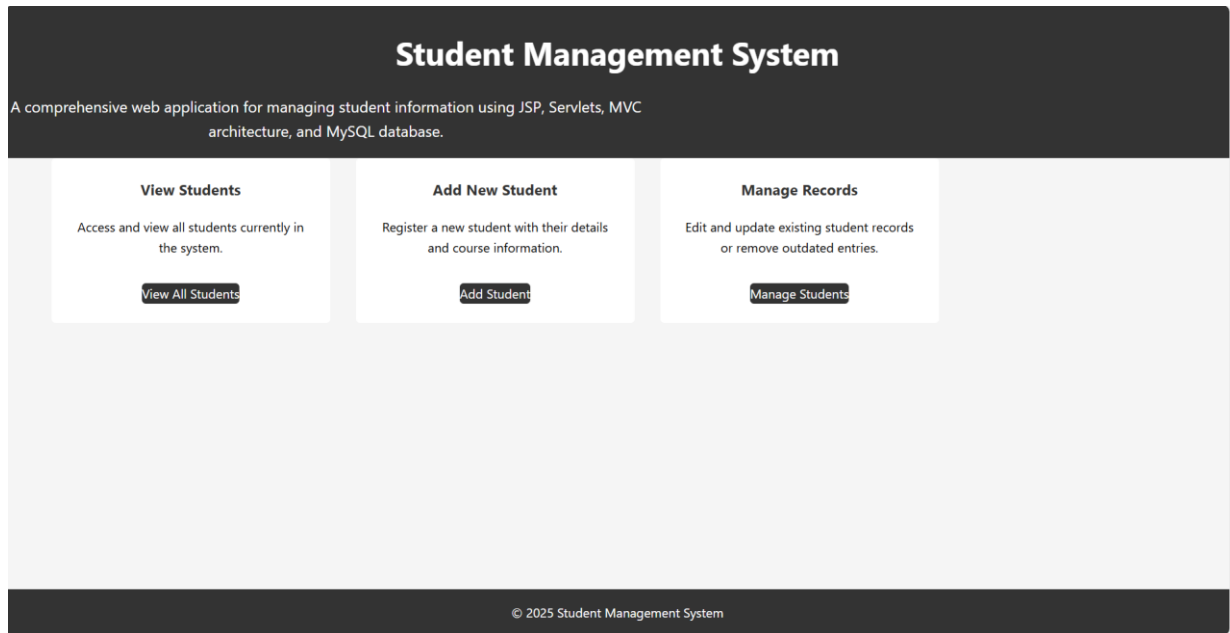**Student Name: Phan Tran Thanh Huy**

Student ID: ITCSIU22056

Lab 8

Running the website:

Feature 1: Course Management: Add the ability to manage courses separately from students

Course-list.jsp

```jsp
<%@ include file="header.jsp" %>

<h2>Course List</h2>

<c:if test="${courses.size()==0}">
    <p>No students found.</p>
</c:if>
<c:if test="${courses.size()>0}">
    <table>
        <thead>
            <tr>
                <th>Code</th>
                <th>Name</th>
                <th>Description</th>
                <th>Credits</th>
                <th>Actions</th>
            </tr>
        </thead>
        <tbody>
            <c:forEach var="course" items="${courses}">
                <tr>
                    <td>${course.code}</td>
                    <td>${course.name}</td>
                    <td>${course.description}</td>
                    <td>${course.credits}</td>
                    <td>
                        <a
href="${pageContext.request.contextPath}/course/view?id=${course.id}"
class="btn">View</a>
                        <a
href="${pageContext.request.contextPath}/course/edit?id=${course.id}"
class="btn">Edit</a>
                        <a
href="${pageContext.request.contextPath}/course/delete?id=${course.id}"
class="btn"
```

```
      class="btn"
36                            onclick="return confirm('Are you sure you want to
37    delete this course?')">Delete</a>
38                            </td>
39                    </tr>
40              </c:forEach>
41          </tbody>
42      </table>
43  </c:if>
    <a href="${pageContext.request.contextPath}/course/new" class="btn">Add New Course</a>
45  <%@ include file="footer.jsp"%>
```

Result:

Course List

Code	Name	Description	Credits	Actions		
CS101	Computer Science	Basics of computer science and programming.	4	View	Edit	Delete
IT201	Information Technology	Overview of IT systems and infrastructure.	4	View	Edit	Delete
SE101	Software Engineering	Software development lifecycle, design, testing.	4	View	Edit	Delete
DS101	Data Science	Statistics, data analysis, and machine learning.	4	View	Edit	Delete
CY101	Cybersecurity	Security principles, threats, and defenses.	4	View	Edit	Delete

Add New Course

Feature 2: Student Search Functionality: Add the ability to search for students by name or email

Input box:

```
<div class="title-box">
    <h2>Student List</h2>
    <form class="search-box" action="${pageContext.request.contextPath}/student/search" method="get">
        <input name="query" type="search"placeholder="Search..."/>
        <button type="submit" class="btn">Search</button>
    </form>
</div>
```

Search student function:

```java
158        private void searchStudent (HttpServletRequest request, HttpServletResponse response)
159            throws IOException, ServletException{
160            String query = request.getParameter("query");
161            List<Student> students;
162
163            if(query == null || query.trim().isEmpty()) {
164                students = studentDAO.getAllStudents();
165            } else {
166                students = studentDAO.searchStudentsByNameOrEmail(query.trim());
167            }
168
169            request.setAttribute("students", students);
170            request.getRequestDispatcher("/WEB-INF/views/student-list.jsp").forward(request, response);
171        }
172    }
```

Search in database:

```java
141    public List<Student> searchStudentsByNameOrEmail(String keyword) {
142
143        List<Student> students = new ArrayList<>();
144        String sql = "SELECT * FROM students WHERE name LIKE ? OR email LIKE ?";
145
146    try (Connection conn = DBUtil.getConnection();
147        PreparedStatement stmt = conn.prepareStatement(sql)) {
148
149        String searchKeyword = "%" + keyword + "%";
150        stmt.setString(1, searchKeyword);
151        stmt.setString(2, searchKeyword);
152        ResultSet rs = stmt.executeQuery();
153
154        while (rs.next()) {
155            Student student = new Student();
156            student.setId(rs.getInt("id"));
157            student.setName(rs.getString("name"));
158            student.setEmail(rs.getString("email"));
159            // Fetch course if needed
160            students.add(student);
161        }
162
163    } catch (SQLException e) {
            e.printStackTrace();
165    }
166
167    return students;
168    }
169    }
```

Result:

Student List

Phan Tran Thanh Huy   ✕   Search

ID	Name	Email	Course	Actions
8	Phan Tran Thanh Huy	ITCSIU22056@student.hcmiu.edu.vn		View Edit Delete

Add New Student