

Lab 4

Github site & link

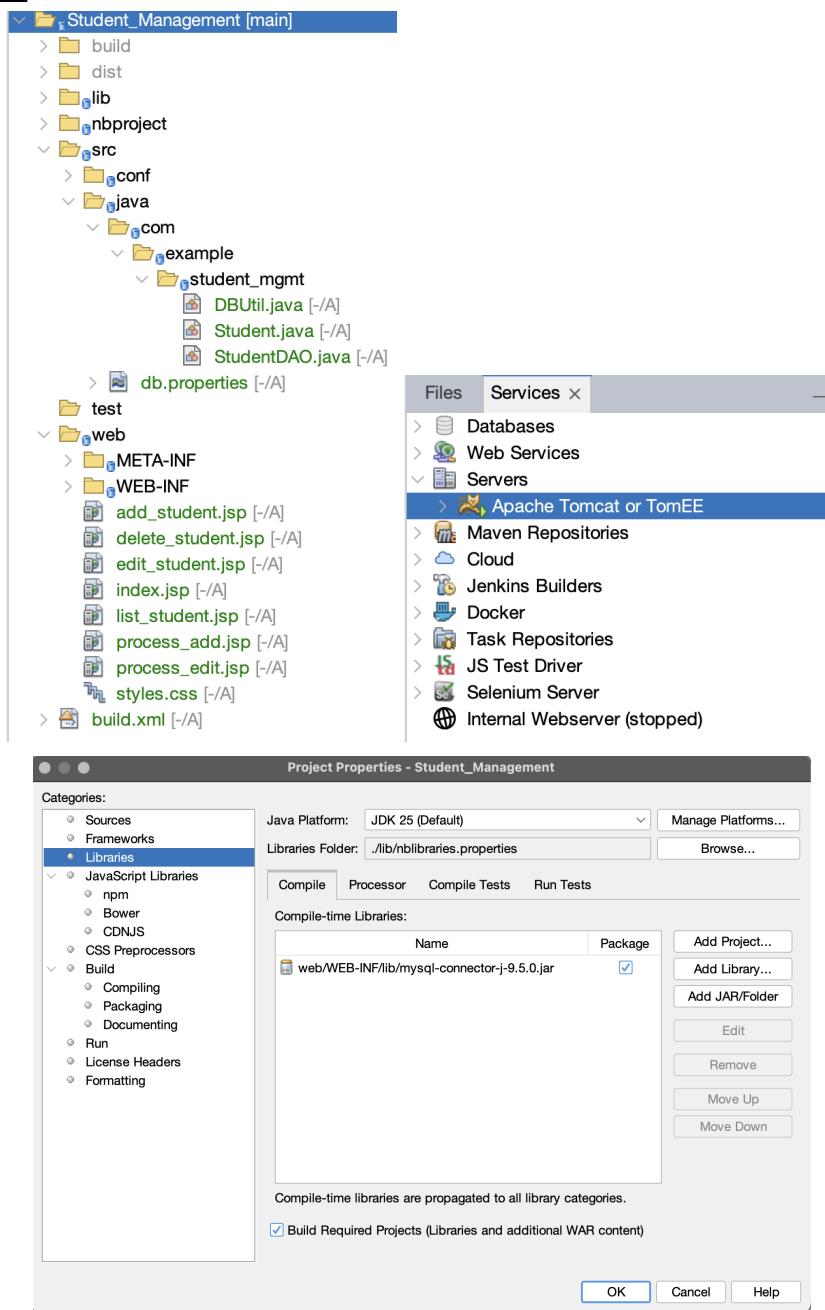
https://github.com/alexis0704/web-dev-practice-lab/tree/main/Student_Management

SQL script

```
1 •   DROP DATABASE IF EXISTS student_mgmt;
2      CREATE DATABASE student_mgmt;
3      USE student_mgmt;
4
5 • ⊖ CREATE TABLE students (
6      id          INT AUTO_INCREMENT PRIMARY KEY,
7      student_code  VARCHAR(50) NOT NULL,
8      full_name    VARCHAR(120) NOT NULL,
9      email        VARCHAR(254) NULL,
10     major        VARCHAR(120) NULL,
11     created_at    TIMESTAMP NOT NULL DEFAULT CURRENT_TIMESTAMP,
12     CONSTRAINT uq_students_code  UNIQUE (student_code),
13     CONSTRAINT uq_students_email UNIQUE (email)
14 ) CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;
15
16 •   INSERT INTO students (student_code, full_name, email, major) VALUES
17     ('123', 'ABC', 'abc@gmail.com', 'A'),
18     ('234', 'BCD', 'bcd@gmail.com', 'B'),
19     ('345', 'CDE', 'CDE@gmail.com', 'C'),
20     ('456', 'DEF', 'def@gmail.com', 'D'),
21     ('567', 'EFG', 'EFG@gmail.com', 'E'),
22     ('678', 'FGH', 'fgh@gmail.com', 'F');
23
```

