Major Project Report

Library management system

GALGOTIAS UNIVERSITY

BY

SYNTAX SQUAD

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B TECH Computer Science

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DESCRIPTION

Library Management System in Java using AWT & Swing

A Library Management System (LMS) helps libraries efficiently handle book records, student transactions, and borrowing processes. Implementing this system in Java using AWT & Swing ensures an interactive graphical user interface (GUI), improving user experience and operational efficiency.

Project Overview

The Library Management System consists of multiple modules designed to automate book handling, streamline student registration, and manage loans and returns seamlessly. The system interacts with a MySQL database via JDBC , ensuring structured data management.

Key Features

1. Login System – Provides authentication for librarians, students, and administrators, ensuring secure access.
2. Database Connection (MySQL) – Stores book details, student information, and transaction logs.
3. Loading Page – Displays a graphical loading screen while data is being processed.
4. Student Registration – Allows students to enroll in the system by providing essential details such as name, ID, and contact information.
5. Home Page – Serves as the central dashboard, providing navigation options for various functions.
6. Book Management – Enables librarians to add, update, and remove book records.
7. Issue & Return Books – Handles book lending, tracks due dates, and calculates fines for late returns.
8. Error Handling (Try & Catch) – Ensures smooth functionality by detecting and managing system failures, such as database errors or incorrect input.

Implementation Details

- AWT (Abstract Window Toolkit) : Provides core UI components such as windows, buttons, and labels.
- Swing : Enhances AWT with modern UI features, including responsive components like `JFrame`, `JButton`, `JLabel`, and `JTable`.
- JDBC (Java Database Connectivity) : Facilitates communication between Java and MySQL, enabling data retrieval and manipulation.

- Exception Handling (Try & Catch) : Prevents system crashes by capturing and managing errors gracefully.

Functionality Breakdown

1. User Authentication
   - Ensures only authorized users access the system.
   - Validates credentials against stored database records.

2. Book Management
   - Allows librarians to maintain book details such as title, author, category, and publication year.
   - Supports searching books by title or author.

3. Student Registration & Management
   - Students can register by entering personal details.
   - The system maintains student borrowing history.

4. Issuing & Returning Books
   - Books can be issued with automated due date tracking.
   - Late returns incur fines based on predefined rules.

5. System Logs & Reports
   - Generates reports on issued books, returned books, and overdue transactions.
   - Maintains librarian activity logs for administrative oversight.

Advantages of Using Java, AWT & Swing

- Platform Independence : Java allows the system to run on different operating systems without modification.
- User-Friendly GUI : Swing provides an intuitive and visually appealing interface.
- Efficient Database Handling : JDBC ensures seamless interaction with MySQL for storing and retrieving records.
- Robust Error Handling : The try-and-catch mechanism prevents system failures and enhances stability.

LOGIN CODE

```
import java.sql.ResultSet;
import javax.swing.JOptionPane;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit this template
 */


public class SignIn extends javax.swing.JFrame {

    /
     * Creates new form SignIn
     */
    public SignIn() {
        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() {

        jButton6 = new javax.swing.JButton();
        jLabel4 = new javax.swing.JLabel();
        txtemail = new javax.swing.JTextField();
        btnlogin = new javax.swing.JButton();
        txtpassword = new javax.swing.JPasswordField();
        jLabel5 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel1 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setUndecorated(true);
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

        jButton6.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/close icon.png"))); // NOI18N
        jButton6.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton6ActionPerformed(evt);
```

```
    }
  });
  getContentPane().add(jButton6, new org.netbeans.lib.awtextra.AbsoluteConstraints(1316, 0, 50, -1));

  jLabel4.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
      jLabel4MouseClicked(evt);
    }
  });
  getContentPane().add(jLabel4, new org.netbeans.lib.awtextra.AbsoluteConstraints(377, 118, 36, 31));

  txtemail.setFont(new java.awt.Font("Sitka Display", 1, 18)); // NOI18N
  txtemail.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
      txtemailActionPerformed(evt);
    }
  });
  txtemail.addKeyListener(new java.awt.event.KeyAdapter() {
    public void keyPressed(java.awt.event.KeyEvent evt) {
      txtemailKeyPressed(evt);
    }
    public void keyReleased(java.awt.event.KeyEvent evt) {
      txtemailKeyReleased(evt);
    }
    public void keyTyped(java.awt.event.KeyEvent evt) {
      txtemailKeyTyped(evt);
    }
  });
  getContentPane().add(txtemail, new org.netbeans.lib.awtextra.AbsoluteConstraints(600, 360, 264, 41));

  btnlogin.setBackground(new java.awt.Color(255, 51, 51));
  btnlogin.setFont(new java.awt.Font("Sitka Display", 1, 14)); // NOI18N
  btnlogin.setForeground(new java.awt.Color(255, 255, 255));
 btnlogin.setText("Login now");
  btnlogin.addMouseMotionListener(new java.awt.event.MouseMotionAdapter() {
    public void mouseMoved(java.awt.event.MouseEvent evt) {
      btnloginMouseMoved(evt);
    }
  });
  btnlogin.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseEntered(java.awt.event.MouseEvent evt) {
      btnloginMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
      btnloginMouseExited(evt);
    }
  });
  btnlogin.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
      btnloginActionPerformed(evt);
    }
  });
  getContentPane().add(btnlogin, new org.netbeans.lib.awtextra.AbsoluteConstraints(580, 500, 122, 30));

  txtpassword.setFont(new java.awt.Font("Tw Cen MT", 1, 24)); // NOI18N
```

```
        txtpassword.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                txtpasswordKeyPressed(evt);
            }
        });
        getContentPane().add(txtpassword, new org.netbeans.lib.awtextra.AbsoluteConstraints(600, 420, 264, 40));

        jLabel5.setFont(new java.awt.Font("Segoe UI", 1, 24)); // NOI18N
        jLabel5.setForeground(new java.awt.Color(255, 255, 255));
        jLabel5.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
        jLabel5.setText("Login now");
        getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(610, 310, 130, 30));

        jLabel2.setFont(new java.awt.Font("Sitka Display", 1, 18)); // NOI18N
        jLabel2.setForeground(new java.awt.Color(255, 255, 255));
        jLabel2.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
        jLabel2.setText("Password");
        getContentPane().add(jLabel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(500, 420, -1, 30));

        jLabel1.setFont(new java.awt.Font("Sitka Display", 1, 18)); // NOI18N
        jLabel1.setForeground(new java.awt.Color(255, 255, 255));
        jLabel1.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);
        jLabel1.setText("User ID");
        getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(510, 370, 80, 30));

        jLabel3.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/login page.jpg"))); // NOI18N
        getContentPane().add(jLabel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 1370, 770));

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

    private void jButton6ActionPerformed(java.awt.event.ActionEvent evt) {
        int yes=JOptionPane.showConfirmDialog(this, "Are you really Close this
application?","Exit",JOptionPane.YES_NO_OPTION,JOptionPane.QUESTION_MESSAGE);
        if(yes==JOptionPane.YES_OPTION){
            System.exit(0);
        }

        // TODO add your handling code here:
    }

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

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

    private void txtemailKeyReleased(java.awt.event.KeyEvent evt) {

    }

    private void txtemailKeyTyped(java.awt.event.KeyEvent evt) {
```

```
}

private void txtpasswordKeyPressed(java.awt.event.KeyEvent evt) {



}

private void jLabel4MouseClicked(java.awt.event.MouseEvent evt) {


   // TODO add your handling code here:
}

private void btnloginMouseMoved(java.awt.event.MouseEvent evt) {

}

private void btnloginMouseEntered(java.awt.event.MouseEvent evt) {

}

private void btnloginMouseExited(java.awt.event.MouseEvent evt) {

}

private void btnloginActionPerformed(java.awt.event.ActionEvent evt) {
   PreparedStatement pst;
   ResultSet rs;
   Connection c=Connect.ConnectToDB();
   try {
      pst=c.prepareStatement("SELECT * FROM library.login where userid=? AND password=?");
      pst.setString(1,txtemail.getText());
      pst.setString(2, txtpassword.getText());
      rs=pst.executeQuery();
      if(rs.next())
         new home().setVisible(true);
      else
         JOptionPane.showMessageDialog(this, "Please Enter Valied ID and Password");
   } catch (SQLException ex) {
      Logger.getLogger(SignIn.class.getName()).log(Level.SEVERE, null, ex);
   }
}

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

// Variables declaration - do not modify
private javax.swing.JButton btnlogin;
private javax.swing.JButton jButton6;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JTextField txtemail;
private javax.swing.JPasswordField txtpassword;
// End of variables declaration
}
```

CONNECT MYSQL

```
public class Connect {
    static Connection con = null;

    public static Connection ConnectToDB() {
        try {
            con = DriverManager.getConnection("jdbc:mysql://localhost:3306/library", "root", "12345");
        } catch (SQLException ex) {
            Logger.getLogger(Connect.class.getName()).log(Level.SEVERE, null, ex);
        }
        return con;
    }
}
```

LODING PAGE 1

```
public class Loading1 extends javax.swing.JFrame {

    /
     * Creates new form Loading1
     */
    public Loading1() {
        initComponents();
        Thread t=new Thread(new Runnable() {
            @Override
            public void run() {
                  try {
                     Thread.sleep(1000);
                     new Loading2().setVisible(true);
                  } catch (InterruptedException ex) {
               }
            }
        });
        t.start();
    }

    /
     * 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();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setUndecorated(true);
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

        jLabel1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/x.jpg"))); // NOI18N
        getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 1370, 770));

        pack();
    }// </editor-fold>
    public static void main(String args[]) {
        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(Loading1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(Loading1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(Loading1.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
            java.util.logging.Logger.getLogger(Loading1.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 Loading1().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JLabel jLabel1;
    // End of variables declaration
}
```

LOADING 2

```
public class Loading2 extends javax.swing.JFrame {

    /
     * Creates new form Loading2
     */
    public Loading2() {
        initComponents(); Thread t = new Thread(new Runnable() {
            @Override
            public void run() {
                for (int i = 0; i <= 100; i++) {
                    try {
                        jProgressBar1.setValue(i);
                        Thread.sleep(50);
                        if(jProgressBar1.getString().equals("100%"))
                            new SignIn().setVisible(true);
                        if(jProgressBar1.getString().equals("50%")){
                            jLabel.setText("Loading Modules.....");

                        }
                        if(jProgressBar1.getString().equals("25%")){
                            jLabel.setText("Connecting Database....");
                            //jLabel1.setForeground(Color.WHITE);
                            }
                        if(jProgressBar1.getString().equals("95%"))
                            jLabel.setText("Launching Aplication....");
                    } catch (InterruptedException ex) {
                        //Logger.getLogger(NewJFrame.class.getName()).log(Level.SEVERE, null, ex);
                    }
                }
            }
        });
        t.start();
```

```
    }

    /
     * 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() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jProgressBar1 = new javax.swing.JProgressBar();
        jLabel = new javax.swing.JLabel();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setBackground(new java.awt.Color(51, 255, 51));
        setUndecorated(true);
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

        jPanel1.setBackground(new java.awt.Color(0, 255, 0));
        jPanel1.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

        jLabel1.setBackground(new java.awt.Color(204, 0, 0));
        jLabel1.setForeground(new java.awt.Color(204, 0, 153));
        jLabel1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/Picsart_23-10-30_17-47-04-
022.jpg"))); // NOI18N
        jPanel1.add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(10, 10, 630, -1));

        jProgressBar1.setBackground(new java.awt.Color(0, 0, 153));
        jProgressBar1.setForeground(new java.awt.Color(0, 0, 153));
        jProgressBar1.setStringPainted(true);
        jPanel1.add(jProgressBar1, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 440, 650, 16));
        jPanel1.add(jLabel, new org.netbeans.lib.awtextra.AbsoluteConstraints(400, 420, 247, 22));

        getContentPane().add(jPanel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, -1, -1));

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

    /
     * @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(Loading2.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(Loading2.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(Loading2.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(Loading2.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 Loading2().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
private javax.swing.JLabel jLabel;
private javax.swing.JLabel jLabel1;
private javax.swing.JPanel jPanel1;
private javax.swing.JProgressBar jProgressBar1;
// End of variables declaration
}
```

