

# JADAVPUR UNIVERSITY

Faculty of Engineering & Technology

..CSE/PC/B/S/321 Database Management System Lab...Engg  
Laboratory

Class....CSE , UG3... Sec....A1.....  
Date of Experiment.....  
Date of Submission.....  
Marks Obtained.....  
Signature of Examiner.....

NAME

Roll

.....Jeetesh Abrol.....  
.....  
.....  
.....  
.....  
.....

.....002210501021.....  
.....  
.....  
.....  
.....  
.....

**Title....** Develop GUI based database oriented application.

**Commence at.....**  
**at.....**

**Completed**

**Name of Teacher concerned:** Prof. Sanjoy Kumar Saha

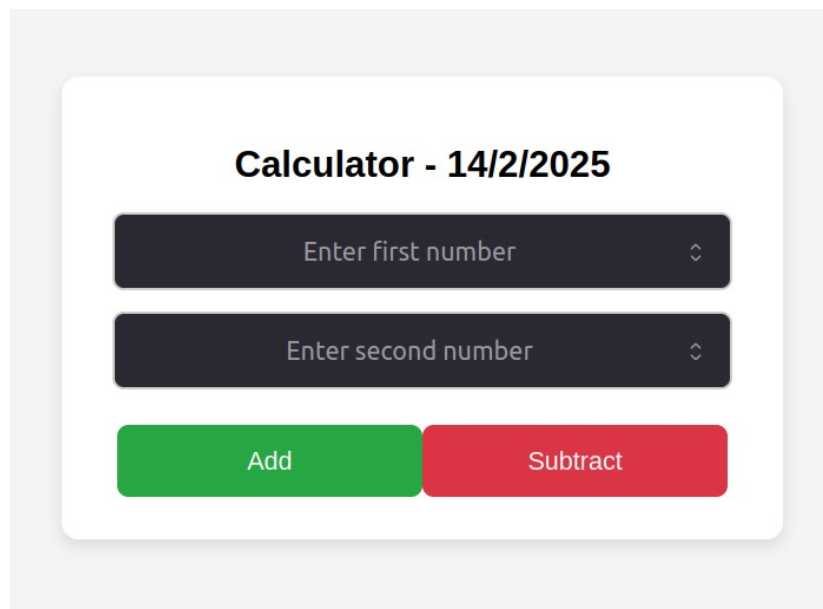
## Application-1:Simple Calculator

### Description:

- The application allows users to enter two numbers.
- A button is provided to either add or find the difference.
- The result is displayed in the result box.
- The title bar of the application displays the current date when the form is loaded.

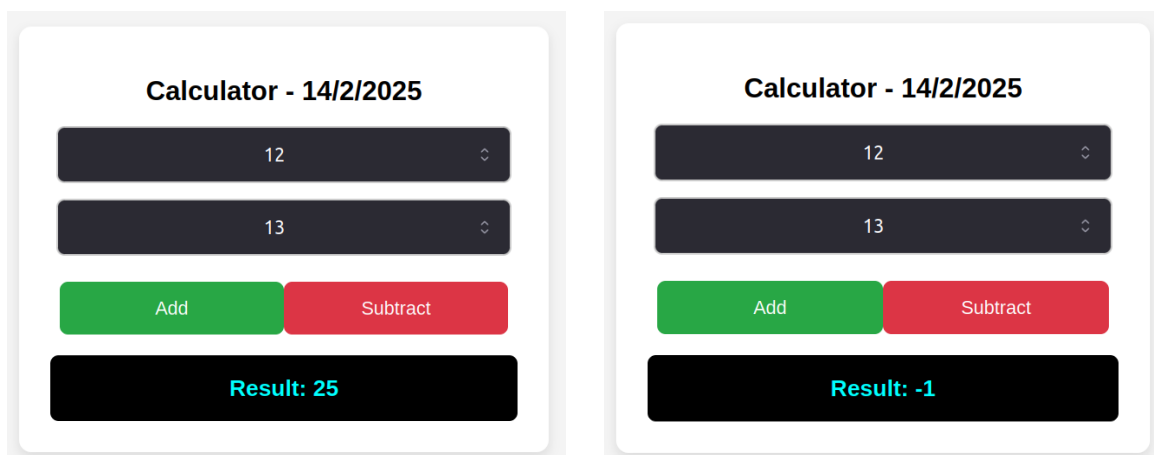
### User Interactions and Observations:

- When the form is loaded:



The screenshot shows a web application titled "Calculator - 14/2/2025". It features two input fields: "Enter first number" and "Enter second number", both with dark backgrounds and light text. Below the input fields are two buttons: a green "Add" button and a red "Subtract" button. The entire form is centered on a light gray background.

