WEB APPLICATION DEVELOPMENT

INSTRUCTOR:

STUDENT NAME

Ngô Quang Hải

STUDENT ID

ITCSIU22276

LAB 5

Notices:

Pom.xml is rewritten!

Basically, these homework made the project to use servlet and let DAO handle the backend and server connection, Controller to hander request, response and forward to jsp files.

All jsp files in in WEB-INF/views/

So the visual studio code require specific version to run, let me paste them:

```xml
<dependencies>

    <!-- JUnit -->
    <dependency>
        <groupId>junit</groupId>
        <artifactId>junit</artifactId>
        <version>4.13.2</version>
        <scope>test</scope>
    </dependency>

    <!-- SQL Server JDBC driver (Java 11+ version) -->
    <dependency>
        <groupId>com.microsoft.sqlserver</groupId>
        <artifactId>mssql-jdbc</artifactId>
        <version>12.6.1.jre11</version>
    </dependency>

    <!-- Tomcat 11 uses Jakarta Servlet 6.0 -->
```
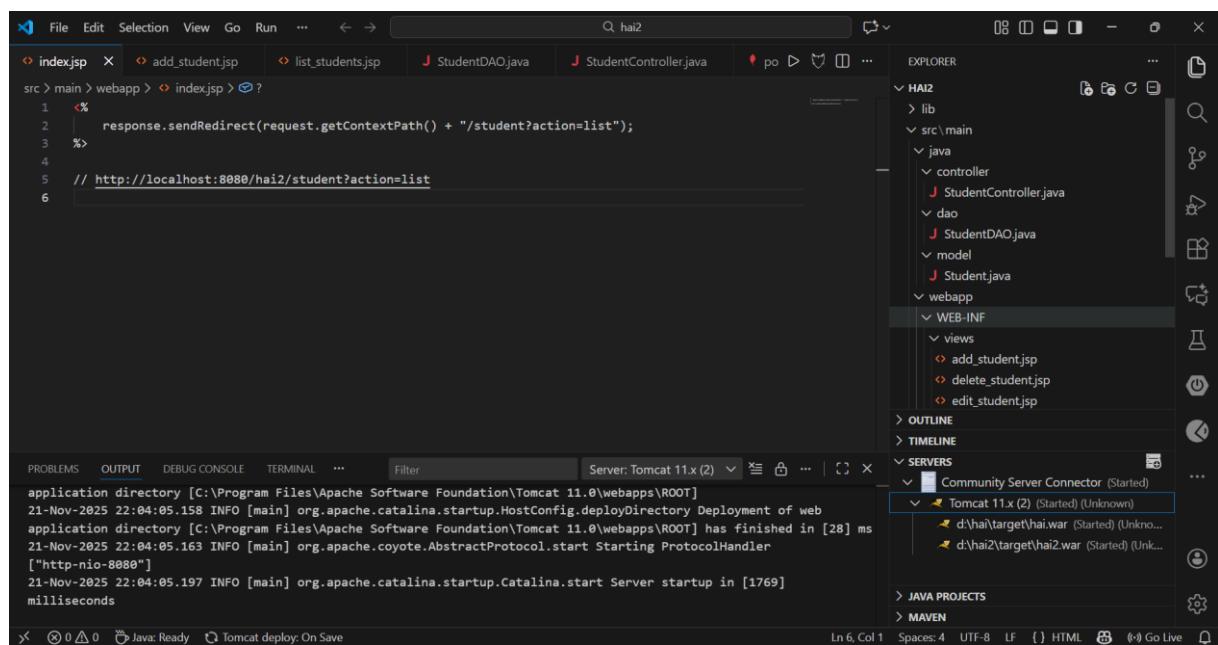
```xml
    <dependency>
      <groupId>jakarta.servlet</groupId>
      <artifactId>jakarta.servlet-api</artifactId>
      <version>6.0.0</version>
      <scope>provided</scope>
    </dependency>


  </dependencies>
```
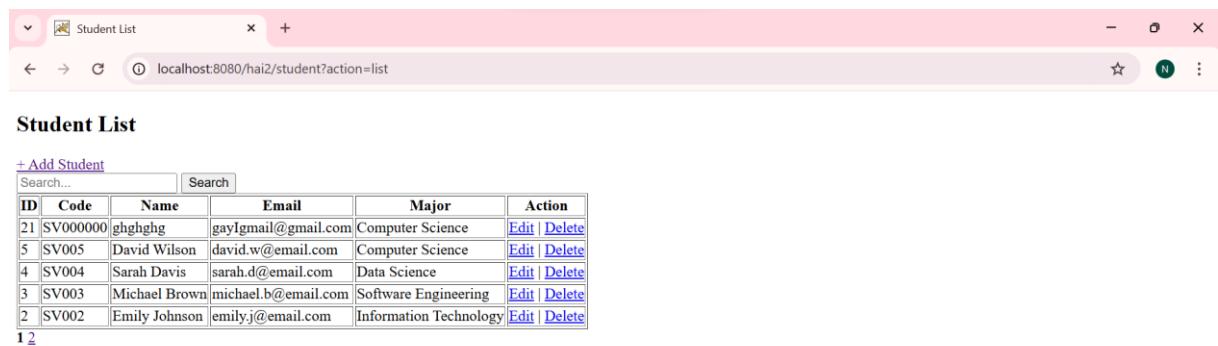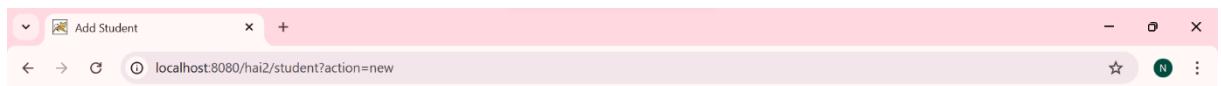
A short snapshot:

My main page:

Validation in Add student:

Add Student

Student Code:

[   ]
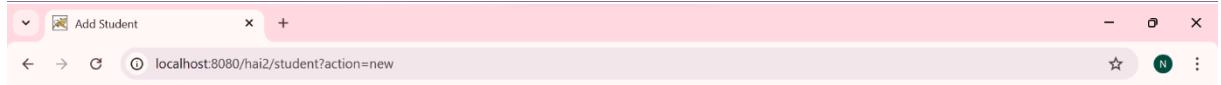
Full Name:

[⚠ Please fill out this field.   ]

Email:

[   ]

Major:

[   ]

[Add Student   ]

Add Student

Student Code:

[SV00000099   ]

Full Name:
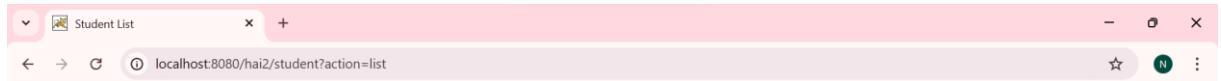
[ghghghg   ]

Email:

[gaylgmailgmail.com   ]

⚠ Please include an '@' in the email address. 'gaylgmailgmail.com' is missing an '@'.

[Add Student   ]

Student List

+ Add Student

[Search...] [Search]

ID	Code	Name	Email	Major	Action
22	SV00000099	ghghghg	gaylgmail@gmail.com	no	Edit | Delete
21	SV000000	ghghghg	gaylgmail@gmail.com	Computer Science	Edit | Delete
5	SV005	David Wilson	david.w@email.com	Computer Science	Edit | Delete
4	SV004	Sarah Davis	sarah.d@email.com	Data Science	Edit | Delete
3	SV003	Michael Brown	michael.b@email.com	Software Engineering	Edit | Delete

1 2

Pagnitation:

Currently there is a page 1 and page 2


```java
/**
 * Paginated search across 3 columns: student_code, full_name, email
 */
public List<Student> searchStudents(String keyword, int offset, int limit)
{
    List<Student> students = new ArrayList<>();
    String sql;

    if (keyword != null && !keyword.trim().isEmpty()) {
        sql = "SELECT * FROM students " +
                "WHERE student_code LIKE ? OR full_name LIKE ? OR email LIKE
? " +
                "ORDER BY id DESC " +
                "OFFSET ? ROWS FETCH NEXT ? ROWS ONLY";
    } else {
        sql = "SELECT * FROM students " +
                "ORDER BY id DESC " +
                "OFFSET ? ROWS FETCH NEXT ? ROWS ONLY";
```

A request path:

```
"<%= request.getContextPath() %>/student?action=edit&id=<%= s.getId() %>"
```