STUDENT RESITRATION CODE

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit this template
 */
import javax.swing.JOptionPane;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;


public class StudentRegistration extends javax.swing.JFrame {

    /
     * Creates new form StudentRegistration
     */
    public StudentRegistration() {
        initComponents();
```

```
    }
public void clear(){
        txtbranch.setText("");
        txtcourse.setText("");
        txtid.setText("");
        txtname.setText("");
        txtsem.setText("");
    }
    /
     * 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() {

        jButton6 = new javax.swing.JButton();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel5 = new javax.swing.JLabel();
        jLabel6 = new javax.swing.JLabel();
        jLabel7 = new javax.swing.JLabel();
        txtcourse = new javax.swing.JTextField();
        txtid = new javax.swing.JTextField();
        txtname = new javax.swing.JTextField();
        txtsem = new javax.swing.JTextField();
        txtbranch = new javax.swing.JTextField();
        btnsave = new javax.swing.JButton();
        jLabel4 = new javax.swing.JLabel();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setUndecorated(true);
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

        jButton6.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/close icon.png"))); // NOI18N
        jButton6.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton6ActionPerformed(evt);
            }
        });
        getContentPane().add(jButton6, new org.netbeans.lib.awtextra.AbsoluteConstraints(1088, 0, 50, -1));

        jLabel1.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        jLabel1.setForeground(new java.awt.Color(242, 242, 242));
        jLabel1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/isue.jpg"))); // NOI18N
        jLabel1.setText("Student Registration");
        getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(40, 40, 250, 60));

        jLabel2.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        jLabel2.setText("Student ID");
        getContentPane().add(jLabel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(130, 170, 239, 46));

        jLabel3.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
```

```
        jLabel3.setText("Student Name");
        getContentPane().add(jLabel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(130, 240, 239, 46));

        jLabel5.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        jLabel5.setText("Branch Name");
        getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(130, 390, 239, 46));

        jLabel6.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        jLabel6.setText(" Course Name");
        getContentPane().add(jLabel6, new org.netbeans.lib.awtextra.AbsoluteConstraints(120, 320, 239, 46));

        jLabel7.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        jLabel7.setText("Semester");
        getContentPane().add(jLabel7, new org.netbeans.lib.awtextra.AbsoluteConstraints(130, 460, 239, 46));

        txtcourse.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        getContentPane().add(txtcourse, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 320, 310, 40));

        txtid.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        getContentPane().add(txtid, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 170, 310, 40));

        txtname.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        getContentPane().add(txtname, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 240, 310, 40));

        txtsem.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        getContentPane().add(txtsem, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 460, 310, 40));

        txtbranch.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        getContentPane().add(txtbranch, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 390, 310, 40));

        btnsave.setBackground(new java.awt.Color(204, 0, 0));
        btnsave.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        btnsave.setForeground(new java.awt.Color(242, 242, 242));
        btnsave.setText("Save");
        btnsave.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                btnsaveActionPerformed(evt);
            }
        });
        getContentPane().add(btnsave, new org.netbeans.lib.awtextra.AbsoluteConstraints(330, 570, 110, 30));

        jLabel4.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/All Page Backgraound.jpg"))); //
NOI18N
        getContentPane().add(jLabel4, new org.netbeans.lib.awtextra.AbsoluteConstraints(10, 20, 1140, 770));

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

    private void jButton6ActionPerformed(java.awt.event.ActionEvent evt) {
        dispose();

        // TODO add your handling code here:
    }

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

```
        PreparedStatement pst;
        Connection c=Connect.ConnectToDB();
        if(txtid.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Student ID");
            txtid.requestFocus();
        }
        else if(txtname.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Student Name");
            txtname.requestFocus();
        }
        else if(txtcourse.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Course");
            txtcourse.requestFocus();
        }
        else if(txtbranch.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Branch of Student");
            txtbranch.requestFocus();
        }
        else if(txtsem.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Semester");
            txtsem.requestFocus();
        }
        else{
        try {
            pst=c.prepareStatement("INSERT INTO `library`.`student` (`id`, `name`, `course`, `branch`, `semester`)
VALUES (?,?,?,?,?)");
            pst.setString(1, txtid.getText());
            pst.setString(2, txtname.getText());
            pst.setString(3, txtcourse.getText());
            pst.setString(4, txtbranch.getText());
            pst.setString(5, txtsem.getText());
            pst.executeUpdate();
            JOptionPane.showMessageDialog(rootPane, "Record
Saved","Saved",JOptionPane.INFORMATION_MESSAGE);
            clear();
        } catch (SQLException ex) {
            Logger.getLogger(SignIn.class.getName()).log(Level.SEVERE, null, ex);
        }
        }

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

// Variables declaration - do not modify
private javax.swing.JButton btnsave;
private javax.swing.JButton jButton6;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JLabel jLabel7;
private javax.swing.JTextField txtbranch;
private javax.swing.JTextField txtcourse;
private javax.swing.JTextField txtid;
private javax.swing.JTextField txtname;
private javax.swing.JTextField txtsem;
// End of variables declaration
}
```

HOME PAGE CODE

```
import javax.swing.JOptionPane;



public class home extends javax.swing.JFrame {

    /
```

```
 * Creates new form home
 */
public home() {
    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() {

    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();
    jLabel2 = new javax.swing.JLabel();

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    setUndecorated(true);
    getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

    jButton1.setBackground(new java.awt.Color(204, 0, 0));
    jButton1.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    jButton1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/log out icon.jpg"))); // NOI18N
    jButton1.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton1ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton1, new org.netbeans.lib.awtextra.AbsoluteConstraints(1160, 620, 180, 60));

    jButton2.setBackground(new java.awt.Color(204, 0, 0));
    jButton2.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jButton2.setForeground(new java.awt.Color(242, 242, 242));
    jButton2.setText("issue books");
    jButton2.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton2ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton2, new org.netbeans.lib.awtextra.AbsoluteConstraints(1160, 360, 180, 60));

    jButton3.setBackground(new java.awt.Color(204, 0, 0));
    jButton3.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jButton3.setForeground(new java.awt.Color(242, 242, 242));
    jButton3.setText("reutrn book");
    jButton3.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton3ActionPerformed(evt);
```

```
        }
    });
    getContentPane().add(jButton3, new org.netbeans.lib.awtextra.AbsoluteConstraints(1160, 480, 180, 60));

    jButton4.setBackground(new java.awt.Color(204, 0, 0));
    jButton4.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jButton4.setForeground(new java.awt.Color(242, 242, 242));
    jButton4.setText("add book");
    jButton4.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton4ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton4, new org.netbeans.lib.awtextra.AbsoluteConstraints(1160, 240, 180, 60));

    jButton5.setBackground(new java.awt.Color(204, 0, 0));
    jButton5.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    jButton5.setForeground(new java.awt.Color(242, 242, 242));
    jButton5.setText("Student Registration");
    jButton5.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton5ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton5, new org.netbeans.lib.awtextra.AbsoluteConstraints(1160, 80, 180, 60));

    jButton6.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/close icon.png"))); // NOI18N
    jButton6.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton6ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton6, new org.netbeans.lib.awtextra.AbsoluteConstraints(1320, 0, 50, -1));

    jLabel2.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/home page.jpg"))); // NOI18N
    getContentPane().add(jLabel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 1370, 770));

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

private void jButton6ActionPerformed(java.awt.event.ActionEvent evt) {
int yes=JOptionPane.showConfirmDialog(this, "Are you really Close this
application?","Exit",JOptionPane.YES_NO_OPTION,JOptionPane.QUESTION_MESSAGE);
    if(yes==JOptionPane.YES_OPTION){
        System.exit(0);
    }

// TODO add your handling code here:
}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
int yes=JOptionPane.showConfirmDialog(this, "Are you really Logout ?",
"Logut",JOptionPane.YES_NO_OPTION);
    if(JOptionPane.YES_OPTION==yes){
        new SignIn().setVisible(true);
```

```
        dispose();
    }       // TODO add your handling code here:
}

private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {
    new StudentRegistration().setVisible(true);       // TODO add your handling code here:
}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {
    new AddBook().setVisible(true);       // TODO add your handling code here:
}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
          new IssueBook().setVisible(true);
}

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
    new ReturnBook().setVisible(true);// 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(home.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(home.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(home.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(home.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 home().setVisible(true);
        }
    });
}
```

```
    // Variables declaration - do not modify
    private javax.swing.JButton jButton1;
    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.JLabel jLabel2;
    // End of variables declaration
}
```

ADDING BOOK

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit this template
 */
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;


public class AddBook extends javax.swing.JFrame {

    /
     * Creates new form AddBook
     */
    public AddBook() {
        initComponents();
    }
    public void clear(){
        txtid.setText("");
        txtname.setText("");
        txtprice.setText("");
        txtpublisher.setText("");
        txtyear.setText("");

    }

    /
     * 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() {

        jButton6 = new javax.swing.JButton();
        txtyear = new javax.swing.JTextField();
        jLabel2 = new javax.swing.JLabel();
```

```
txtprice = new javax.swing.JTextField();
jLabel3 = new javax.swing.JLabel();
jButton1 = new javax.swing.JButton();
jLabel5 = new javax.swing.JLabel();
jLabel6 = new javax.swing.JLabel();
jLabel7 = new javax.swing.JLabel();
txtpublisher = new javax.swing.JTextField();
txtid = new javax.swing.JTextField();
txtname = new javax.swing.JTextField();
jLabel1 = new javax.swing.JLabel();
jLabel4 = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setUndecorated(true);
getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jButton6.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/close icon.png"))); // NOI18N
jButton6.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton6ActionPerformed(evt);
    }
});
getContentPane().add(jButton6, new org.netbeans.lib.awtextra.AbsoluteConstraints(1088, 0, 50, 31));

txtyear.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
getContentPane().add(txtyear, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 570, 320, 36));

jLabel2.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
jLabel2.setText("Book ID");
getContentPane().add(jLabel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 210, 239, 46));

txtprice.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
getContentPane().add(txtprice, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 470, 320, 40));

jLabel3.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
jLabel3.setText("Book Name");
getContentPane().add(jLabel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 300, 239, 46));

jButton1.setBackground(new java.awt.Color(204, 0, 0));
jButton1.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
jButton1.setForeground(new java.awt.Color(242, 242, 242));
jButton1.setText("Save");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});
getContentPane().add(jButton1, new org.netbeans.lib.awtextra.AbsoluteConstraints(310, 670, 120, 30));

jLabel5.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
jLabel5.setText("Price");
getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 470, 239, 46));

jLabel6.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
jLabel6.setText("Publisher");
```