- When add and subtract operations are performed:



The image shows two side-by-side screenshots of the calculator application. Both screenshots have the title "Calculator - 14/2/2025". The left screenshot shows the "Add" button pressed, with the first input field containing "12", the second input field containing "13", and a black result box at the bottom displaying "Result: 25" in red text. The right screenshot shows the "Subtract" button pressed, with the first input field containing "12", the second input field containing "13", and a black result box at the bottom displaying "Result: -1" in red text.

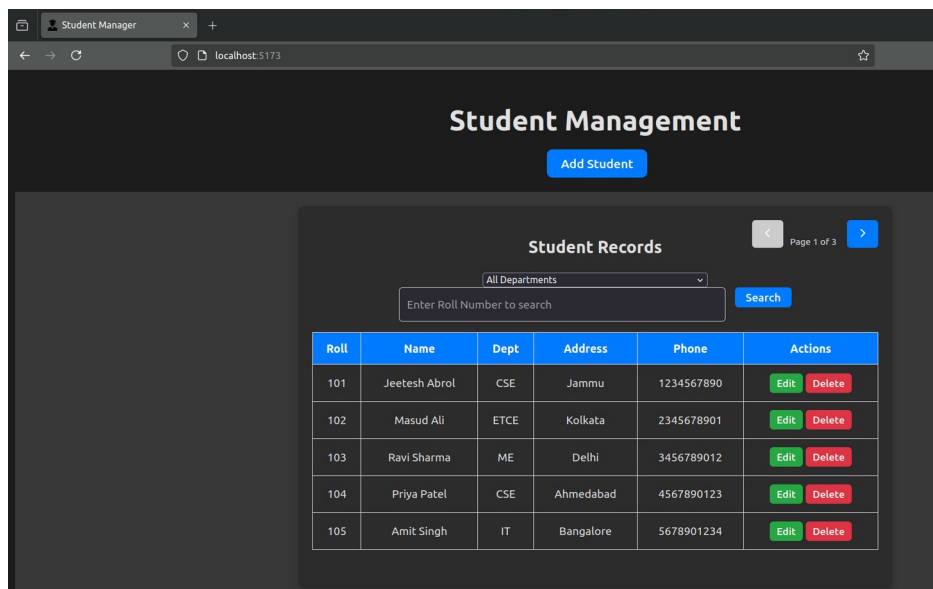
## Application-2:Student-Manager

### Description:

- The system manages a list of departments and students.
- It allows users to add, search, edit, delete, and display student records.
- Roll numbers must be unique.
- Users select a department name, and its corresponding department code is stored.
- Users can **SAVE** or **CANCEL** when adding/editing records.
- Searching, editing, and deleting work based on roll numbers.
- Student records are displayed in sets of five with **PREV/NEXT** buttons.

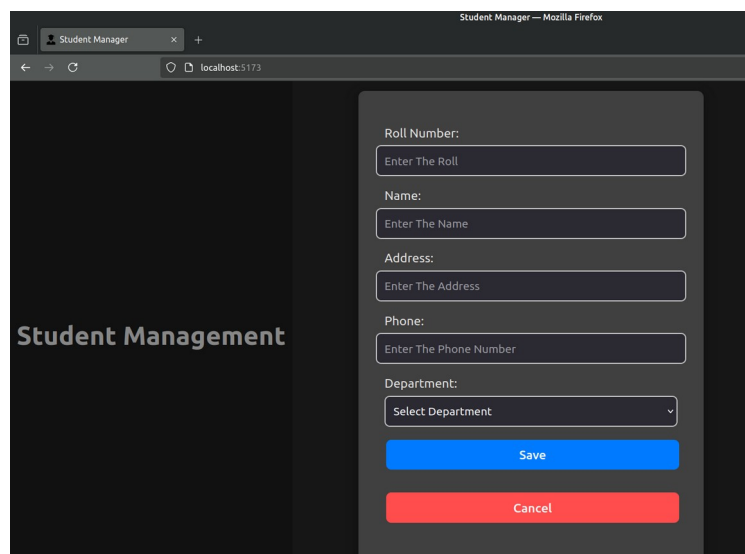
### User Interactions and Observations:

#### 1. When the page is loaded:



#### 2. While adding a student:

- When form is loaded:



- When student is added:

a) On Success:

Student Manager — Mozilla Firefox

Roll Number:  
100

Name:  
Rohit Verma

Address:  
Mishriwala

Phone:  
1234567890

Department:  
Computer Science and Engineering

Save

Cancel

Student Manager — Mozilla Firefox

Student added successfully!

## Student Management

Add Student

### Student Records

All Departments

Enter Roll Number to search

Search

Roll	Name	Dept	Address	Phone	Actions
101	Jeetesh Abrol	CSE	Jammu	1234567890	Edit Delete
102	Masud Ali	ETCE	Kolkata	2345678901	Edit Delete
103	Ravi Sharma	ME	Delhi	3456789012	Edit Delete
104	Priya Patel	CSE	Ahmedabad	4567890123	Edit Delete
105	Amit Singh	IT	Bangalore	5678901234	Edit Delete

(b) On Failure:

Student Manager — Mozilla Firefox

Roll number must be unique!

