

VIETNAM NATIONAL UNIVERSITY OF HO CHI MINH CITY  
THE INTERNATIONAL UNIVERSITY  
SCHOOL OF COMPUTER SCIENCE AND ENGINEERING



**Web Application Development - IT093IU**

Homework Lab 5: SERVLET & MVC PATTERN

Nguyễn Vũ Thành Tính - ITCSIU23039

**Lab Instructor:** N.T.Nghia

<b>Github Link.....</b>	<b>3</b>
<b>1. List.....</b>	<b>3</b>
<b>2. Add.....</b>	<b>4</b>
A. Showing the New Student Form:.....	4
B. Processing the Form Submission:.....	5
<b>3. Edit.....</b>	<b>6</b>
A. Showing the Edit Form (Pre-filled):.....	6
B. Processing the Update Submission:.....	7
<b>4. Delete.....</b>	<b>8</b>
<b>5. Empty State.....</b>	<b>9</b>

## Github Link

[https://github.com/ngvuthtinh/Web\\_Lab/tree/main/Lab\\_5/Homework](https://github.com/ngvuthtinh/Web_Lab/tree/main/Lab_5/Homework)

### 1. Home page with student list

The screenshot shows the 'Student Management System' dashboard. At the top, there is a logo consisting of three colored squares (blue, green, red) followed by the text 'Student Management System'. Below the logo, it says 'MVC Pattern with Jakarta EE & JSTL'. There are two buttons: 'Add Student' (purple) and 'Export Excel' (green). Below these buttons is a search bar with placeholder text 'Search name/code...' and a dropdown menu for 'All Majors'. To the right of the search bar are a magnifying glass icon and a 'Clear' button. The main area displays a table of student data:

ID	CODE	FULL NAME	EMAIL	MAJOR	ACTION
6	SV149	Thanh Tinh	thanhtinh@test.com	Computer Science	<button>Edit</button> <button>Delete</button>
7	SV205	Anh Khoi	anhkhoi@test.com	Software Engineering	<button>Edit</button> <button>Delete</button>

**Description:** The main dashboard displays a paginated list of students. It includes a control panel for searching, filtering by major, and sorting by columns. Users can also export data to Excel or add new students from this view.

## 2. Add student form

### + Add New Student

Student Code \*

Format: 2 letters + 3+ digits

Full Name \*

Email \*

Major \*

+ **Add Student**

× **Cancel**

**Description:** A clean form for registering new students. It contains fields for Student Code, Full Name, Email, and Major selection.

### 3. Edit student form (pre-filled)

The screenshot shows a modal window titled "Edit Student" with a pencil icon. It contains four input fields: "Student Code \*" (SV149), "Full Name \*" (Thanh Tinh), "Email \*" (thanhtinh@test.com), and "Major \*" (Computer Science). Below the fields are two buttons: "Update Student" and "Cancel".

**Description:** The edit form pre-loads the existing student's data from the database, allowing the user to modify details while preserving the Student ID.

### 4. Search results

The screenshot shows the main application interface with a title "Student Management System" and a subtitle "MVC Pattern with Jakarta EE & JSTL". It features a search bar with "Thanh Tinh" and dropdown filters for "All Majors". Below is a table with columns: ID, CODE, FULL NAME, EMAIL, MAJOR, and ACTION. One row is shown with ID 6, CODE SV149, NAME Thanh Tinh, EMAIL thanhtinh@test.com, and MAJOR Computer Science. Action buttons "Edit" and "Delete" are at the bottom right of the table row.

ID	CODE	FULL NAME	EMAIL	MAJOR	ACTION
6	SV149	Thanh Tinh	thanhtinh@test.com	Computer Science	Edit  Delete

**Description:** Search functionality allows finding students by Name, Code, or Email. The search state is preserved across pagination.

## 5. Validation errors

The screenshot shows a web-based form titled "Edit Student" with a pencil icon. The form has four input fields: "Student Code \*", "Full Name \*", "Email \*", and "Major \*". Each field has a placeholder text and a red warning message below it if it's empty or invalid. The "Update Student" button is blue, and the "Cancel" button is grey.

Field	Placeholder	Error Message
Student Code *	e.g., SV001, IT123	⚠️ Student code is required Format: 2 letters + 3+ digits
Full Name *	Enter full name	⚠️ Full name is required
Email *	student@example.com	⚠️ Email is required
Major *	-- Select Major --	⚠️ Major is required

**Description:** Server-side validation prevents invalid data entry. Error messages are displayed directly below the relevant fields if inputs are missing or format constraints (like Regex for Student Code/Email) are violated.

## 6. Sorted list

The screenshot shows a web application titled "Student Management System" using the "MVC Pattern with Jakarta EE & JSTL". At the top, there are two buttons: "Add Student" (purple) and "Export Excel" (green). Below them is a search bar with placeholder text "Search name/code..." and a dropdown menu set to "All Majors". There are also a blue search button and a "Clear" button. The main area displays a table of student data:

ID ▼	CODE	FULL NAME	EMAIL	MAJOR	ACTION
8	SV310	Hoang Phuong	hoangphuong@test.com	Business Administration	<button>Edit</button> <button>Delete</button>
7	SV205	Anh Khoi	anhkhoi@test.com	Software Engineering	<button>Edit</button> <button>Delete</button>
6	SV149	Thanh Tinh	thanhtinh@test.com	Computer Science	<button>Edit</button> <button>Delete</button>

Visual indicators (arrows) are present on the "ID" column header to show it is sorted in descending order.

**Description:** Clicking on column headers sorts the data in Ascending or Descending order. Visual indicators (arrows) show the current sort direction.

## 7. Filtered list

The screenshot shows the same "Student Management System" interface. The "Major" dropdown in the top right is now set to "Business Administration". The table data is identical to the previous screenshot, but the "Edit" and "Delete" buttons for the first student (ID 8) are now greyed out, indicating they cannot be performed on filtered data.

**Description:** Users can filter the list to show only students from a specific Major. The filter dropdown reflects the current selection.