  
    firstnum = Double.parseDouble(jtxtDisplay.getText());
```

```
jtxtDisplay.setText("");
operations = "*";
}

private void jButton17ActionPerformed(java.awt.event.ActionEvent evt) {
    firstnum = Double.parseDouble(jtxtDisplay.getText());
    jtxtDisplay.setText("");
    operations = "+";
}

private void jButton18ActionPerformed(java.awt.event.ActionEvent evt) {
    firstnum = Double.parseDouble(jtxtDisplay.getText());
    jtxtDisplay.setText("");
    operations = "-";
}

private void jButton10ActionPerformed(java.awt.event.ActionEvent evt) {
    String Enternumber = jtxtDisplay.getTex() + jBtn10.getTex();
    jtxtDisplay.setTex(Enternumber);
}

private void jButton16ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
}

/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
```

```

/* Set the Nimbus look and feel */

//<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">

/* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
 * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
 */

try {

    for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {

        if ("Nimbus".equals(info.getName())) {

            javax.swing.UIManager.setLookAndFeel(info.getClassName());

            break;

        }

    }

} catch (ClassNotFoundException ex) {

    java.util.logging.Logger.getLogger(CalculatoR.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);

} catch (InstantiationException ex) {

    java.util.logging.Logger.getLogger(CalculatoR.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);

} catch (IllegalAccessException ex) {

    java.util.logging.Logger.getLogger(CalculatoR.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);

} catch (javax.swing.UnsupportedLookAndFeelException ex) {

    java.util.logging.Logger.getLogger(CalculatoR.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);

}

//</editor-fold>

/* Create and display the form */

java.awt.EventQueue.invokeLater(new Runnable() {

```

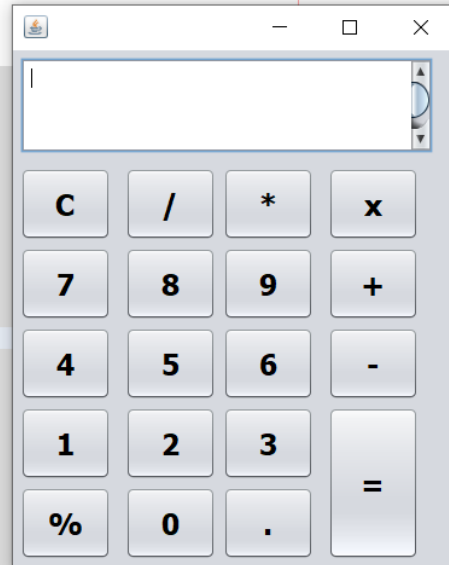
```
        public void run() {  
            new CalculatoR().setVisible(true);  
        }  
    });  
}  
  
// Variables declaration - do not modify  
private javax.swing.JButton jButton1;  
private javax.swing.JButton jButton10;  
private javax.swing.JButton jButton11;  
private javax.swing.JButton jButton12;  
private javax.swing.JButton jButton13;  
private javax.swing.JButton jButton14;  
private javax.swing.JButton jButton15;  
private javax.swing.JButton jButton16;  
private javax.swing.JButton jButton17;  
private javax.swing.JButton jButton18;  
private javax.swing.JButton jButton19;  
private javax.swing.JButton jButton2;  
private javax.swing.JButton jButton3;  
private javax.swing.JButton jButton4;  
private javax.swing.JButton jButton5;  
private javax.swing.JButton jButton6;  
private javax.swing.JButton jButton7;  
private javax.swing.JButton jButton8;  
private javax.swing.JButton jButton9;  
private javax.swing.JScrollPane jScrollPane1;  
private javax.swing.JTextArea jTextArea1;  
  
// End of variables declaration
```

```
}
```

Design:-

```
r().setVisible(true);
```

```
- do not modify
on jButton1;
on jButton10;
on jButton11;
on jButton12;
on jButton13;
on jButton14;
on jButton15;
on jButton16;
on jButton17;
on jButton18;
on jButton19;
on jButton2;
on jButton3;
on jButton4;
on jButton5;
on jButton6;
on jButton7;
on jButton8;
on jButton9;
llPane jScrollPane1;
Area jTextArea1;
ation
```



Problem Statement:-03 Integer Division

Source Code:-

```
package intigerdivision;

public class IntigerDivisions extends javax.swing.JFrame {

    public IntigerDivisions() {
        initComponents();
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {
```

```
jLabel1 = new javax.swing.JLabel();
jTextField1 = new javax.swing.JTextField();
jLabel2 = new javax.swing.JLabel();
jTextField2 = new javax.swing.JTextField();
jButton1 = new javax.swing.JButton();
jButton2 = new javax.swing.JButton();
jLabel3 = new javax.swing.JLabel();
jTextField3 = new javax.swing.JTextField();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jLabel1.setText("First Number");
jTextField1.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jLabel2.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jLabel2.setText("Second Number");

jTextField2.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jTextField2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jTextField2ActionPerformed(evt);
    }
});
```