## Student Management

Roll Number:  
101

Name:  
Avinaash Singh

Address:  
Bhalwal

Phone:  
1223497689

Department:  
Information Technology

Save

Cancel

### 3) While searching a student:

a) if student exists:

The screenshot shows a web application titled "Student Management". At the top, there is a blue button labeled "Add Student". Below this, a "Student Records" section is visible, featuring a dropdown menu set to "All Departments" and a search input field containing "100". A blue "Search" button is to the right of the input field. The search results are displayed in a modal box titled "Search Result", showing the following details: Roll: 100, Name: Rohit Verma, Department: CSE, Address: Mishriwala, and Phone: 1234567890. A blue "Close" button is at the bottom of the modal. The interface also includes pagination controls showing "Page 1 of 3".

b) if student does not exist:

The screenshot shows the same "Student Management" interface. The search input field now contains "1200". Below the search input, the text "Student not found" is displayed in red. Below this message, a table of existing student records is shown. The table has columns for Roll, Name, Dept, Address, Phone, and Actions. The Actions column contains "Edit" (green button) and "Delete" (red button) for each record.

Roll	Name	Dept	Address	Phone	Actions
102	Masud Alam	ETCE	Kolkata	2345678901	<button>Edit</button> <button>Delete</button>
103	Ravi Sharma	ME	Delhi	3456789012	<button>Edit</button> <button>Delete</button>
104	Priya Patel	CSE	Ahmedabad	4567890123	<button>Edit</button> <button>Delete</button>
105	Amit Singh	IT	Bangalore	5678901234	<button>Edit</button> <button>Delete</button>
106	Pooja Gupta	CE	Mumbai	6789012345	<button>Edit</button> <button>Delete</button>

#### 4) Editing a student:

Student Manager — Mozilla Firefox

Roll Number:

102

Name:

Masud Alam

Address:

Kolkata

Phone:

2345678901

Department:

Electronics and Telecommunication Engineering

Save

Cancel

Student Management

Add Student

Student Records

All Departments

Enter Roll Number to search

Search

Roll	Name	Dept	Address	Phone	Actions
102	Masud Alam	ETCE	Kolkata	2345678901	<div>Edit</div> <div>Delete</div>
103	Ravi Sharma	ME	Delhi	3456789012	<div>Edit</div> <div>Delete</div>
104	Priya Patel	CSE	Ahmedabad	4567890123	<div>Edit</div> <div>Delete</div>
105	Amit Singh	IT	Bangalore	5678901234	<div>Edit</div> <div>Delete</div>
106	Pooja Gupta	CE	Mumbai	6789012345	<div>Edit</div> <div>Delete</div>

Student details updated!

#### 4)Deleting a student:

Student Management

Add Student

Are you sure?

You won't be able to revert this!

Yes, delete it!

Cancel

Roll	Name	Dept	Address	Phone	Actions
101	J...				<div>Edit</div> <div>Delete</div>
102					<div>Edit</div> <div>Delete</div>
103	Ravi Sharma	ME	Delhi	3456789012	<div>Edit</div> <div>Delete</div>
104	Priya Patel	CSE	Ahmedabad	4567890123	<div>Edit</div> <div>Delete</div>
105	Amit Singh	IT	Bangalore	5678901234	<div>Edit</div> <div>Delete</div>

Student Management

Add Student

Deleted!

The student has been removed.

OK

Roll	Name	Dept	Address	Phone	Actions
102					<div>Edit</div> <div>Delete</div>
103	R...				<div>Edit</div> <div>Delete</div>
104	Priya Patel	CSE	Ahmedabad	4567890123	<div>Edit</div> <div>Delete</div>
105	Amit Singh	IT	Bangalore	5678901234	<div>Edit</div> <div>Delete</div>
106	Pooja Gupta	CE	Mumbai	6789012345	<div>Edit</div> <div>Delete</div>

Student deleted!

## **Conclusion:**

### **1. User-Friendly Interface:**

The applications provide a simple and interactive GUI, allowing smooth user interaction for calculations and student record management.

### **2. Efficient Data Handling:**

Features like unique roll number validation, dropdown department selection, and proper error handling ensure data integrity and accuracy.

### **3. Dynamic and Responsive UI:**

The interface updates in real-time based on user input, providing immediate feedback for actions like adding, searching, editing, and deleting records.

### **4. Smooth Navigation:**

The student records are displayed in batches of five, with **PREV/NEXT** buttons ensuring easy navigation while preventing unnecessary scrolling.