Task 1:

public class TableGeneration extends javax.swing.JFrame {

public TableGeneration() {

initComponents();

}

@SuppressWarnings("unchecked")

// <editor-fold defaultstate="collapsed" desc="Generated Code">

private void initComponents() {

jLabel3 = new javax.swing.JLabel();

number = new javax.swing.JTextField();

jButton1 = new javax.swing.JButton();

jButton2 = new javax.swing.JButton();

jScrollPane1 = new javax.swing.JScrollPane();

table = new javax.swing.JTextArea();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

jLabel3.setFont(new java.awt.Font("Tahoma", 0, 12)); // NOI18N

jLabel3.setText("Enter Number to Generate Table");

jButton1.setText("Generate");

jButton1.addActionListener(new java.awt.event.ActionListener() {

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

jButton1ActionPerformed(evt);

}

});

jButton2.setText("Clear");

jButton2.addActionListener(new java.awt.event.ActionListener() {

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

jButton2ActionPerformed(evt);

}

});

table.setColumns(20);

table.setRows(5);

jScrollPane1.setViewportView(table);

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

getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup()

.addContainerGap()

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

.addGroup(layout.createSequentialGroup()

.addGap(34, 34, 34)

.addComponent(jButton1)

.addGap(18, 18, 18)

.addComponent(jButton2)

.addGap(0, 0, Short.MAX\_VALUE))

.addGroup(layout.createSequentialGroup()

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

.addGroup(layout.createSequentialGroup()

.addComponent(number, javax.swing.GroupLayout.PREFERRED\_SIZE, 228, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 0, Short.MAX\_VALUE))

.addComponent(jLabel3, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.DEFAULT\_SIZE, 247, Short.MAX\_VALUE))

.addContainerGap())))

.addGroup(layout.createSequentialGroup()

.addGap(18, 18, 18)

.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED\_SIZE, 228, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 0, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

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

.addGroup(layout.createSequentialGroup()

.addContainerGap()

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 25, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(number, javax.swing.GroupLayout.PREFERRED\_SIZE, 28, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

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

.addComponent(jButton1)

.addComponent(jButton2))

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

.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED\_SIZE, 148, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addContainerGap(42, Short.MAX\_VALUE))

);

pack();

}// </editor-fold>

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

// TODO add your handling code here:

int base, i, n;

base = Integer.parseInt(number.getText());

table.setText("");

for (i=1; i<=10; i++) {

n = base\*i;

table.append(base + " × " + i + " = " + n + "\n"); }

}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

number.setText("");

}

public static void main(String args[]) {

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

public void run() {

new TableGeneration().setVisible(true);

}

});

}

// Variables declaration - do not modify

private javax.swing.JButton jButton1;

private javax.swing.JButton jButton2;

private javax.swing.JLabel jLabel3;

private javax.swing.JScrollPane jScrollPane1;

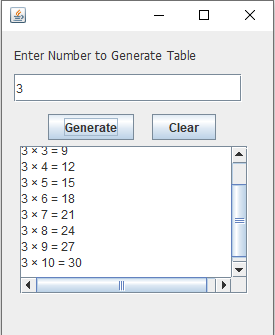
private javax.swing.JTextField number;

private javax.swing.JTextArea table;

// End of variables declaration

}

**Output:**



**Task 2:**

package javaapplication32;

import java.util.\*;

public class Ohms\_law extends javax.swing.JFrame {

public Ohms\_law() {

initComponents();

}

@SuppressWarnings("unchecked")

// <editor-fold defaultstate="collapsed" desc="Generated Code">

private void initComponents() {

jPanel1 = new javax.swing.JPanel();

jLabel1 = new javax.swing.JLabel();

jLabel2 = new javax.swing.JLabel();

jLabel3 = new javax.swing.JLabel();

jLabel4 = new javax.swing.JLabel();

current = new javax.swing.JTextField();

voltage = new javax.swing.JTextField();

resistance = new javax.swing.JTextField();

jButton1 = new javax.swing.JButton();

jButton4 = new javax.swing.JButton();

jLabel8 = new javax.swing.JLabel();

jLabel9 = new javax.swing.JLabel();

jLabel10 = new javax.swing.JLabel();

jLabel11 = new javax.swing.JLabel();

jButton3 = new javax.swing.JButton();

jButton2 = new javax.swing.JButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

jLabel1.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N

jLabel1.setText("I :");

jLabel2.setText("volts");

jLabel3.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N

jLabel3.setText("R :");

jLabel4.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N

jLabel4.setText("V :");

current.setText(" ");

voltage.setText(" ");

voltage.addActionListener(new java.awt.event.ActionListener() {

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

voltageActionPerformed(evt);

}

});

resistance.setText(" ");

jButton1.setText("Print");

jButton4.setText("Calculate");

jButton4.addActionListener(new java.awt.event.ActionListener() {

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

jButton4ActionPerformed(evt);