```
jButton1.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jButton1.setText("Clear");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});
jButton2.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jButton2.setText("Divide");
jButton2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton2ActionPerformed(evt);
    }
});

jLabel3.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jTextField3.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jTextField3.setText("Result");
jTextField3.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jTextField3ActionPerformed(evt);
    }
});
```

```
        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());

        getContentPane().setLayout(layout);

        layout.setHorizontalGroup(

            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                .addGroup(layout.createSequentialGroup()

                    .addGap(58, 58, 58)

                    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                        .addComponent(jTextField3,
javax.swing.GroupLayout.PREFERRED_SIZE, 128,
javax.swing.GroupLayout.PREFERRED_SIZE)

                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

                        .addComponent(jLabel3)

                        .addGap(78, 78, 78))

                    .addGroup(layout.createSequentialGroup()

                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                            .addComponent(jLabel1)

                            .addComponent(jLabel2))
```

```
        .addComponent(jButton1,
javax.swing.GroupLayout.PREFERRED_SIZE, 96,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGap(30, 30, 30)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addComponent(jButton2,
javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 99,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

        .addComponent(jTextField1,
javax.swing.GroupLayout.DEFAULT_SIZE, 188, Short.MAX_VALUE)

        .addComponent(jTextField2)))

        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))))

    );

    layout.setVerticalGroup(

        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(layout.createSequentialGroup()

        .addGap(69, 69, 69)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

        .addComponent(jLabel1)

        .addComponent(jTextField1,
javax.swing.GroupLayout.PREFERRED_SIZE, 31,
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
.addGap(42, 42, 42)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(jLabel2)

    .addComponent(jTextField2,
javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))

.addGap(30, 30, 30)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

    .addComponent(jTextField3,
javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(jLabel3))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 48,
Short.MAX_VALUE)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE,
36, javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE,
36, javax.swing.GroupLayout.PREFERRED_SIZE))

.addGap(35, 35, 35))

);

pack();

}

private void jTextField2ActionPerformed(java.awt.event.ActionEvent evt) {
```

```
}  
  
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {  
    int num1=Integer.parseInt(jTextField1.getText());  
    int num2=Integer.parseInt(jTextField2.getText());  
    int Result=num1/num2;  
    jLabel3.setText(" ");  
}  
  
private void jTextField3ActionPerformed(java.awt.event.ActionEvent evt) {  
}  
  
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {  
    int num1=Integer.parseInt(jTextField1.getText());  
    int num2=Integer.parseInt(jTextField2.getText());  
    int Result=num1/num2;  
    jLabel3.setText("Division is "+Result);  
}  
  
try {  
    for (javax.swing.UIManager.LookAndFeelInfo info :  
        javax.swing.UIManager.getInstalledLookAndFeels()) {  
        if ("Nimbus".equals(info.getName())) {  
            javax.swing.UIManager.setLookAndFeel(info.getClassName());  
            break;  
        }  
    }  
}  
  
} catch (ClassNotFoundException ex) {
```

```
java.util.logging.Logger.getLogger(IntigerDivisions.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (InstantiationException ex) {
```

```
java.util.logging.Logger.getLogger(IntigerDivisions.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (IllegalAccessException ex) {
```

```
java.util.logging.Logger.getLogger(IntigerDivisions.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
```

```
java.util.logging.Logger.getLogger(IntigerDivisions.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    }
```

```
    java.awt.EventQueue.invokeLater(new Runnable() {
```

```
        public void run() {
```

```
            new IntigerDivisions().setVisible(true);
```

```
        }
```

```
    });
```

```
}
```

```
private javax.swing.JButton jButton1;
```

```
private javax.swing.JButton jButton2;
```

```
private javax.swing.JLabel jLabel1;
```

```
private javax.swing.JLabel jLabel2;
```

```
private javax.swing.JLabel jLabel3;
```

```

private javax.swing.JTextField jTextField1;
private javax.swing.JTextField jTextField2;
private javax.swing.JTextField jTextField3;
// End of variables declaration
}

```

OUTPUT

ge this license header, choose License Headers in Project Properties.
ge this template file, choose Tools | Templates
n the template in the editor.

