EE46801_S24 Database Systems | Spring 2024
Project: University Course Management System

User Manual

Designed By
Rahul Vijaykumar
Satya Sai Deepak Velagapudi
Yu Liu

Supervised By
Professor Daqing Hou

Clarkson University

Contents

1. Introduction

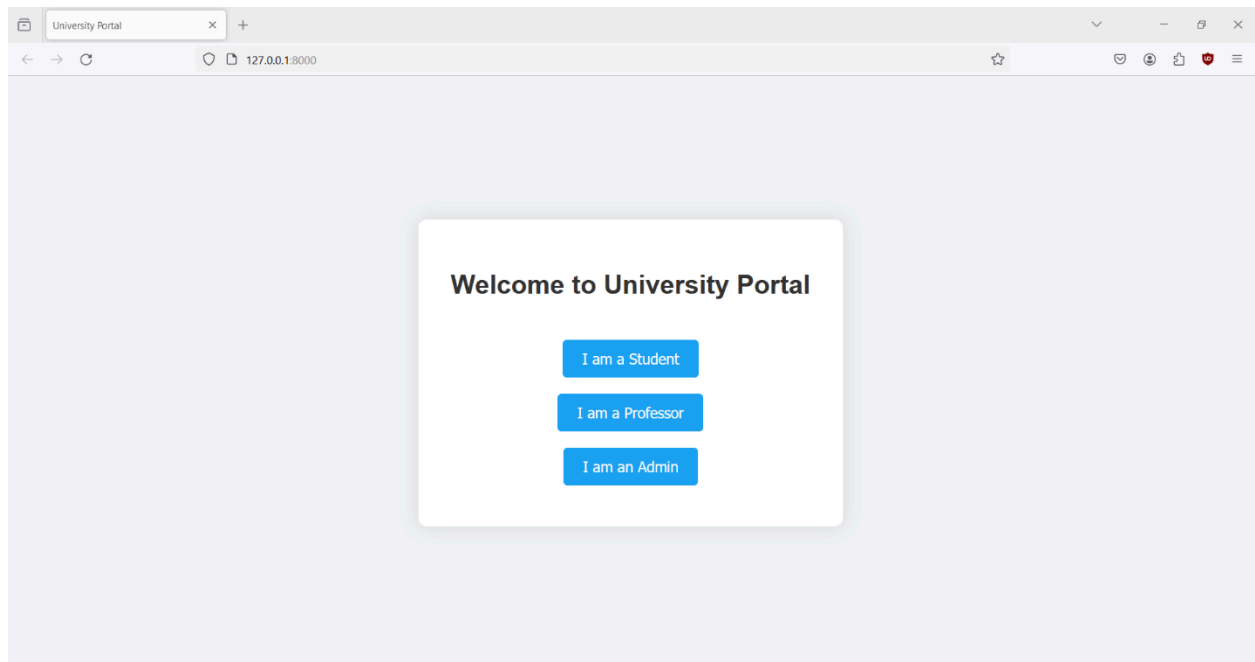### a. University Course Management System

We present a prototype of the university course management system to fulfillment the semester project requirement of 'EE468/EE568/CS560: Database Systems'. This is the first version. The system has three modules: Admin, Professors and Students.

b. System/tools requirements

MySQL 8.0.28
Django Version 4.2.11
Python 3.10.4
IDE: Visual Studio Code

c. Accessing the University Course Management System

The University Course Management System can be accessed using a web browser using the address: 127.0.0.1:8000. This is the address of the index page. The application is not browser specific.

d. Using the University Course Management System.
From the Index page, login to authorized users as Admin, Professor or Student.

e. Authorized User Profile
The system has three types of profiles:

1. **Admin can perform following tasks**
   a. Create a list of professors sorted by one of the following criteria that can be chosen by the admin: (1) name (2) dept, or (3) salary.
   b. Create a table of min/max/average salaries by department.
   c. Create a table of professor name, dept, and total number of students each professor taught for a given semester.
2. **Professor can perform following tasks**
   a. Create the list of course sections, and the number of students enrolled in each section,that the professor taught for a given semester.
   b. Create the list of students enrolled in a course section taught by the professor, in a given semester.
3. **Students can perform following tasks**
   a. Query the list of course sections offered by dept in a given semester and year.

Instructions for Admin

Below shows the functionality of each of the Admin sections with a sample output. Each of the functions are labeled F1, F2, F3 for the Administrator.

F1 Query:

Create a list of professors sorted by one of the following criteria that can be chosen by the admin: (1) name (2) dept, or (3) salary.

