

Lab 4

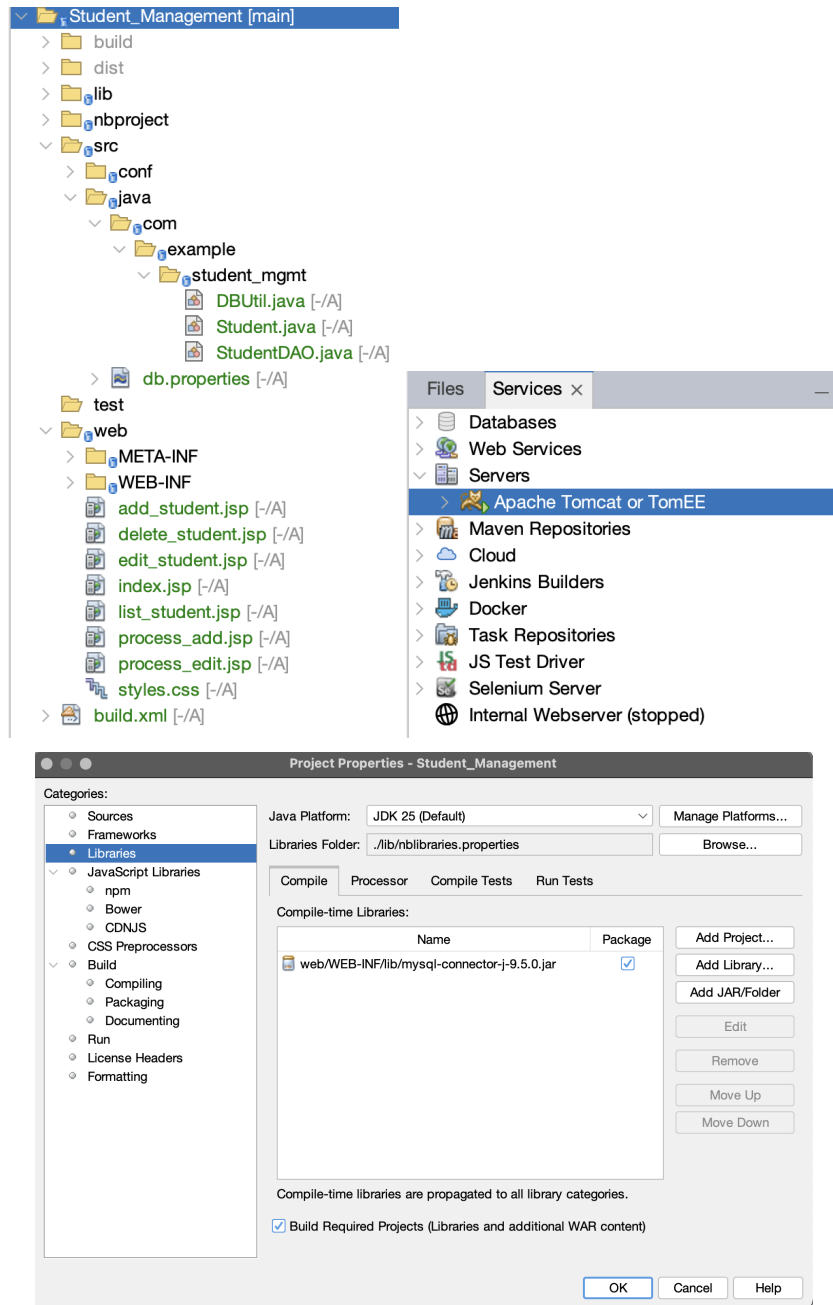
Github site & link

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
```

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-jsp:
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%2F1b%2Fbtwd2mcs5v9c2lgkfp5dtxm0000gn%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:	OK
----------	----

Manager			
List Applications	HTML Manager Help	Manager Help	Server Status

Applications					
Path	Version	Display Name	Running	Sessions	Commands
/Student_Management	None specified	StudentManagement	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy 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 <input type="button" value="Choose File"/> No file chosen	
<input type="button" value="Deploy"/>	

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

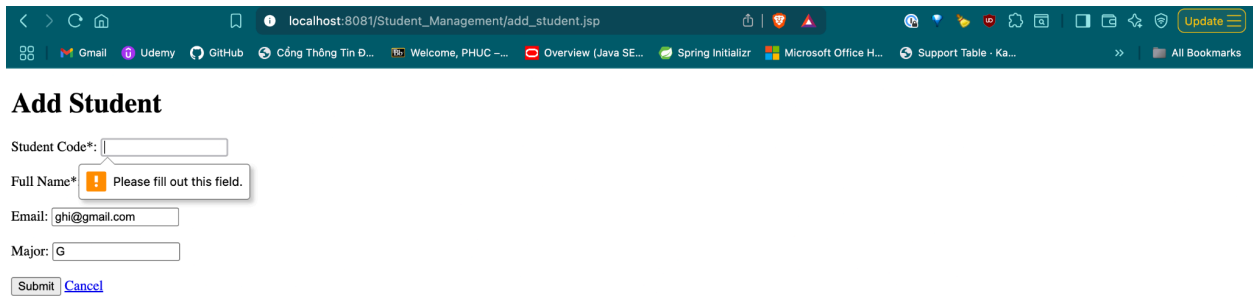
Students

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

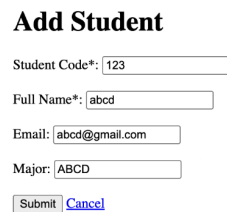


The screenshot shows a web browser window with the address bar displaying 'localhost:8081/Student_Management/add_student.jsp'. The browser's bookmark bar includes links to Gmail, Udemy, GitHub, and several other sites. The page title is 'Add Student'. The form contains the following fields and values:

- Student Code*: An empty text input field.
- Full Name*: A text input field containing 'abod'. A red error message box is displayed below this field, stating 'Please fill out this field.'.
- Email: A text input field containing 'ghi@gmail.com'.