}

});

jLabel8.setFont(new java.awt.Font("Segoe UI Emoji", 3, 24)); // NOI18N

jLabel8.setForeground(new java.awt.Color(255, 51, 51));

jLabel8.setText("Ohm's Law");

jLabel9.setBackground(java.awt.Color.white);

jLabel9.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N

jLabel9.setText("I=V/R");

jLabel10.setText("amperes");

jLabel11.setText("ohms");

jButton3.setText("Clear");

jButton3.addActionListener(new java.awt.event.ActionListener() {

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

jButton3ActionPerformed(evt);

}

});

jButton2.setText("Quit");

jButton2.addActionListener(new java.awt.event.ActionListener() {

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

jButton2ActionPerformed(evt);

}

});

javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);

jPanel1.setLayout(jPanel1Layout);

jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()

.addGap(57, 57, 57)

.addComponent(jLabel8, javax.swing.GroupLayout.PREFERRED\_SIZE, 133, javax.swing.GroupLayout.PREFERRED\_SIZE)

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

.addComponent(jLabel9, javax.swing.GroupLayout.PREFERRED\_SIZE, 57, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGroup(jPanel1Layout.createSequentialGroup()

.addGap(72, 72, 72)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

.addGroup(jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

.addGroup(jPanel1Layout.createSequentialGroup()

.addComponent(jLabel4)

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

.addComponent(voltage))

.addGroup(jPanel1Layout.createSequentialGroup()

.addComponent(jLabel3)

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

.addComponent(resistance))

.addGroup(jPanel1Layout.createSequentialGroup()

.addComponent(jLabel1)

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

.addComponent(current, javax.swing.GroupLayout.PREFERRED\_SIZE, 124, javax.swing.GroupLayout.PREFERRED\_SIZE)))

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

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(jLabel2)

.addComponent(jLabel11)

.addComponent(jLabel10)))

.addGroup(javax.swing.GroupLayout.Alignment.LEADING, jPanel1Layout.createSequentialGroup()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING, false)

.addComponent(jButton1, javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jButton4, javax.swing.GroupLayout.Alignment.LEADING, javax.swing.GroupLayout.DEFAULT\_SIZE, 87, Short.MAX\_VALUE))

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

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

.addComponent(jButton3, javax.swing.GroupLayout.DEFAULT\_SIZE, 87, Short.MAX\_VALUE)

.addComponent(jButton2, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))))))

.addContainerGap(32, Short.MAX\_VALUE))

);

jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()

.addContainerGap()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jLabel9, javax.swing.GroupLayout.PREFERRED\_SIZE, 40, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel8, javax.swing.GroupLayout.PREFERRED\_SIZE, 28, javax.swing.GroupLayout.PREFERRED\_SIZE))

.addGap(18, 18, 18)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED\_SIZE, 25, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(voltage, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel2))

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

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED\_SIZE, 25, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(resistance, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel11))

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

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED\_SIZE, 28, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(current, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(jLabel10))

.addGap(40, 40, 40)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jButton3)

.addComponent(jButton4))

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

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jButton1)

.addComponent(jButton2))

.addContainerGap(32, Short.MAX\_VALUE))

);

current.getAccessibleContext().setAccessibleName("current");

voltage.getAccessibleContext().setAccessibleName("voltage");

resistance.getAccessibleContext().setAccessibleName("resistance");

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

getContentPane().setLayout(layout);

layout.setHorizontalGroup(

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

.addGroup(layout.createSequentialGroup()

.addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(0, 10, Short.MAX\_VALUE))

);

layout.setVerticalGroup(

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

.addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

);

pack();

}// </editor-fold>

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

voltage.setText("");

resistance.setText("");

current.setText("");

voltage.requestFocus();

}

private void voltageActionPerformed(java.awt.event.ActionEvent evt) {

}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {

float volts, resist, cur;

volts = Float.parseFloat(voltage.getText());

resist = Float.parseFloat(resistance.getText());

cur = volts/resist;

current.setText(cur+"");

}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

System.exit(0);

}

public static void main(String args[]) {

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

public void run() {

new Ohms\_law().setVisible(true);

}

});

}

// Variables declaration - do not modify

private javax.swing.JTextField current;

private javax.swing.JButton jButton1;

private javax.swing.JButton jButton2;

private javax.swing.JButton jButton3;

private javax.swing.JButton jButton4;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel10;

private javax.swing.JLabel jLabel11;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JLabel jLabel4;

private javax.swing.JLabel jLabel8;

private javax.swing.JLabel jLabel9;

private javax.swing.JPanel jPanel1;

private javax.swing.JTextField resistance;

private javax.swing.JTextField voltage;

// End of variables declaration

}

**Output:**