Task 1: Setup and Display

Project properties



Successful build and deployment

```
ant -f "/Users/alexis/Documents/_Study/Web Dev/Lab/Practice_Lab/Student_Management" -Dnb.internal.action.name=redeploy -Ddirector
init:
deps-module-jar:
deps-ear-jar:
deps-jar:
library-inclusion-in-archive:
library-inclusion-in-manifest:
compile:
compile-jsps:
In-place deployment at /Users/alexis/Documents/_Study/Web Dev/Lab/Practice_Lab/Student_Management/build/web
Deployment is in progress...
deploy?config=file%3A%2Fvar%2Ffolders%2Flb%2Fbtwd2mcs5v9c2lgkfp5dtxm000gn%2FT%2Fcontext13092701460693730247.xml&path=/Student_M
OK - Deployed application at context path [/Student_Management]
Start is in progress...
start?path=/Student_Management
OK - Started application at context path [/Student_Management]
run-deploy:
BUILD SUCCESSFUL (total time: 0 seconds)
```



Tomcat Web Application Manager

Message:

Manager

List Applications	HTML Manager Help	Manager Help	Server Status
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Applications

Path	Version	Display Name	Running	Sessions	Commands
/Student_Management	None specified	StudentManagement	true	0	<input type="button" value="Start"/> <input type="button" value="Stop"/> <input type="button" value="Reload"/> <input type="button" value="Undeploy"/> <input type="button" value="Expire sessions"/> with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	<input type="button" value="Start"/> <input type="button" value="Stop"/> <input type="button" value="Reload"/> <input type="button" value="Undeploy"/> <input type="button" value="Expire sessions"/> with idle ≥ 30 minutes

Deploy

Deploy directory or WAR file located on server

Context Path: <input type="text"/>
Version (for parallel deployment): <input type="text"/>
XML Configuration file path: <input type="text"/>
WAR or Directory path: <input type="text"/>
<input type="button" value="Deploy"/>

WAR file to deploy

Select WAR file to upload No file chosen

index.jsp and list_student.jsp



Student Management

[View Students](#) | [Add Student](#)

Students

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
1	123	ABC	abc@gmail.com	A	2025-11-08 22:10:18.0	Edit Delete
2	234	BCD	bcd@gmail.com	B	2025-11-08 22:10:30.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-08 22:10:46.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-08 22:11:01.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-08 22:11:17.0	Edit Delete

Task 2: Create Operation

Adding a student

Add Student

Student Code*:

Full Name*:

Email:

Major:

[Cancel](#)

Valid submission, redirect to list_student.jsp with success message

Students

Student added successfully

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
1	123	ABC	abc@gmail.com	A	2025-11-08 22:10:18.0	Edit Delete
2	234	BCD	bcd@gmail.com	B	2025-11-08 22:10:30.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-08 22:10:46.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-08 22:11:01.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-08 22:11:17.0	Edit Delete
6	678	FGH	fgh@gmail.com	F	2025-11-08 22:15:27.0	Edit Delete

If doesn't input a required field

localhost:8081/Student_Management/add_student.jsp

Add Student

Student Code*:

Full Name*: Please fill out this field.