```
        getContentPane().add(jLabel6, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 400, 239, 46));

        jLabel7.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        jLabel7.setText("Publisher Year");
        getContentPane().add(jLabel7, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 560, 239, 46));

        txtpublisher.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        getContentPane().add(txtpublisher, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 390, 320, 40));

        txtid.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        getContentPane().add(txtid, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 210, 320, 40));

        txtname.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        getContentPane().add(txtname, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 300, 320, 40));

        jLabel1.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
        jLabel1.setForeground(new java.awt.Color(242, 242, 242));
        jLabel1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/isue.jpg"))); // NOI18N
        jLabel1.setText("Add Book Details");
        getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(60, 50, 230, 53));

        jLabel4.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/All Page Backgraound.jpg"))); //
NOI18N
        getContentPane().add(jLabel4, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 1140, 770));

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

    private void jButton6ActionPerformed(java.awt.event.ActionEvent evt) {
        dispose();

        // TODO add your handling code here:
    }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        PreparedStatement pst;
        Connection c=Connect.ConnectToDB();
        if(txtid.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Book ID");
            txtid.requestFocus();
        }
        else if(txtname.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Book Name");
            txtname.requestFocus();
        }
        else if(txtpublisher.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Publisher");
            txtpublisher.requestFocus();
        }
        else if(txtprice.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Book Price");
            txtprice.requestFocus();
        }
        else if(txtyear.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter publisher Year");
```

```
            txtyear.requestFocus();
        }
        else{
        try {
            pst=c.prepareStatement("insert into library.book(id,name,publisher,price,year,status)values(?,?,?,?,?,?)");
            pst.setString(1, txtid.getText());
            pst.setString(2, txtname.getText());
            pst.setString(3, txtpublisher.getText());
            pst.setString(4, txtprice.getText());
            pst.setString(5, txtyear.getText());
            pst.setString(6, "NotIssued");
            pst.executeUpdate();
            JOptionPane.showMessageDialog(rootPane, "Record
Saved","Saved",JOptionPane.INFORMATION_MESSAGE);
            clear();
        } catch (SQLException ex) {
            Logger.getLogger(SignIn.class.getName()).log(Level.SEVERE, null, ex);
        }
            }// 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(AddBook.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(AddBook.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(AddBook.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
            java.util.logging.Logger.getLogger(AddBook.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 AddBook().setVisible(true);
            }
        });
    }
```

```
    // Variables declaration - do not modify
    private javax.swing.JButton jButton1;
    private javax.swing.JButton jButton6;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JLabel jLabel5;
    private javax.swing.JLabel jLabel6;
    private javax.swing.JLabel jLabel7;
    private javax.swing.JTextField txtid;
    private javax.swing.JTextField txtname;
    private javax.swing.JTextField txtprice;
    private javax.swing.JTextField txtpublisher;
    private javax.swing.JTextField txtyear;
    // End of variables declaration
}
```

RETURN BOOK

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit this template
 */
import java.sql.ResultSet;
import javax.swing.JOptionPane;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;


public class ReturnBook extends javax.swing.JFrame {
    Connection c=Connect.ConnectToDB();
    PreparedStatement pst;
    ResultSet rs;

    /
     * Creates new form ReturnBook
     */
    public ReturnBook() {
        initComponents();
    }
    public void clear(){
        txtbookid.setText("");
        txtbookname.setText("");
        txtduedate.setText("");
        txtissuedate.setText("");
        txtstudentid.setText("");
        txtstudentname.setText("");
    }
    /
     * 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() {

    jButton6 = new javax.swing.JButton();
    txtduedate = new javax.swing.JTextField();
    jLabel2 = new javax.swing.JLabel();
    txtissuedate = new javax.swing.JTextField();
    jLabel3 = new javax.swing.JLabel();
    jButton1 = new javax.swing.JButton();
    jLabel5 = new javax.swing.JLabel();
    jLabel6 = new javax.swing.JLabel();
    jLabel7 = new javax.swing.JLabel();
    txtbookname = new javax.swing.JTextField();
    txtbookid = new javax.swing.JTextField();
    txtstudentid = new javax.swing.JTextField();
    jLabel1 = new javax.swing.JLabel();
    jButton2 = new javax.swing.JButton();
    txtstudentname = new javax.swing.JTextField();
    jLabel8 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    setUndecorated(true);
    getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

    jButton6.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/close icon.png"))); // NOI18N
    jButton6.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton6ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton6, new org.netbeans.lib.awtextra.AbsoluteConstraints(1088, 0, 50, -1));

    txtduedate.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    getContentPane().add(txtduedate, new org.netbeans.lib.awtextra.AbsoluteConstraints(340, 560, 350, 40));

    jLabel2.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel2.setText("Book ID");
    getContentPane().add(jLabel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(120, 180, 270, 50));

    txtissuedate.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    getContentPane().add(txtissuedate, new org.netbeans.lib.awtextra.AbsoluteConstraints(340, 480, 350, 40));

    jLabel3.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel3.setText("Student ID");
    getContentPane().add(jLabel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(120, 260, 270, 50));

    jButton1.setBackground(new java.awt.Color(204, 0, 0));
    jButton1.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jButton1.setForeground(new java.awt.Color(242, 242, 242));
    jButton1.setText("Return");
```

```
    jButton1.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton1ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton1, new org.netbeans.lib.awtextra.AbsoluteConstraints(330, 640, 130, 40));

    jLabel5.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel5.setText("Issue Date");
    getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(120, 490, 270, 50));

    jLabel6.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel6.setText("Book Name");
    getContentPane().add(jLabel6, new org.netbeans.lib.awtextra.AbsoluteConstraints(120, 410, 220, 50));

    jLabel7.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel7.setText("Due Date");
    getContentPane().add(jLabel7, new org.netbeans.lib.awtextra.AbsoluteConstraints(120, 560, 270, 50));

    txtbookname.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    getContentPane().add(txtbookname, new org.netbeans.lib.awtextra.AbsoluteConstraints(340, 410, 350,
40));

    txtbookid.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    getContentPane().add(txtbookid, new org.netbeans.lib.awtextra.AbsoluteConstraints(340, 180, 350, 40));

    txtstudentid.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    getContentPane().add(txtstudentid, new org.netbeans.lib.awtextra.AbsoluteConstraints(340, 260, 350, 40));

    jLabel1.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel1.setForeground(new java.awt.Color(242, 242, 242));
    jLabel1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/isue.jpg"))); // NOI18N
    jLabel1.setText("Return Book");
    getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(20, 40, 240, 60));

    jButton2.setBackground(new java.awt.Color(204, 0, 0));
    jButton2.setFont(new java.awt.Font("Segoe UI", 0, 14)); // NOI18N
    jButton2.setForeground(new java.awt.Color(242, 242, 242));
    jButton2.setText("Search");
    jButton2.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton2ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton2, new org.netbeans.lib.awtextra.AbsoluteConstraints(696, 267, -1, -1));

    txtstudentname.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    getContentPane().add(txtstudentname, new org.netbeans.lib.awtextra.AbsoluteConstraints(340, 340, 350,
40));

    jLabel8.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel8.setText("Student Name");
    getContentPane().add(jLabel8, new org.netbeans.lib.awtextra.AbsoluteConstraints(120, 340, 220, 50));
```

```
        jLabel4.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/All Page Backgraound.jpg"))); //
NOI18N
        getContentPane().add(jLabel4, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, -4, 1140, 770));

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

    private void jButton6ActionPerformed(java.awt.event.ActionEvent evt) {
        dispose();

        // TODO add your handling code here:
    }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
        try {
            pst=c.prepareStatement("SELECT * FROM library.book where id=?");
            pst.setString(1, txtstudentid.getText());
            rs=pst.executeQuery();
            if(rs.next()){
                txtbookname.setText(rs.getString("name"));
                txtbookid.setText(rs.getString("id"));
                txtissuedate.setText(rs.getString("issue"));
                txtduedate.setText(rs.getString("due"));
            }
            else
               JOptionPane.showMessageDialog(this, "Please Enter Valied Student ID");
            pst=c.prepareStatement("SELECT * FROM library.student where id=?");
            pst.setString(1, txtstudentid.getText());
            rs=pst.executeQuery();
            if(rs.next())
                txtstudentname.setText(rs.getString("name"));

        } catch (SQLException ex) {
            Logger.getLogger(SignIn.class.getName()).log(Level.SEVERE, null, ex);
        }       // TODO add your handling code here:
    }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        if(txtbookid.getText().equals("")){
            JOptionPane.showMessageDialog(rootPane, "Please enter Student ID and Search it again");
            txtstudentid.requestFocus();
        }
        else{
            try{
            pst=c.prepareStatement("UPDATE `library`.`book` SET `status` = 'NotIssue', `issue` = '', `due` = '',
`studentid` = '' WHERE (`id` = ?)");
            pst.setString(1, txtstudentid.getText());
            pst.executeUpdate();
            JOptionPane.showMessageDialog(this, "Return Successfull");
            clear();
            } catch (SQLException ex) {
               Logger.getLogger(SignIn.class.getName()).log(Level.SEVERE, null, ex);
            }
        }
            // 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(ReturnBook.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(ReturnBook.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(ReturnBook.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
            java.util.logging.Logger.getLogger(ReturnBook.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 ReturnBook().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton jButton1;
    private javax.swing.JButton jButton2;
    private javax.swing.JButton jButton6;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JLabel jLabel5;
    private javax.swing.JLabel jLabel6;
    private javax.swing.JLabel jLabel7;
    private javax.swing.JLabel jLabel8;
    private javax.swing.JTextField txtbookid;
    private javax.swing.JTextField txtbookname;
```

```
    private javax.swing.JTextField txtduedate;
    private javax.swing.JTextField txtissuedate;
    private javax.swing.JTextField txtstudentid;
    private javax.swing.JTextField txtstudentname;
    // End of variables declaration
}
```

