

WEB APPLICATION DEVELOPMENT

INSTRUCTOR:

STUDENT NAME

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STUDENT ID

ITCSIU22276

LAB4

Query:

```
-- Create database  
CREATE DATABASE student_management;  
GO
```

```
-- Switch to the new database
```

```
USE student_management;  
GO
```

```
-- Create table
```

```
CREATE TABLE students (  
    id INT IDENTITY(1,1) PRIMARY KEY,  
    student_code VARCHAR(10) UNIQUE NOT NULL,  
    full_name NVARCHAR(100) NOT NULL,  
    email VARCHAR(100),  
    major NVARCHAR(50),  
    created_at DATETIME DEFAULT GETDATE()
```

);

GO

-- Insert sample data

```
INSERT INTO students (student_code, full_name, email, major) VALUES
('SV001', 'John Smith', 'john.smith@email.com', 'Computer Science'),
('SV002', 'Emily Johnson', 'emily.j@email.com', 'Information Technology'),
('SV003', 'Michael Brown', 'michael.b@email.com', 'Software Engineering'),
('SV004', 'Sarah Davis', 'sarah.d@email.com', 'Data Science'),
('SV005', 'David Wilson', 'david.w@email.com', 'Computer Science');
```

GO

Snapshot of my project:

VS code studio + MAVEN and Tomcat extensions

Also, i do not use MySQL, i use Mssql

The screenshot shows the VS Code interface with the following details:

- File Explorer:** Shows the project structure under "src\main\webapp". The file "list_students.jsp" is currently selected.
- Code Editor:** Displays the Java JSP code for "list_students.jsp". It includes imports for java.sql.* and javax.servlet.*. The code handles database connection to MSSQL using the com.microsoft.sqlserver.jdbc.SQLServerDriver and performs a query based on a keyword parameter.
- Terminal:** Shows the output of the command "Tomcat deploy:Disable".
- Servers:** Shows a "Community Server Connector (Started)" and two Tomcat instances: "Tomcat 11.x (Stopped)" and "Tomcat 11.x (1) (Started)".
- Java Projects:** Shows the Maven project structure.

Main list here: It has pacification, so theres a scrollbar and each page fits exactly 10 students.

The Ids is a bit off though.

localhost:8080/demo/list_students.jsp?success=Student%20deleted%20successfully

Student List

+ Add Student

Search by name or code...

| ID | Student Code | Full Name | Email | Major | Actions |
|----|--------------|---------------|-------------------------------------|------------------------|---------------------------------------|
| 12 | SV007 | Ngo Quang Hai | NgoQunagHai500505@gmail.com (Valid) | no | <input type="button" value="Delete"/> |
| 5 | SV005 | David Wilson | david.w@email.com (Valid) | Computer Science | <input type="button" value="Delete"/> |
| 4 | SV004 | Sarah Davis | sarah.d@email.com (Valid) | Data Science | <input type="button" value="Delete"/> |
| 3 | SV003 | Michael Brown | michael.b@email.com (Valid) | Software Engineering | <input type="button" value="Delete"/> |
| 2 | SV002 | Emily Johnson | emily.j@email.com (Valid) | Information Technology | <input type="button" value="Delete"/> |

As you see, there's a search bar with placeholder "Search by name or code" so if you enter number or integer it search by Student code, if you just search by text it will jump to Name. Everything is being searched by queries thanks to Mssql. The word in the search bar get highlighted in the list.

localhost:8080/demo/list_students.jsp?keyword=a

Student List

+ Add Student

a

| ID | Student Code | Full Name | Email | Major | Actions |
|----|--------------|---------------|-------------------------------------|----------------------|---------------------------------------|
| 12 | SV007 | Ngo Quang Hai | NgoQunagHai500505@gmail.com (Valid) | no | <input type="button" value="Delete"/> |
| 5 | SV005 | David Wilson | david.w@email.com (Valid) | Computer Science | <input type="button" value="Delete"/> |
| 4 | SV004 | Sarah Davis | sarah.d@email.com (Valid) | Data Science | <input type="button" value="Delete"/> |
| 3 | SV003 | Michael Brown | michael.b@email.com (Valid) | Software Engineering | <input type="button" value="Delete"/> |
| 1 | | | | | |