F1 Name Result:

NAME	DEPT NAME	SALARY
Banerjee	CS	100000
Conlon	OIS	115000
Gohl	IA	78000
Hou	ECE	100000
Hussain	ECE	90000
Imtiaz	ECE	115000
Khondker	ECE	125000
King	CHE	200000
Lee	ECE	115000
Liu	ECE	135000
Liu	CS	110000
Lynch	CS	112000
Maciel	CS	800000
Martin	MA	100000
Mondal	MA	123000
NEW MA	MA	99000
New Prof	-	-
Ramsdell	PH	105000
Reynolds	MA	108000
Skufca	MA	132000

F1 Department Result:

NAME	DEPT NAME	SALARY
Zhang	PY	115000
Ramsdell	PH	105000
Conlon	OIS	115000
Martin	MA	100000
Mondal	MA	123000
NEW MA	MA	99000
Reynolds	MA	108000
Skufca	MA	132000
Gohl	IA	78000
Stein	HIST	80000
Hou	ECE	100000
Hussain	ECE	90000
Imtiaz	ECE	115000
Khondker	ECE	125000
Lee	ECE	115000
Liu	ECE	135000
Swati	ECE	15000

F1 Salary Result:

NAME	DEPT NAME	SALARY
New Prof	-	-
Swati	ECE	15000
Gohl	IA	78000
Stein	HIST	80000
Hussain	ECE	90000
NEW MA	MA	99000
Banerjee	CS	100000
Hou	ECE	100000
Martin	MA	100000
Ramsdell	PH	105000
Reynolds	MA	108000
Liu	CS	110000
Lynch	CS	112000
Conlon	OIS	115000
Imtiaz	ECE	115000
Lee	ECE	115000

Each of the headers can be sorted in ascending and descending order and also the admin has the option to search for a particular department on top also there is a list of all the departments displayed in the right table.

Select instructor to change

	NAME	DEPT NAME	SALARY
☐	Banerjee	CS	100000
☐	Conlon	OIS	115000
☐	Gohl	IA	78000
☐	Hou	ECE	100000
☐	Hussain	ECE	90000
☐	Imtiaz	ECE	115000
☐	Khondker	ECE	125000
☐	King	CHE	200000

ADD INSTRUCTOR +

Search

Action: --------- Go   0 of 26 selected

FILTER

👁 Show counts

↓ By dept name

All
CHE
COMM
CS
ECE
HIST
IA
MA
OIS
PH
PY
-

F2 Query:
Create a table of min/max/average salaries by dept

The salary tab displayed the list of all min max and average salary of all the departments but the admin can select a particular department from the department list displayed in the right or search for a particular department in the search bar placed on top of a table to get the list of salary details as per the department.

F3 Query:

Create a table of professor name, dept, and total number of students each professor taught for a given semester.

When Performance is selected the below page opens that displays textbar for the user to insert the Instructor name,Year and Semester
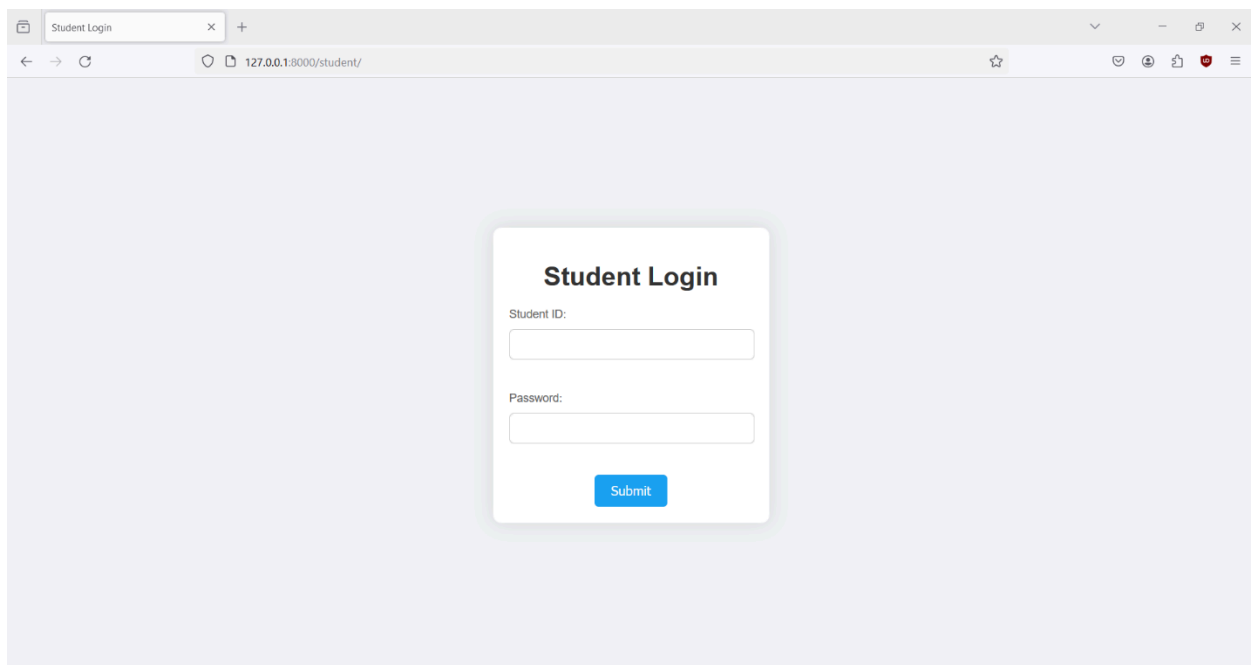
once the admin enters these details and clicks on Submit button the information is displayed