ISSUE BOOK

```
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;

/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/GUIForms/JFrame.java to edit this template
 */



public class IssueBook extends javax.swing.JFrame {
        PreparedStatement pst;
        ResultSet rs;
        Connection c=Connect.ConnectToDB();
    /
     * Creates new form IssueBook
     */
    public IssueBook() {
        initComponents();
        SimpleDateFormat  dat=new SimpleDateFormat("dd/MM/yyyy ");
         Date d=new Date();
         txtissuedate.setText(dat.format(d));

    }
public void clear(){
        txtbookname.setText("");
        txtduedate.setText("");
        txtissuedate.setText("");
        txtstudentid.setText("");
        txtid.setText("");
    }
    /
     * 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();
    jLabel4 = new javax.swing.JLabel();
    jLabel5 = new javax.swing.JLabel();
    jLabel6 = new javax.swing.JLabel();
    btnissue = new javax.swing.JButton();
    txtid = new javax.swing.JTextField();
    txtstudentid = new javax.swing.JTextField();
    txtbookname = new javax.swing.JTextField();
    txtissuedate = new javax.swing.JTextField();
    txtduedate = new javax.swing.JTextField();
    jButton2 = new javax.swing.JButton();
    jButton1 = new javax.swing.JButton();
    jLabel7 = new javax.swing.JLabel();

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    setUndecorated(true);
    getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

    jLabel1.setFont(new java.awt.Font("Segoe UI", 1, 24)); // NOI18N
    jLabel1.setForeground(new java.awt.Color(242, 242, 242));
    jLabel1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/isue.jpg"))); // NOI18N
    jLabel1.setText("Issue Book");
    getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(40, 60, 200, 70));

    jLabel2.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel2.setText("Book ID");
    getContentPane().add(jLabel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 200, 250, 40));

    jLabel3.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel3.setText("Student ID");
    getContentPane().add(jLabel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 280, 240, 40));

    jLabel4.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel4.setText("Book Name");
    getContentPane().add(jLabel4, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 360, 250, 40));

    jLabel5.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel5.setText("Issue Date");
    getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 450, 240, 40));

    jLabel6.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    jLabel6.setText("Due Date");
    getContentPane().add(jLabel6, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 540, 240, 40));

    btnissue.setBackground(new java.awt.Color(204, 0, 0));
    btnissue.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    btnissue.setForeground(new java.awt.Color(242, 242, 242));
    btnissue.setText("Issue Book");
    btnissue.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            btnissueActionPerformed(evt);
```

```
        }
    });
    getContentPane().add(btnissue, new org.netbeans.lib.awtextra.AbsoluteConstraints(260, 630, 130, 40));

    txtid.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    getContentPane().add(txtid, new org.netbeans.lib.awtextra.AbsoluteConstraints(320, 200, 350, 40));

    txtstudentid.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    getContentPane().add(txtstudentid, new org.netbeans.lib.awtextra.AbsoluteConstraints(320, 280, 350, 40));

    txtbookname.setEditable(false);
    txtbookname.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    getContentPane().add(txtbookname, new org.netbeans.lib.awtextra.AbsoluteConstraints(320, 360, 350,
40));

    txtissuedate.setEditable(false);
    txtissuedate.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    getContentPane().add(txtissuedate, new org.netbeans.lib.awtextra.AbsoluteConstraints(320, 450, 350, 40));

    txtduedate.setFont(new java.awt.Font("Segoe UI", 1, 18)); // NOI18N
    getContentPane().add(txtduedate, new org.netbeans.lib.awtextra.AbsoluteConstraints(320, 540, 350, 40));

    jButton2.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/close icon.png"))); // NOI18N
    jButton2.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton2ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton2, new org.netbeans.lib.awtextra.AbsoluteConstraints(1090, 0, 51, 40));

    jButton1.setBackground(new java.awt.Color(204, 0, 0));
    jButton1.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
    jButton1.setForeground(new java.awt.Color(242, 242, 242));
    jButton1.setText("Search");
    jButton1.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton1ActionPerformed(evt);
        }
    });
    getContentPane().add(jButton1, new org.netbeans.lib.awtextra.AbsoluteConstraints(676, 204, -1, 30));

    jLabel7.setIcon(new javax.swing.ImageIcon(getClass().getResource("/img/All Page Backgraound.jpg"))); //
NOI18N
    getContentPane().add(jLabel7, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 1140, 770));

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

  private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
   dispose();   // TODO add your handling code here:
  }

  private void btnissueActionPerformed(java.awt.event.ActionEvent evt) {
    if(txtid.getText().equals("")){
        JOptionPane.showMessageDialog(rootPane, "Please enter Book ID and Search it again");
```

```
            txtid.requestFocus();
        }
        else{
            try{
            pst=c.prepareStatement("UPDATE `library`.`book` SET `status` = 'Issued', issue = ?, due = ?,studentid =?
WHERE (`id` = ?)");
            pst.setString(1, txtissuedate.getText());
            pst.setString(2, txtduedate.getText());
            pst.setString(3, txtstudentid.getText());
            pst.setString(4, txtid.getText());
            pst.executeUpdate();
            JOptionPane.showMessageDialog(this, "Book Issued");
            clear();
            } catch (SQLException ex) {
                Logger.getLogger(SignIn.class.getName()).log(Level.SEVERE, null, ex);
            }
        }



        // TODO add your handling code here:
    }

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

        try {
            pst=c.prepareStatement("SELECT * FROM library.book where id=?");
            pst.setString(1, txtid.getText());
            rs=pst.executeQuery();
            if(rs.next())
                txtbookname.setText(rs.getString("name"));
            else
                JOptionPane.showMessageDialog(this, "Please Enter Valied Book ID");
        } catch (SQLException ex) {
            Logger.getLogger(SignIn.class.getName()).log(Level.SEVERE, null, ex);
        }       // 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) {
```

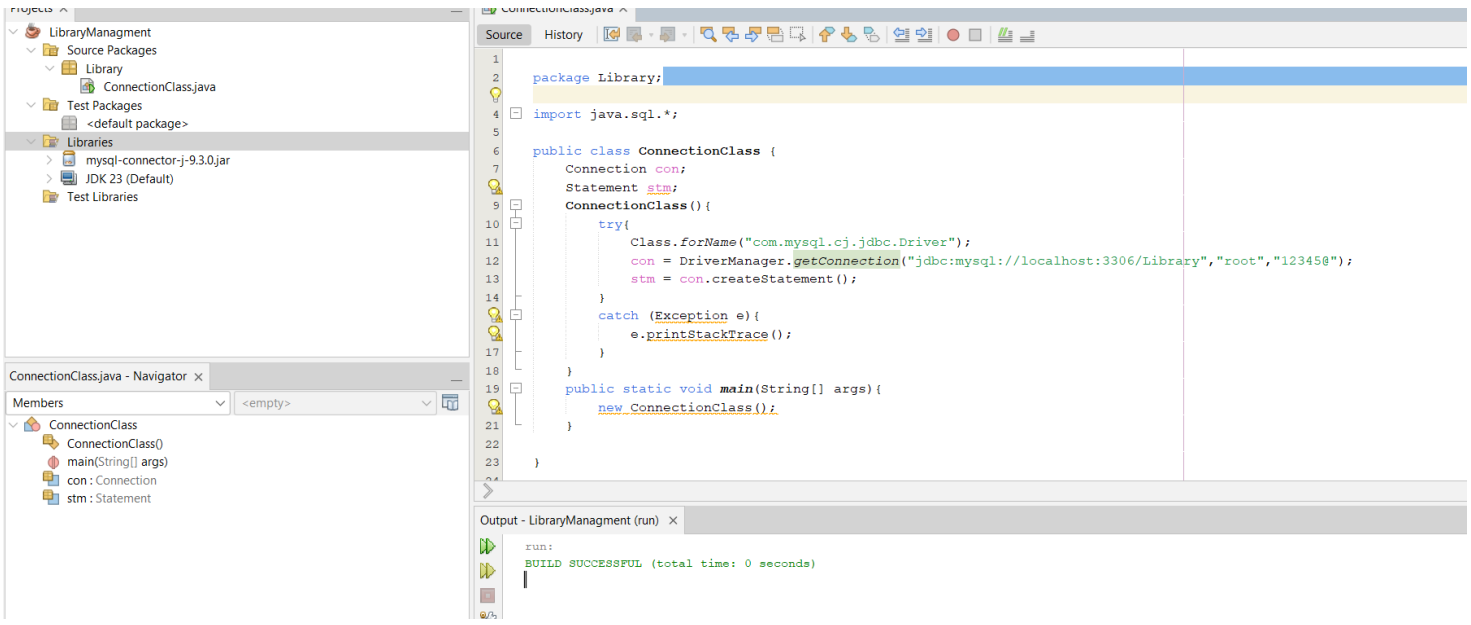
```
            java.util.logging.Logger.getLogger(IssueBook.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(IssueBook.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
        }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

    // Variables declaration - do not modify
    private javax.swing.JButton btnissue;
    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.JLabel jLabel4;
    private javax.swing.JLabel jLabel5;
    private javax.swing.JLabel jLabel6;
    private javax.swing.JLabel jLabel7;
    private javax.swing.JTextField txtbookname;
    private javax.swing.JTextField txtduedate;
    private javax.swing.JTextField txtid;
    private javax.swing.JTextField txtissuedate;
    private javax.swing.JTextField txtstudentid;
    // End of variables declaration
}
```

