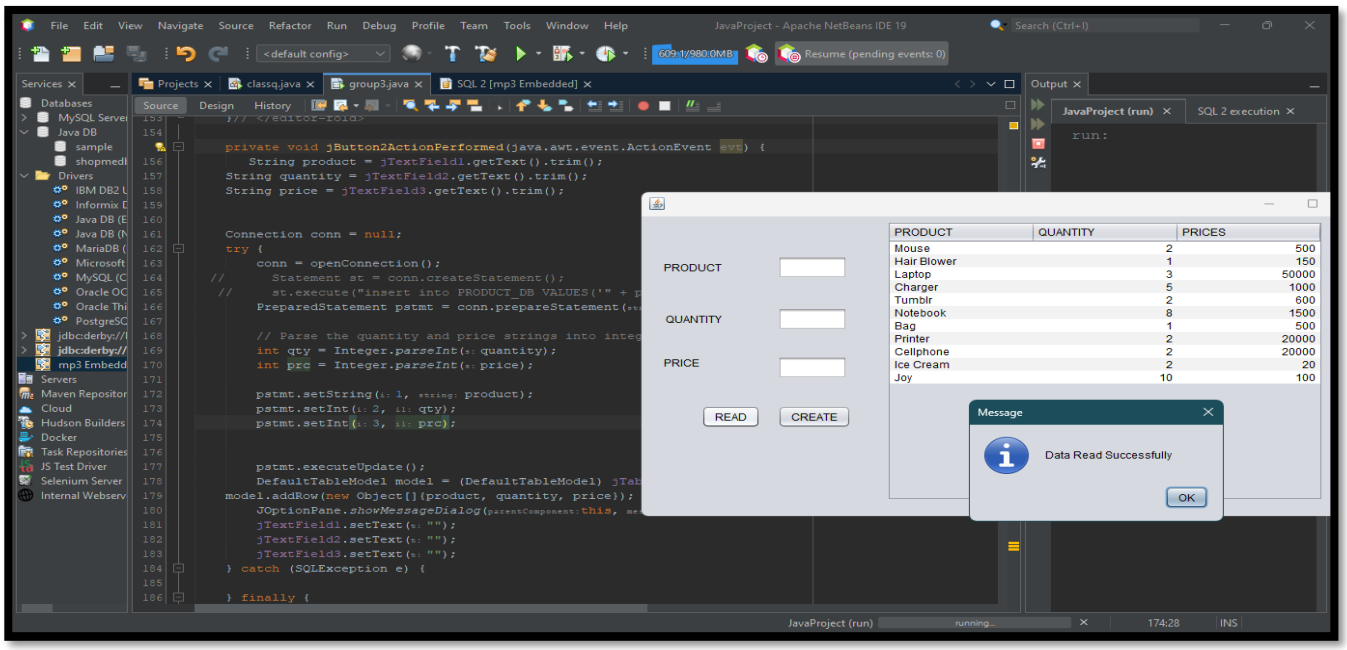
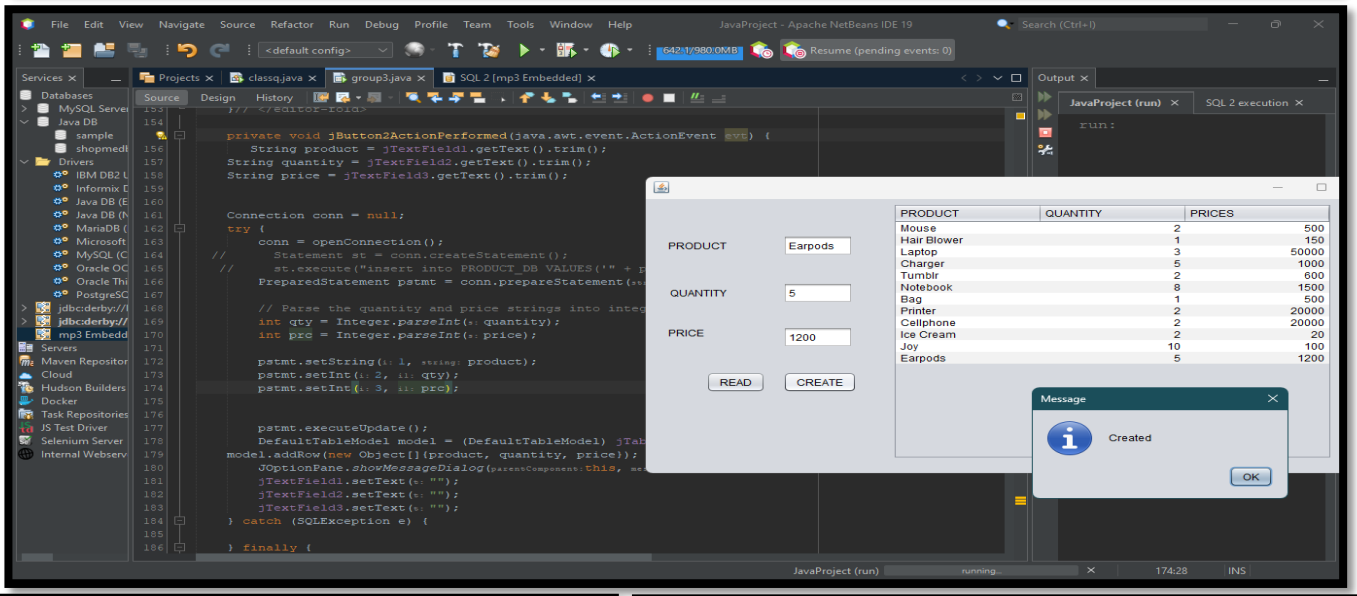
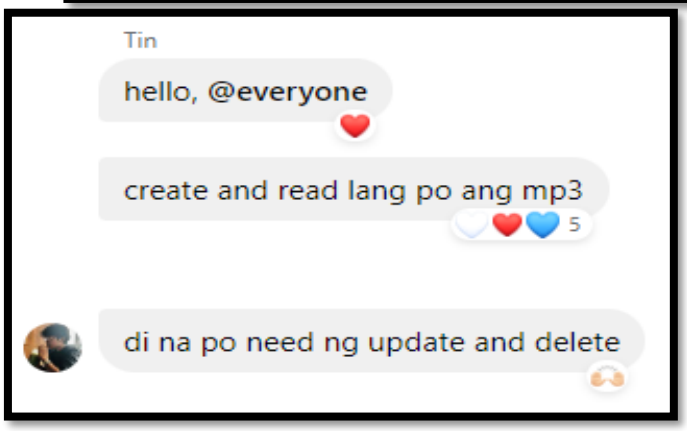
CICAT, REAN JOY S.
BSIT-S-2A-T