Email:

Major:

If input already exist student code

Add Student

Student Code*:

Full Name*:

Email:

Major:

Add Student

Student code already exists

Student Code*:

Full Name*:

Email:

Major:

[Cancel](#)

Task 3: Update Operation

List

Students

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
1	123	ABC	abc@gmail.com	A	2025-11-08 22:10:18.0	Edit Delete
2	234	BCD	bcd@gmail.com	B	2025-11-08 22:10:30.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-08 22:10:46.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-08 22:11:01.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-08 22:11:17.0	Edit Delete
6	678	FGH	fgh@gmail.com	F	2025-11-08 22:15:27.0	Edit Delete

Press edit for the student with id = 123 → prefilled form, student code can't be changed

Edit Student

Student Code (read only):

Full Name*:

Email:

Major:

Change student's info

Edit Student

Student Code (read only): 123

Full Name*: ABCD [A O](#)

Email: abcd@gmail.com

Major: AA

[Save](#)

On save

Students

Student updated successfully

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
1	123	ABCD	abcd@gmail.com	AA	2025-11-08 22:10:18.0	Edit Delete
2	234	BCD	bcd@gmail.com	B	2025-11-08 22:10:30.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-08 22:10:46.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-08 22:11:01.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-08 22:11:17.0	Edit Delete
6	678	FGH	fgh@gmail.com	F	2025-11-08 22:15:27.0	Edit Delete

If I were to use an ID that doesn't exist → redirects to list_student.jsp with an error message



Edit Student



Students

Student not found

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
1	123	ABCD	abcd@gmail.com	AA	2025-11-08 22:10:18.0	Edit Delete
2	234	BCD	bcd@gmail.com	B	2025-11-08 22:10:30.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-08 22:10:46.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-08 22:11:01.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-08 22:11:17.0	Edit Delete
6	678	FGH	fgh@gmail.com	F	2025-11-08 22:15:27.0	Edit Delete

Some edit input validator (required field & unique email)

Edit Student

Student Code (read only): 123

Full Name*:



Email: ! Please fill out this field.

Major: AA

[Cancel](#)

Edit Student

Email already exists

Student Code (read only): 123

Full Name*: ABC

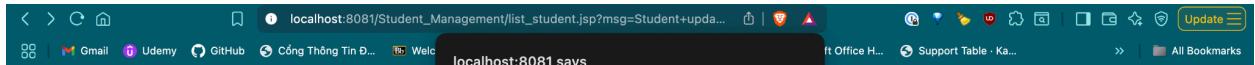
Email: ghi@gmail.com

Major: A

[Cancel](#)

Task 4: Delete Operation

Upon delete request, ask for confirmation → show success msg



Students

Student updated successfully

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
1	123	ABC	ghi@gmail.com	A	2025-11-09 01:42:24.0	Edit Delete
2	234	BCD	bcd@gmail.com	B	2025-11-09 01:42:24.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-09 01:42:24.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-09 01:42:24.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-09 01:42:24.0	Edit Delete
6	678	FGH	fgh@gmail.com	F	2025-11-09 01:42:24.0	Edit Delete

localhost:8081/Student_Management/delete_student.jsp?id=1

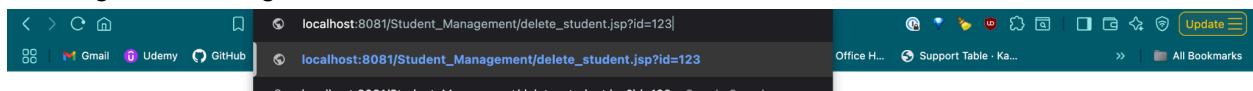
Students

Student deleted

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
2	234	BCD	bcd@gmail.com	B	2025-11-09 01:42:24.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-09 01:42:24.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-09 01:42:24.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-09 01:42:24.0	Edit Delete
6	678	FGH	fgh@gmail.com	F	2025-11-09 01:42:24.0	Edit Delete

Deleting non-existing student



Students

Student deleted

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
2	234	BCD	bcd@gmail.com	B	2025-11-09 01:42:24.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-09 01:42:24.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-09 01:42:24.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-09 01:42:24.0	Edit Delete
6	678	FGH	fgh@gmail.com	F	2025-11-09 01:42:24.0	Edit Delete



Students

ID not found

[+ Add Student](#)

ID	Student Code	Full Name	Email	Major	Created At	Actions
2	234	BCD	bcd@gmail.com	B	2025-11-09 01:42:24.0	Edit Delete
3	345	CDE	CDE@gmail.com	C	2025-11-09 01:42:24.0	Edit Delete
4	456	DEF	def@gmail.com	D	2025-11-09 01:42:24.0	Edit Delete
5	567	EFG	EFG@gmail.com	E	2025-11-09 01:42:24.0	Edit Delete
6	678	FGH	fgh@gmail.com	F	2025-11-09 01:42:24.0	Edit Delete