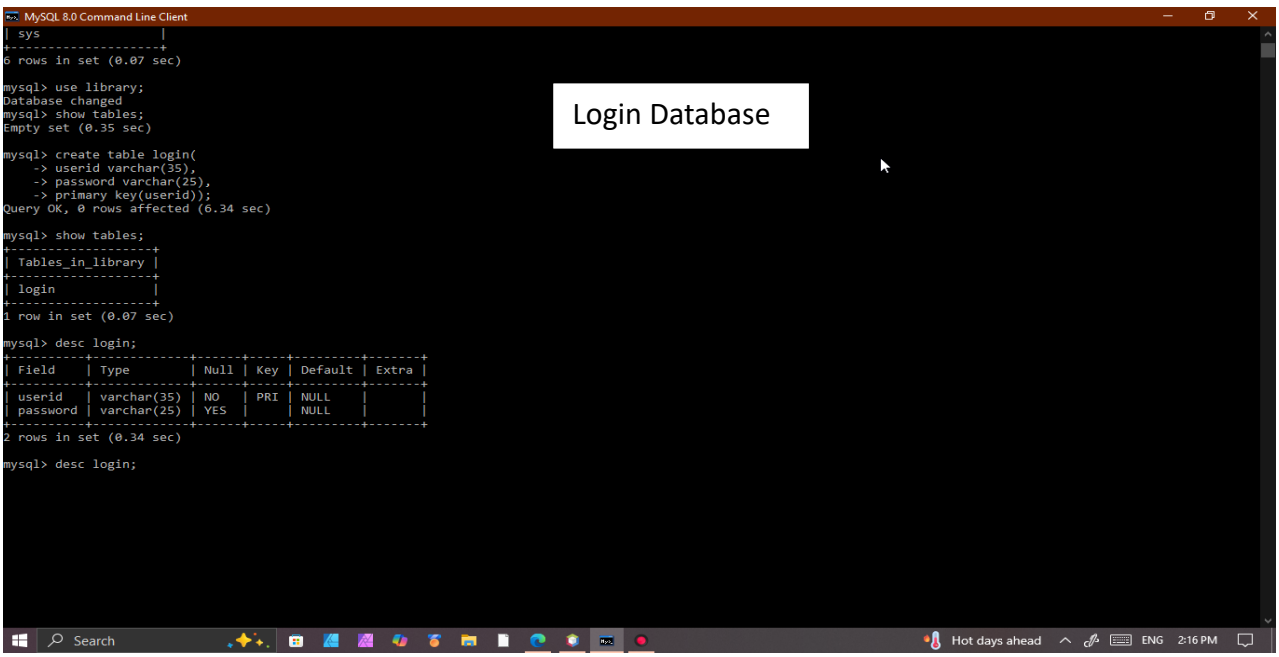
SCREENSHOT

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| library            |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql> use library;
Database changed
mysql>
```

Database creation

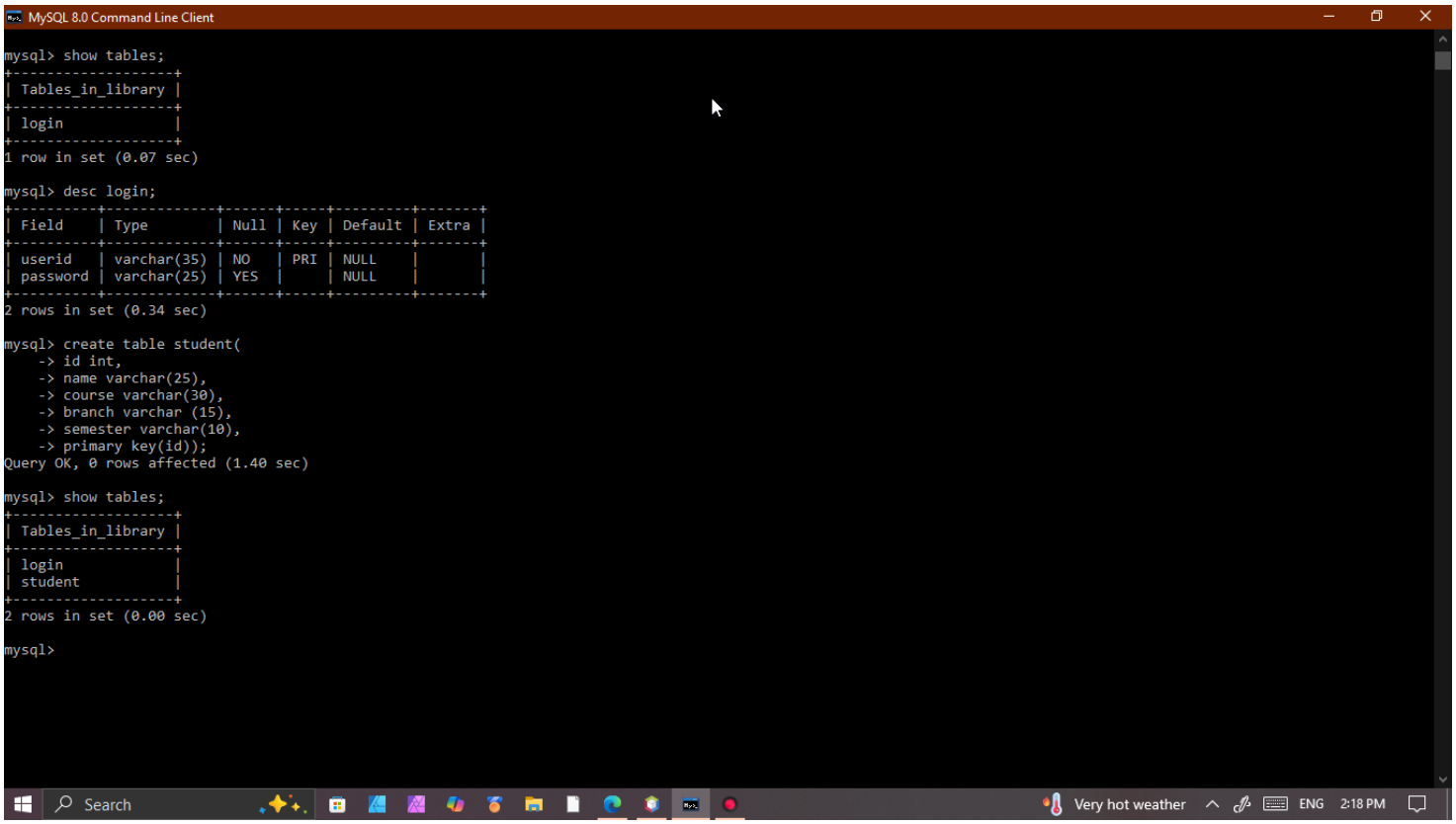
JDBC Connection and jar file

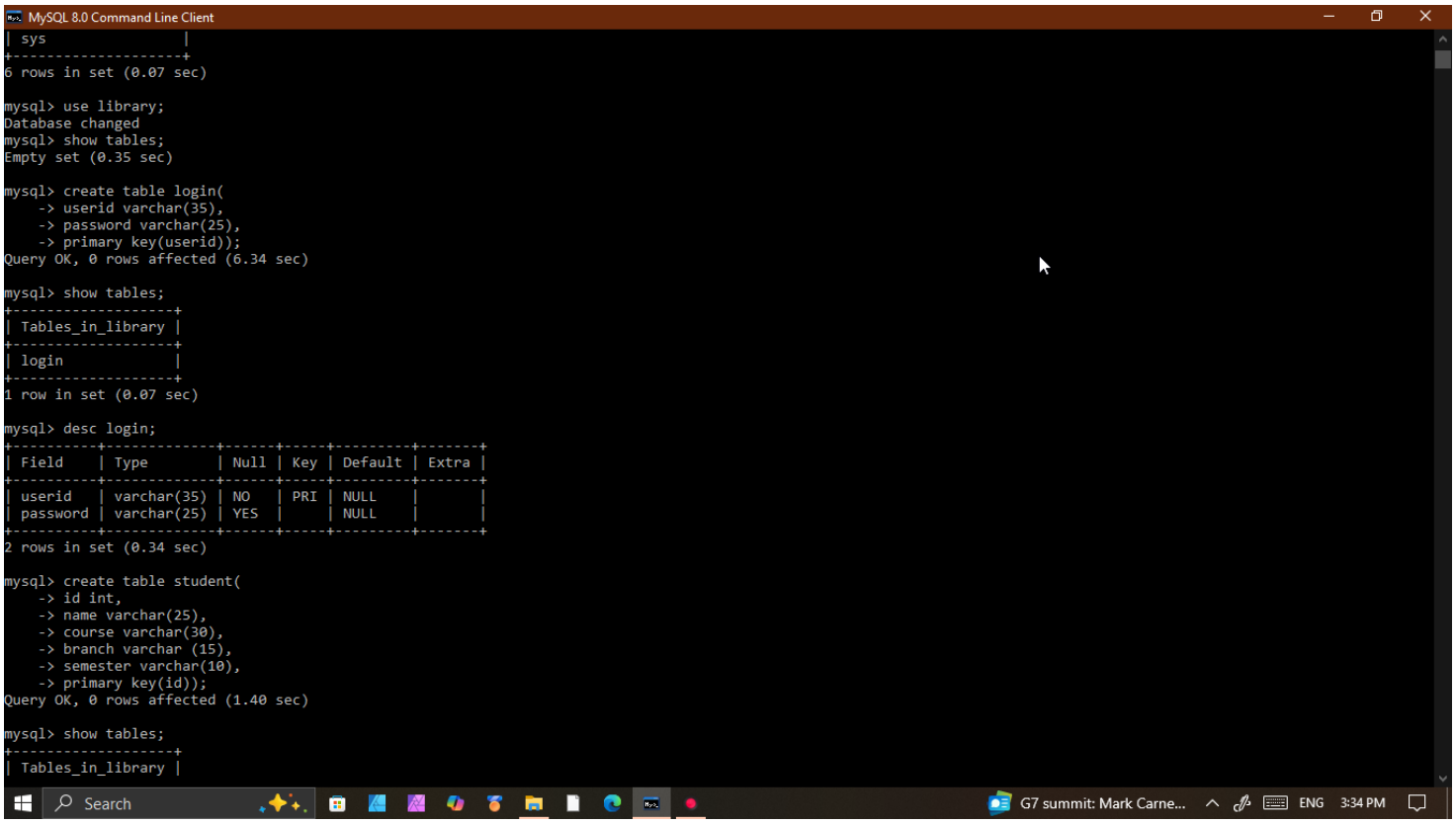


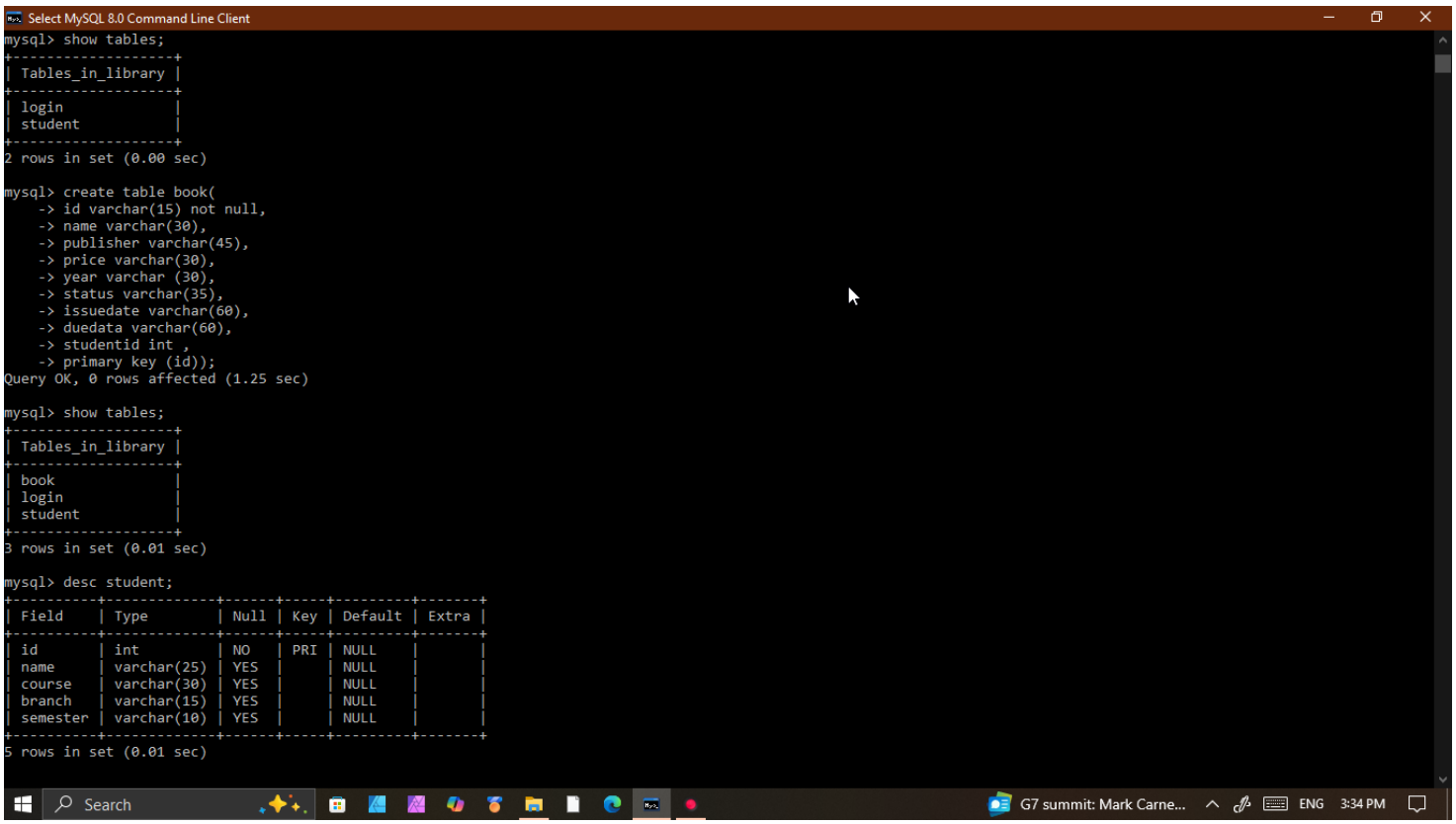


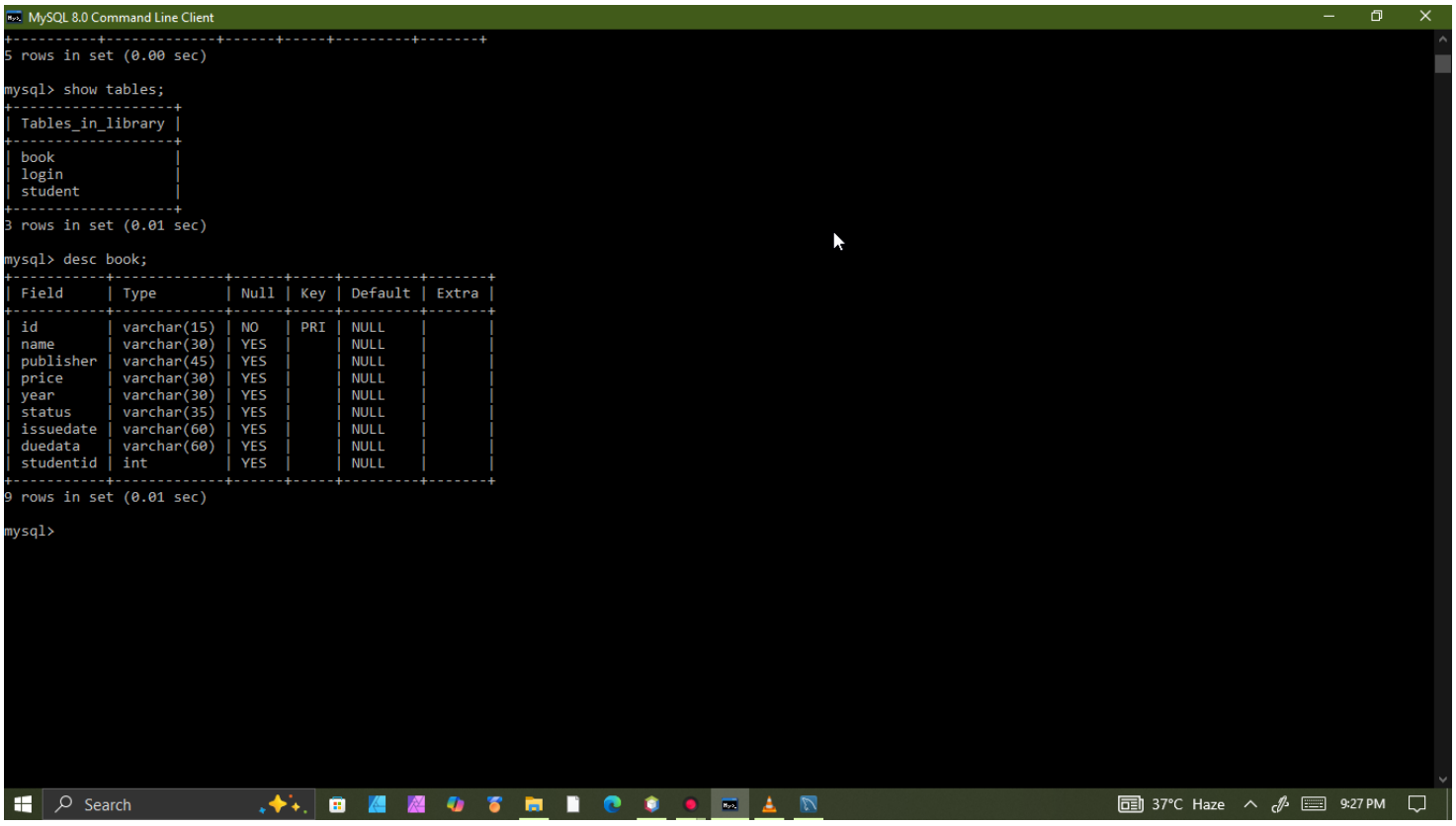
Login Database

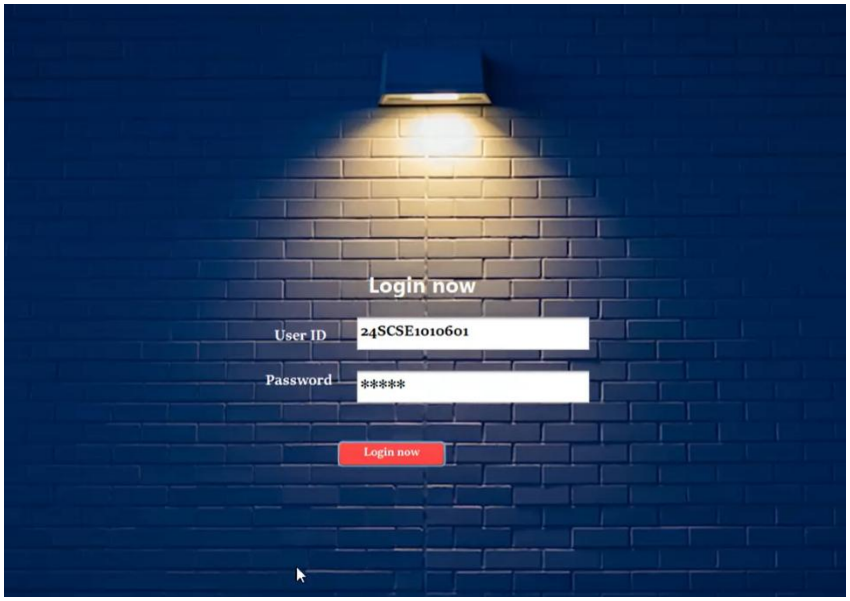
Login ,Student, Book table my MYSQL

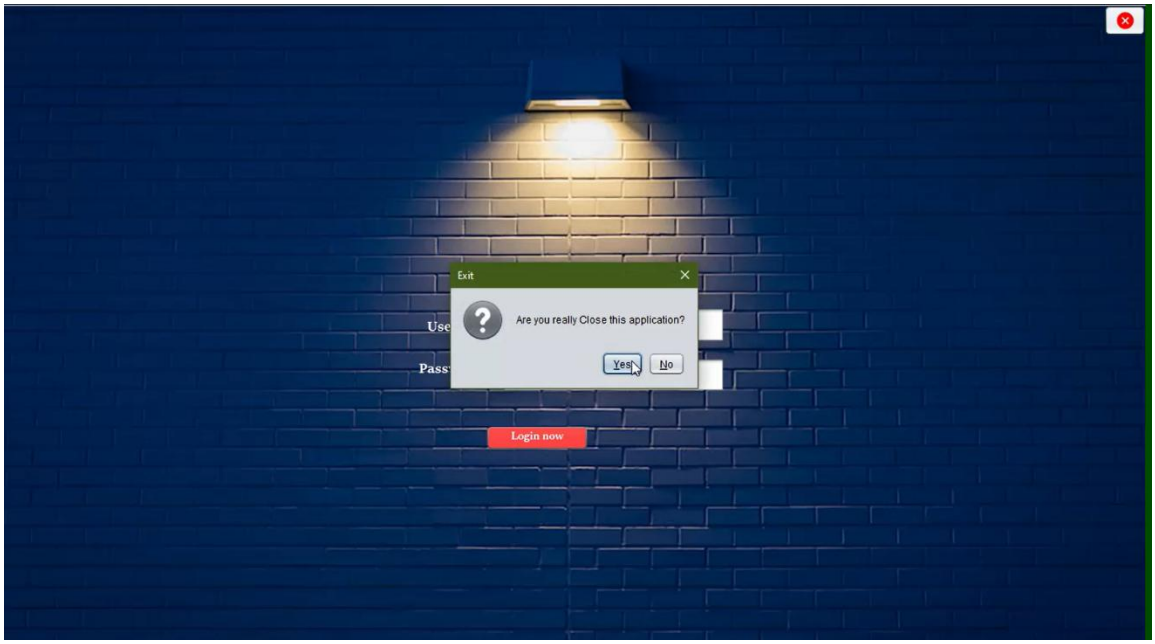


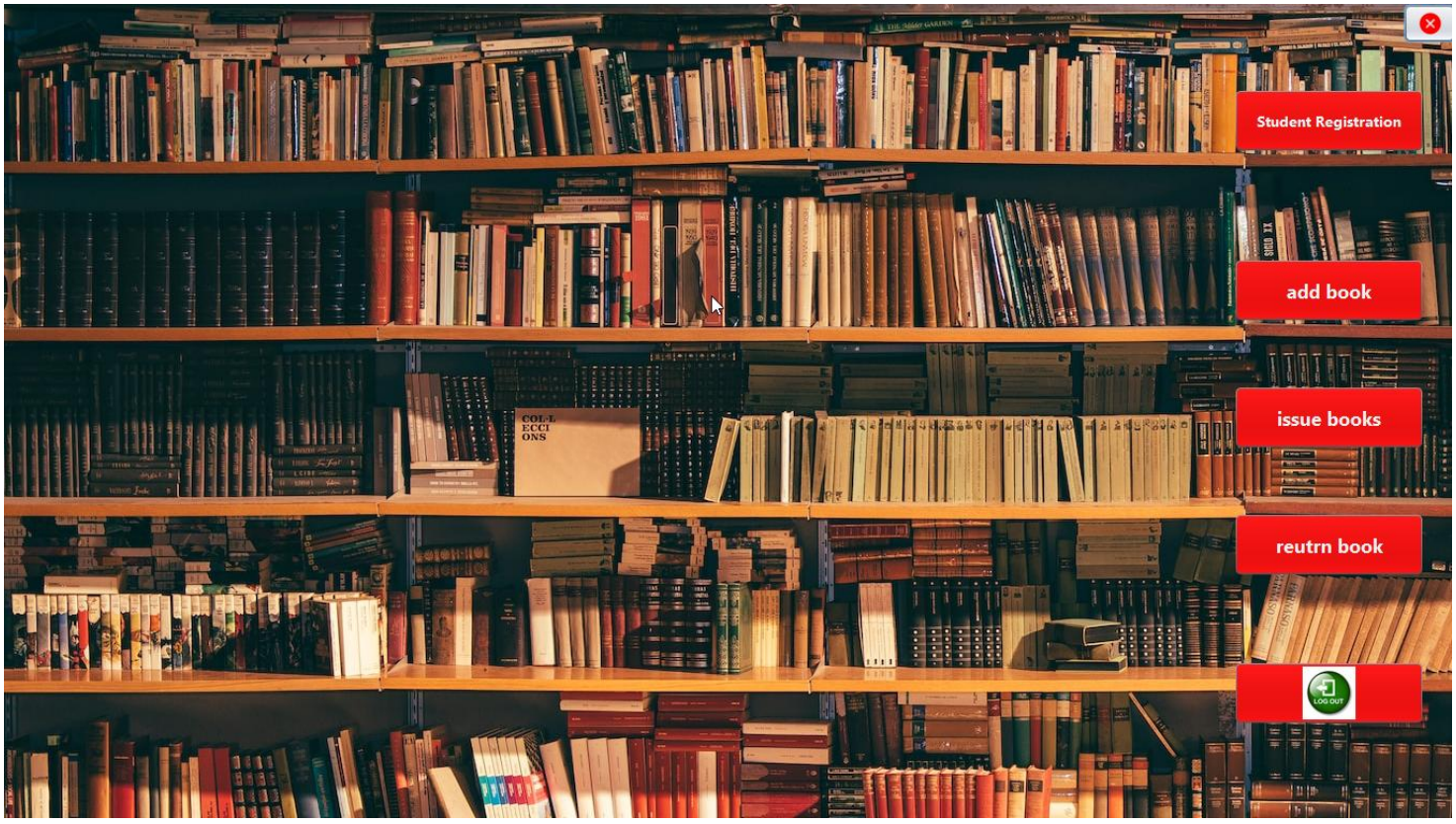


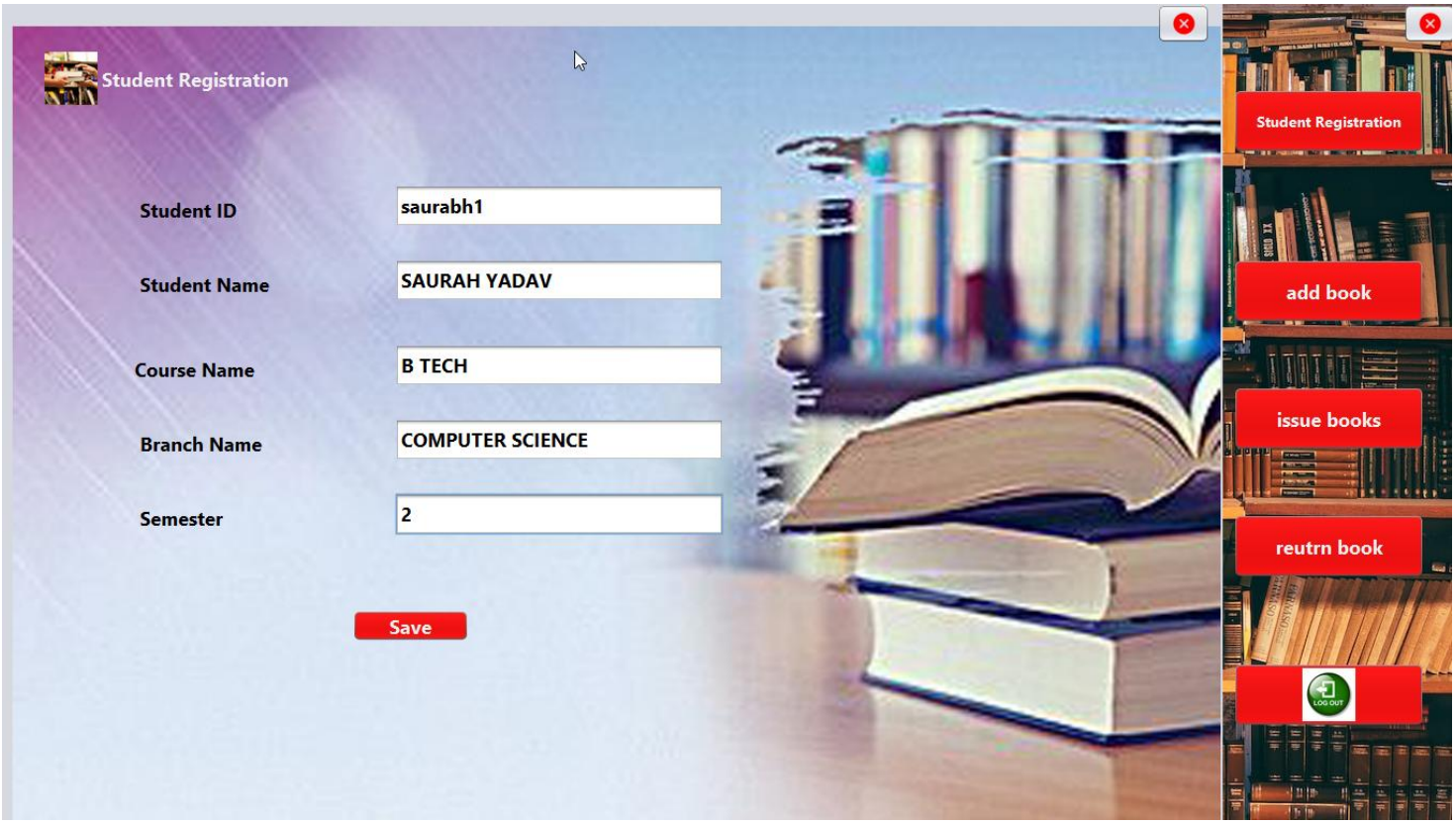

Select MySQL 8.0 Command Line Client
mysql> show tables;
+------------------+
| Tables_in_library |
+------------------+
| login |
| student |
+------------------+
2 rows in set (0.00 sec)
mysql> create table book(
-> id varchar(15) not null,
-> name varchar(30),
-> publisher varchar(45),
-> price varchar(30),
-> year varchar (30),