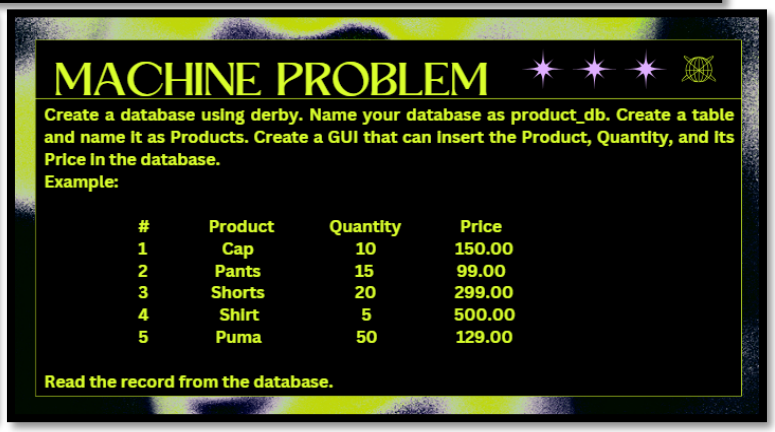
MACHINE PROBLEM NO.2
OCTOBER 31, 2023

SCREENSHOTS OF CODES AND OUTPUTS









```
package javaproject;


/**
 *
 * @author Cicat, Rean joy
 */


import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.sql.Statement;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import java.sql.PreparedStatement;


public class group3 extends javax.swing.JFrame {


    /** Creates new form group3 */
    public group3() {
        initComponents();
    }


    /** This method is called from within the constructor to
     * initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is
     * always regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
```

```
    private void initComponents() {

        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();
        jTextField1 = new javax.swing.JTextField();
        jTextField2 = new javax.swing.JTextField();
        jTextField3 = new javax.swing.JTextField();
        jScrollPane1 = new javax.swing.JScrollPane();
        jTable1 = new javax.swing.JTable();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jLabel1.setText("PRODUCT");

        jLabel2.setText("QUANTITY");

        jLabel3.setText("PRICE");

        jButton1.setText("READ");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });

        jButton2.setText("CREATE");
```

```
        jButton2.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton2ActionPerformed(evt);
            }
        });

        jTextField1.setText("jTextField1");

        jTextField2.setText("jTextField2");

        jTextField3.setText("jTextField3");

        jTable1.setModel(new javax.swing.table.DefaultTableModel(
            new Object [][] {

            },
            new String [] {
                "PRODUCT", "QUANTITY", "PRICES"
            }
        ) {
            Class[] types = new Class [] {
                java.lang.String.class, java.lang.Integer.class, java.lang.Integer.class
            };

            public Class getColumnClass(int columnIndex) {
                return types [columnIndex];
            }
        });
        jTable1.addMouseListener(new java.awt.event.MouseAdapter() {
```

```
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            jTable1MouseClicked(evt);
        }
    });
    jScrollPane1.setViewportView(jTable1);

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout.createSequentialGroup()
                    .addGap(23, 23, 23)
                    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                            .addComponent(jLabel2)
                            .addComponent(jLabel1))
                        .addComponent(jLabel3))
                    .addGap(58, 58, 58))
                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.createSequentialGroup()
                    .addContainerGap()
                    .addComponent(jButton1)
                    .addGap(18, 18, 18)))
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(jButton2)
                .addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
```