```
tigerdivision;
```

```
Asus
```

```
ss IntigerDivis
```

```
ates new form I
```

```
IntigerDivisio  
itComponents();
```

```
s method is cal  
NING: Do NOT mc  
enerated by the
```

```
essWarnings("un  
ted Code
```

```
e void jTextFieldActionPerformed(java.awt.event.ActionEvent evt) {  
    TODO add your handling code here:
```

```
e void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {  
    rDivisions >
```

```
IntigerDivision (form) v
```

Problem Statement:-04 Java Applet

Source Code:-

```
import java. applet. Applet;

import java. awt. Graphics;

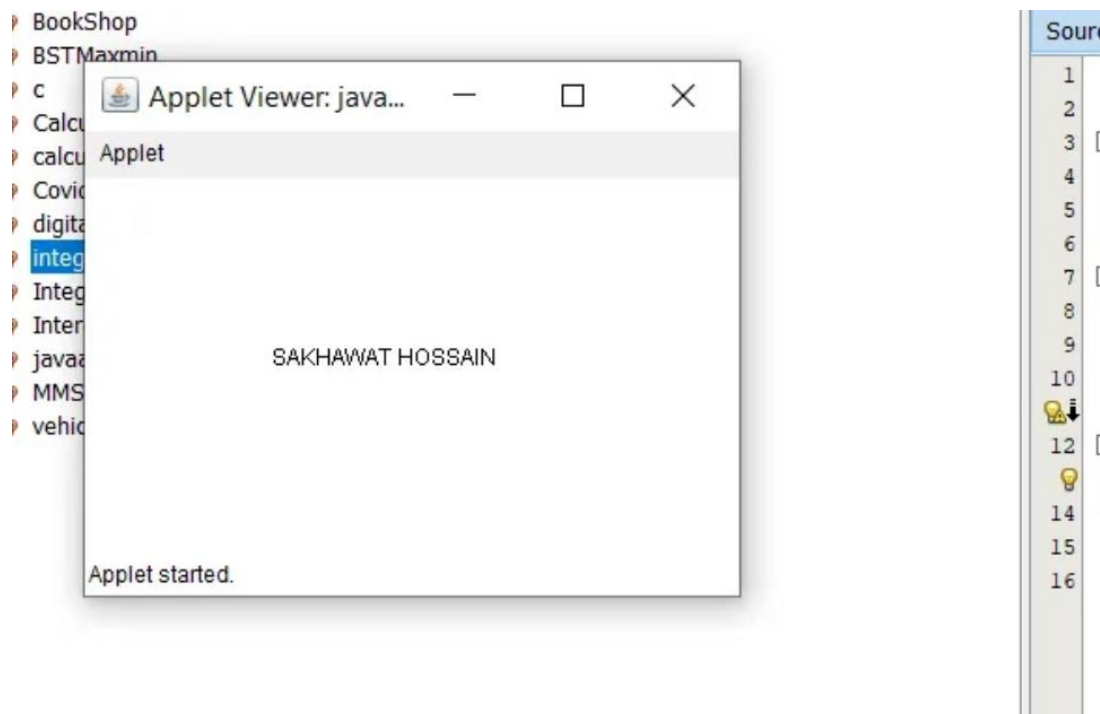
public class First extends Applet {

    public void paint (Graphics g) {

        g. drawstring ("welcome",150,150);
    }

}
```

OUTPUT



Problem Statement:-05 Digital Clock

Source Code:-

```
import java.applet.*;
import java.awt.*;
import java.text.*;
import java.util.*;

public class DigitalClock extends Applet implements Runnable{
    Thread t=null;
    int hours=0, minutes=0,seconds=0;

    String timeString=" ";

    public void init() {
        setBackground( Color.blue);
    }

    public void start() {
        t = new Thread( this );
        t.start();
    }
}
```

```
public void run() {  
    try {  
        while (true) {  
  
            Calendar cal = Calendar.getInstance();  
            hours = cal.get( Calendar.HOUR_OF_DAY );  
            if ( hours > 12 ) hours -= 12;  
            minutes = cal.get( Calendar.MINUTE );  
            seconds = cal.get( Calendar.SECOND );  
  
            SimpleDateFormat formatter = new SimpleDateFormat("hh:mm:ss");  
            Date date = cal.getTime();  
            timeString = formatter.format( date );  
  
            repaint();  
            t.sleep( 100 );  
        }  
    }  
    catch (Exception e) { }  
}  
  
public void paint( Graphics g ) {  
    g.setColor( Color.yellow );
```

```
g.drawString( timeString, 150, 150 );
```

```
}
```

```
}
```

OUTPUT

```
clock extends Applet implements Runnable{
```

```
    hours=0, seconds=0;
```

```
    " ";
```

```
    init() {  
        color.blue);
```

```
    {  
        ( this );
```

```
    {
```

```
        cal = Calendar.ge
```

```
        cal.get( Calendar
```

```
        ( > 12 ) hours -- 12;
```

```
        cal.get( Calendar.MINUTE );
```

```
        cal.get( Calendar.SECOND );
```