-> status varchar(35),
-> issuedate varchar(60),
-> duedata varchar(60),
-> studentid int ,
-> primary key (id));
Query OK, 0 rows affected (1.25 sec)
mysql> show tables;
+------------------+
| Tables_in_library |
+------------------+
| book |
| login |
| student |
+------------------+
3 rows in set (0.01 sec)
mysql> desc student;
+----------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
id	int	NO	PRI	NULL	
name	varchar(25)	YES		NULL	
course	varchar(30)	YES		NULL	
branch	varchar(15)	YES		NULL	
semester	varchar(10)	YES		NULL	
+----------+-------------+------+-----+---------+-------+
5 rows in set (0.01 sec)
Search
G7 summit: Mark Carne...
ENG
3:34 PM


MySQL 8.0 Command Line Client
5 rows in set (0.00 sec)
mysql> show tables;
+------------------+
| Tables_in_library |
+------------------+
| book |
| login |
| student |
+------------------+
3 rows in set (0.01 sec)
mysql> desc book;
+-----------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
id	varchar(15)	NO	PRI	NULL	
name	varchar(30)	YES		NULL	
publisher	varchar(45)	YES		NULL	
price	varchar(30)	YES		NULL	
year	varchar(30)	YES		NULL	
status	varchar(35)	YES		NULL	
issuedate	varchar(60)	YES		NULL	
duedata	varchar(60)	YES		NULL	
studentid	int	YES		NULL	
+-----------+-------------+------+-----+---------+-------+
9 rows in set (0.01 sec)
mysql>
Search
37°C Haze
9:27 PM

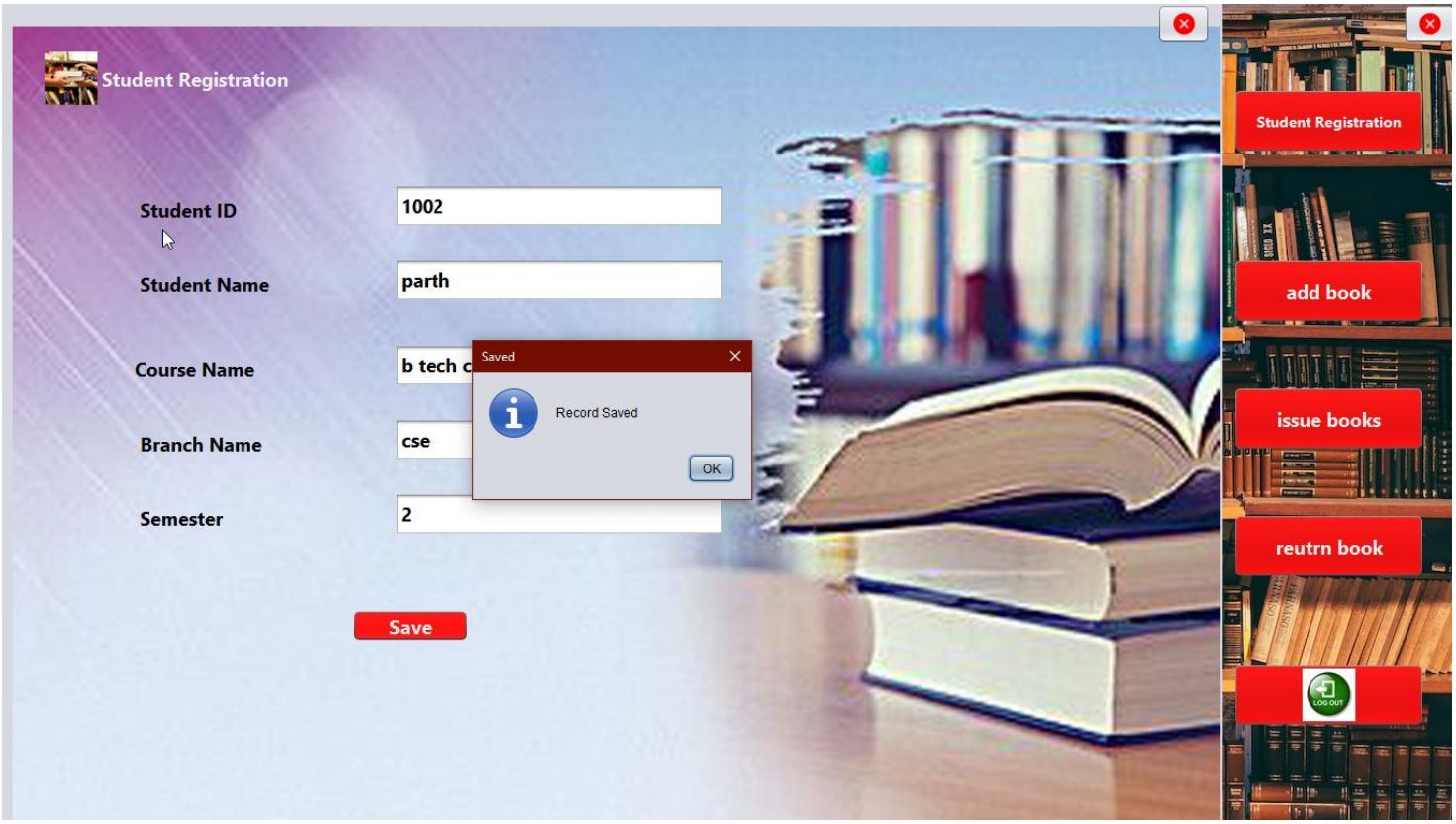

Login now
User ID
24SCSE1010601
Password
*****
Login now


Exit
Are you really Close this application?
Yes
No
Login now


Student Registration
add book
issue books
reutrn book
LOG OUT

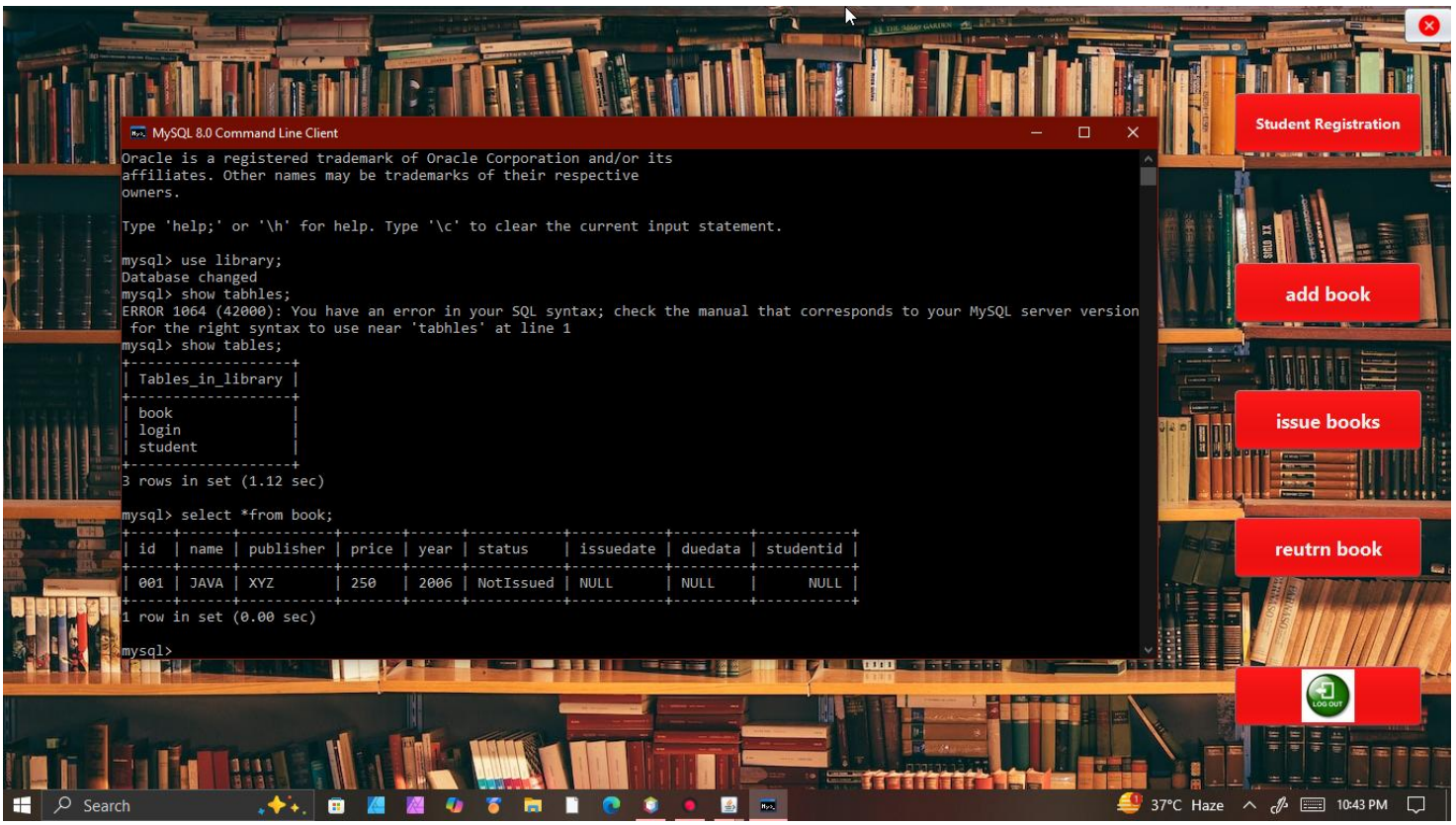

Student Registration
Student ID
saurabh1
Student Name
SAURAH YADAV
Course Name
B TECH
Branch Name
COMPUTER SCIENCE
Semester
2
Save
Student Registration
add book
issue books
reutrn book

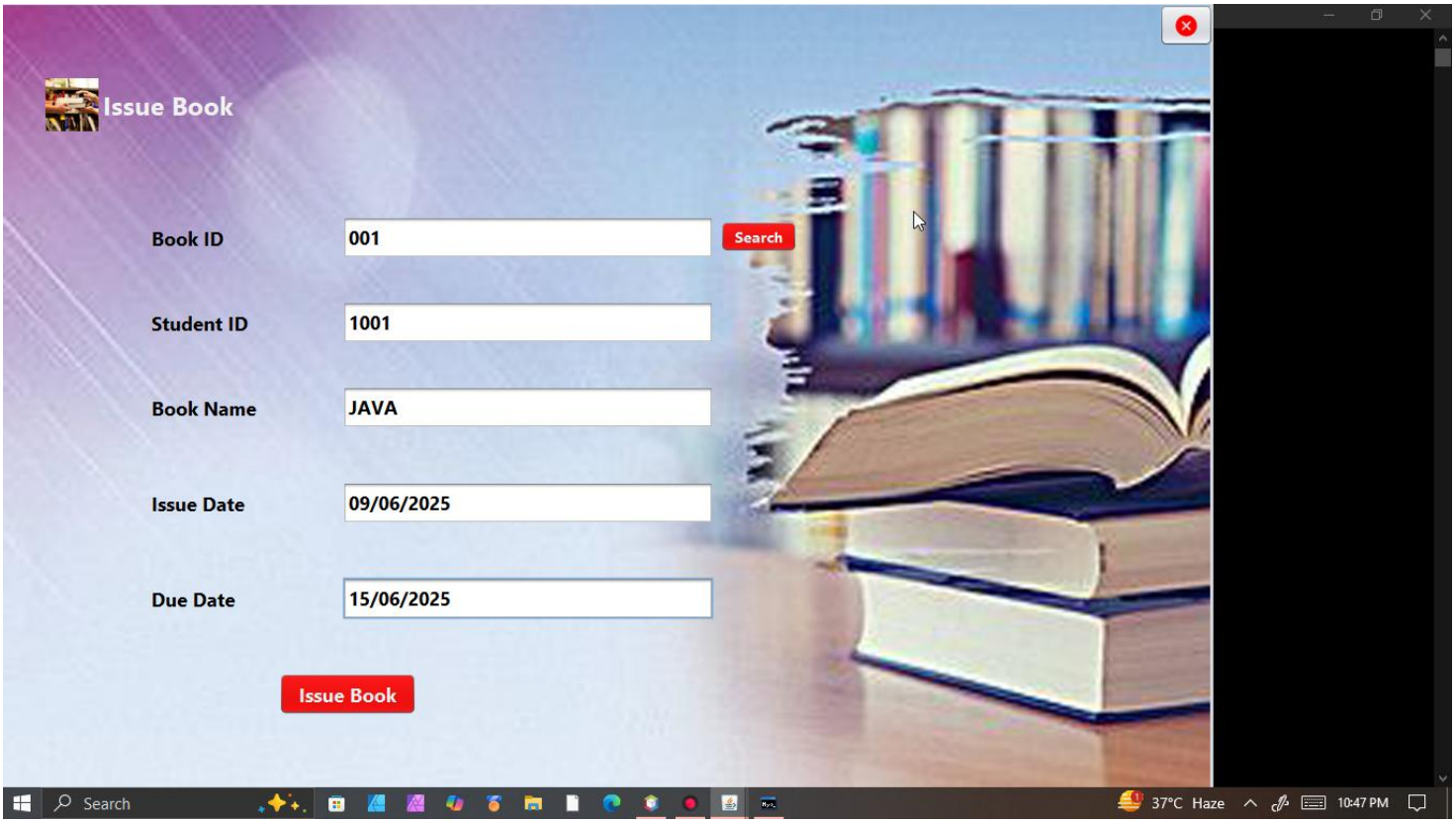
Student Registration
Student ID
1002
Student Name
parth
Course Name
b tech cse
Branch Name
cse
Semester
2
Save
Student Registration
add book
issue books
reutrn book