The search bar support the memory function to keep the inputs in local storage.

localhost:8080/demo/list_students.jsp

Student List

+ Add Student

Search by name or code... | Search | Clear

| ID | | Full Name | Email | Major | Actions |
|----|------------------|---------------|-------------------------------------|------------------------|---------|
| 12 | david em a | Ngo Quang Hai | NgoQuangHai500505@gmail.com (Valid) | no | Delete |
| 5 | SV005 | David Wilson | david.w@email.com (Valid) | Computer Science | Delete |
| 4 | SV004 | Sarah Davis | sarah.d@email.com (Valid) | Data Science | Delete |
| 3 | SV003 | Michael Brown | michael.b@email.com (Valid) | Software Engineering | Delete |
| 2 | SV002 | Emily Johnson | emily.j@email.com (Valid) | Information Technology | Delete |

localhost:8080/demo/list_students.jsp

So, there's a big green + Add Student. When you click on it, you will be moved to add_Student.jsp. I have process_add.jsp do all the backend. And like the search bar those input fields also have memory.

localhost:8080/demo/add_student.jsp

Add Student

Student Code:

Full Name:

Email:

Major:

An example of an adding of student.

localhost:8080/demo/add_student.jsp

Add Student

Student Code:
SV001

Full Name:
ne

Email:
gay@gmail@gmail.com

Major:
no

Add Student

The adding failed because there already exist SV001, so it detected the duplicate. Every time the adding failed when you click submit button Add Student, it will display error message.

localhost:8080/demo/add_student.jsp?error=Error%20adding%20student

Add Student

X Error adding student

Student Code:

Full Name:

Email:

Major:

Add Student

A valid Inputs.

Add Student

Student Code:

Full Name:

Email:

Major:

Add Student

✓ Student added successfully

Student Code:

Full Name:

Email:

Major:

Delete_student.jsp is called when you click on red Delete button. I use the built system notification message. If you choose OK, a deletion query will be executed and MSSQL will delete the student by its ID from database. The list will load a database with that student gone.

ITCSIU22276_Web_Submission/ Student List

localhost:8080/demo/list_students.jsp?keyword=a

Student List

+ Add Student

a Search Clear

localhost:8080 says
Delete this student?

OK Cancel

| ID | Student Code | Full Name | Email | Major | Actions |
|----|--------------|-------------------|-------------------------------------|----------------------|---------|
| 15 | SV001 | Ngo Quang Hai 222 | NgoQunagHai500505@gmail.com (Valid) | no | Delete |
| 12 | SV007 | Ngo Quang Hai | NgoQunagHai500505@gmail.com (Valid) | no | Delete |
| 5 | SV005 | David Wilson | david.w@email.com (Valid) | Computer Science | Delete |
| 4 | SV004 | Sarah Davis | sarah.d@email.com (Valid) | Data Science | Delete |
| 3 | SV003 | Michael Brown | michael.b@email.com (Valid) | Software Engineering | Delete |
| 1 | | | | | |

localhost:8080/demo/list_students.jsp?success=Student%20deleted%20successfully

Student List

✓ Student deleted successfully

+ Add Student

Search by name or code... Search Clear

| ID | Student Code | Full Name | Email | Major | Actions |
|----|--------------|---------------|-------------------------------------|----------------------|---------|
| 12 | SV007 | Ngo Quang Hai | NgoQunagHai500505@gmail.com (Valid) | no | Delete |
| 5 | SV005 | David Wilson | david.w@email.com (Valid) | Computer Science | Delete |
| 4 | SV004 | Sarah Davis | sarah.d@email.com (Valid) | Data Science | Delete |
| 3 | SV003 | Michael Brown | michael.b@email.com (Valid) | Software Engineering | Delete |
| | | | | | Delete |