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

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

        .addGap(37, 37, 37)

        .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 452,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addContainerGap(58, Short.MAX_VALUE))

    );

    layout.setVerticalGroup(

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

      .addGroup(layout.createSequentialGroup()

        .addGap(49, 49, 49)

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

          .addComponent(jLabel1)

          .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGap(36, 36, 36)

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

          .addComponent(jLabel2)

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

        .addGap(32, 32, 32)

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

          .addComponent(jLabel3)

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

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

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

          .addComponent(jButton1)
```

```
                .addComponent(jButton2))
            .addGap(109, 109, 109))
        .addGroup(layout.createSequentialGroup()
            .addContainerGap()
            .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 346,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap(19, Short.MAX_VALUE))
    );

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

  private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    String product = jTextField1.getText().trim();
  String quantity = jTextField2.getText().trim();
  String price = jTextField3.getText().trim();


  Connection conn = null;
  try {
    conn = openConnection();
//     Statement st = conn.createStatement();
//     st.execute("insert into PRODUCT_DB VALUES('" + product + "','" + quantity + "','" + price + "')");
    PreparedStatement pstmt = conn.prepareStatement("INSERT INTO PRODUCT_DB (PRODUCT,
QUANTITY, PRICE) VALUES (?, ?, ?)");

    // Parse the quantity and price strings into integers
    int qty = Integer.parseInt(quantity);
    int prc = Integer.parseInt(price);
```

```
    pstmt.setString(1, product);
    pstmt.setInt(2, qty);
    pstmt.setInt(3, prc);



    pstmt.executeUpdate();
    DefaultTableModel model = (DefaultTableModel) jTable1.getModel();
  model.addRow(new Object[]{product, quantity, price});
    JOptionPane.showMessageDialog(this, "Created");
    jTextField1.setText("");
    jTextField2.setText("");
    jTextField3.setText("");
  } catch (SQLException e) {

  } finally {
    closeConnection(conn);
  }
  }

  private void jTable1MouseClicked(java.awt.event.MouseEvent evt) {
    DefaultTableModel model = (DefaultTableModel) jTable1.getModel();
  int selectedRowIndex = jTable1.getSelectedRow();
  jTextField1.setText(model.getValueAt(selectedRowIndex, 0).toString());
  jTextField2.setText(model.getValueAt(selectedRowIndex, 1).toString());
  jTextField3.setText(model.getValueAt(selectedRowIndex, 2).toString());
  }

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

```
        Connection conn = null;
    try {
        conn = openConnection();
        Statement st = conn.createStatement();
        java.sql.ResultSet rs = st.executeQuery("SELECT * FROM PRODUCT_DB");

        DefaultTableModel model = (DefaultTableModel) jTable1.getModel();
        model.setRowCount(0); // Clear the existing table data

        while (rs.next()) {
            String product = rs.getString("PRODUCT");
            String quantity = rs.getString("QUANTITY");
            String price = rs.getString("PRICE");
            model.addRow(new Object[]{product, quantity, price});
        }

        JOptionPane.showMessageDialog(this, "Data Read Successfully");
    } catch (SQLException e) {
        // Handle the exception here
        e.printStackTrace();
    } finally {
        closeConnection(conn);
    }
    }
     //CONNECTION CODE
  private Connection openConnection() throws SQLException {
    return DriverManager.getConnection("jdbc:derby:C:/Derby/mp3");
}
```

```
private void closeConnection(Connection conn) {
   if (conn != null) {
      try {
         conn.close();
      } catch (SQLException e) {


      }
   }
}
   /**
    * @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(group3.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
```

```
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(group3.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(group3.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
            java.util.logging.Logger.getLogger(group3.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 group3().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    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.JScrollPane jScrollPane1;
    private javax.swing.JTable jTable1;
    private javax.swing.JTextField jTextField1;
    private javax.swing.JTextField jTextField2;
```

```
    private javax.swing.JTextField jTextField3;
    // End of variables declaration


}
```