- Major: A text input field containing 'G'.

At the bottom of the form, there are two buttons: 'Submit' and 'Cancel'.

If input already exist student code



The screenshot shows the 'Add Student' form with the following pre-filled data:

- Student Code*: 123
- Full Name*: abod
- Email: abod@gmail.com
- Major: ABCD

At the bottom of the form, there are two buttons: 'Submit' and 'Cancel'.

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):

Full Name*:  

Email:

Major:

On save

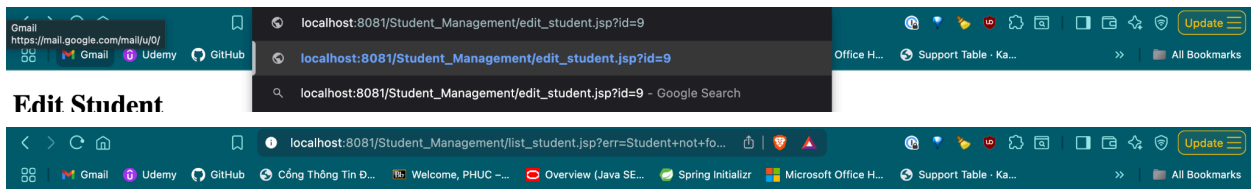
Students

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



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):

Full Name*: 

Email:  Please fill out this field.

Major:

Edit Student

Email already exists

Student Code (read only):

Full Name*:

Email:

Major:

[Cancel](#)

Task 4: Delete Operation

Upon delete request, ask for confirmation → show success msg

localhost:8081/Student_Management/list_student.jsp?msg=Student+upda...

localhost:8081 says
Are you sure you want to delete this student?
Cancel OK

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

localhost:8081/Student_Management/delete_student.jsp?id=123

localhost:8081/Student_Management/delete_student.jsp?id=123

localhost:8081/Student_Management/delete_student.jsp?id=123 - Google Search

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

localhost:8081/Student_Management/list_student.jsp?err=ID%20not%20f...

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