Instructor Performance

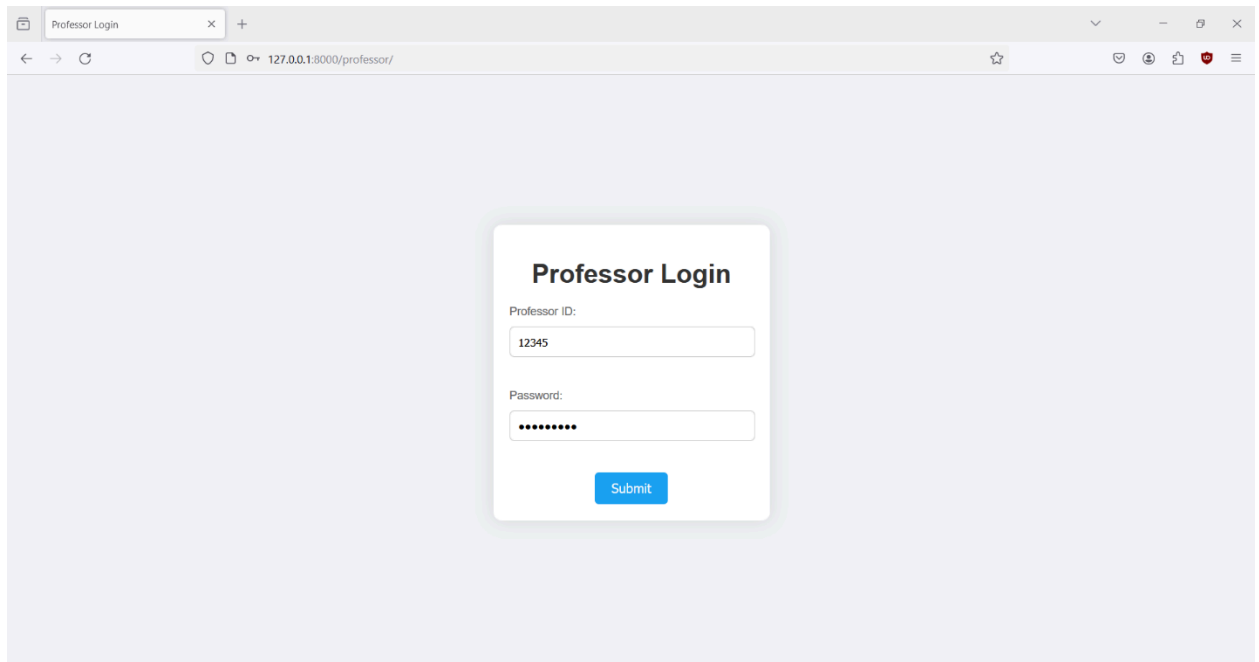| Name	Number of Sections	Number of Students	Total Funding	Number of Publications
Hou	2	2	$1600000	4
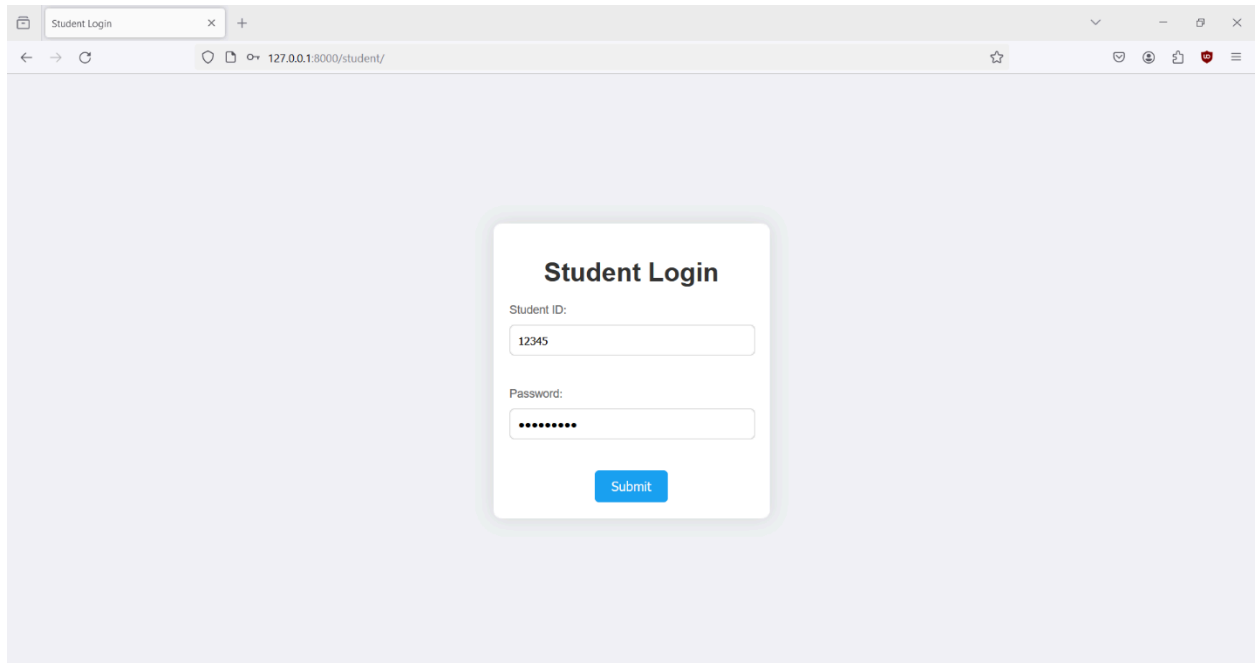
Instructions for Students