```
MySQL 8.0 Command Line Client
| login             |
| student           |
+-------------------+
3 rows in set (1.12 sec)

mysql> select *from book;
+-----+------+-----------+-------+------+-----------+-----------+---------+-----------+
| id  | name | publisher | price | year | status    | issuedate | duedata | studentid |
+-----+------+-----------+-------+------+-----------+-----------+---------+-----------+
| 001 | JAVA | XYZ       | 250   | 2006 | NotIssued | NULL      | NULL    |      NULL |
+-----+------+-----------+-------+------+-----------+-----------+---------+-----------+
1 row in set (0.00 sec)

mysql> select *from student;
Empty set (0.00 sec)

mysql> select *from student;
Empty set (0.00 sec)

mysql> select *from student;
+------+----------------+-------------+--------+----------+
| id   | name           | course      | branch | semester |
+------+----------------+-------------+--------+----------+
| 1001 | saurabh yadav  | b tech cse  | cse    | 2        |
| 1002 | parth          | b tech cse  | cse    | 2        |
| 1003 | saurabh pandey | b tech cse  | cse    | 2        |
+------+----------------+-------------+--------+----------+
3 rows in set (0.00 sec)

mysql>
```

Add Book Details
Book ID
001
Book Name
JAVA
Publisher
XYZ
Price
250
Publisher Year
2006
Save
Saved
Record Saved
OK
Student Registration
add book
issue books
reutrn book


MySQL 8.0 Command Line Client
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> use library;
Database changed
mysql> show tabhles;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version
for the right syntax to use near 'tabhles' at line 1
mysql> show tables;
+-------------------+
| Tables_in_library |
+-------------------+
| book |
| login |
| student |
+-------------------+
3 rows in set (1.12 sec)
mysql> select *from book;
+-----+------+-----------+-------+------+-----------+-----------+---------+-----------+
| id | name | publisher | price | year | status | issuedate | duedata | studentid |
+-----+------+-----------+-------+------+-----------+-----------+---------+-----------+
| 001 | JAVA | XYZ | 250 | 2006 | NotIssued | NULL | NULL | NULL |
+-----+------+-----------+-------+------+-----------+-----------+---------+-----------+
1 row in set (0.00 sec)
mysql>
Student Registration
add book
issue books
reutrn book
Search
37°C Haze
10:43 PM


Issue Book
Book ID
001
Search
Student ID
1001
Book Name
JAVA
Issue Date
09/06/2025
Due Date
15/06/2025
Issue Book