1. Click on the "I am a student" button on the home page.

2. You will be redirected to the Student Login page.

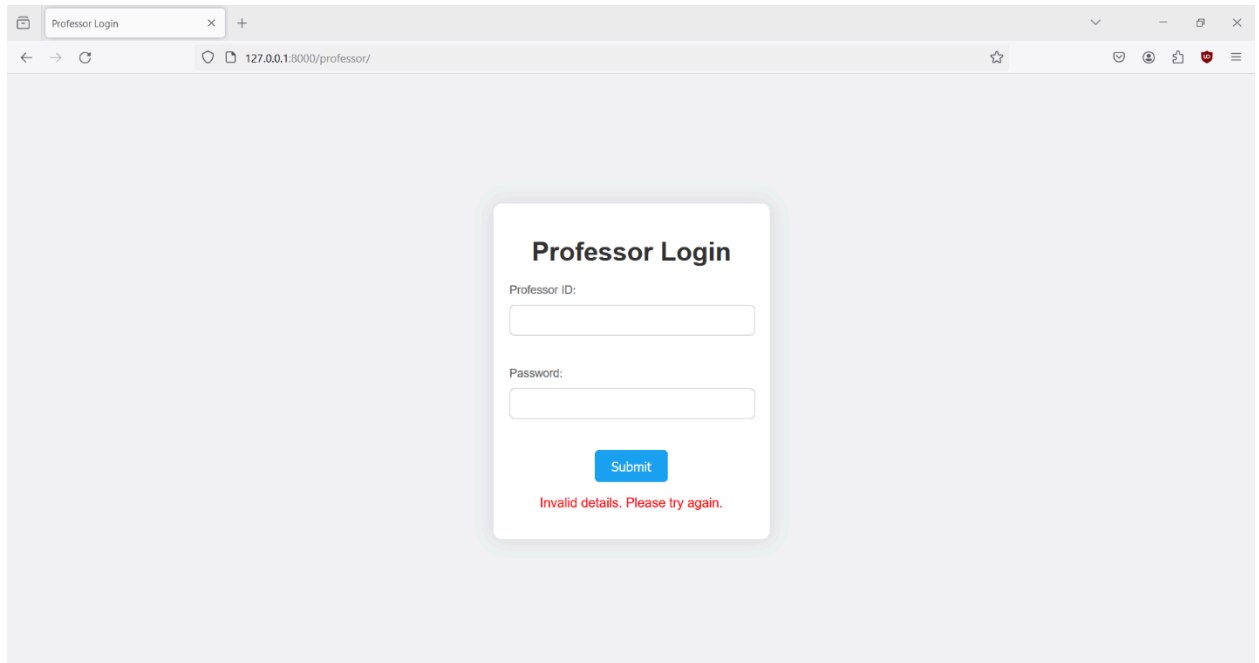3. The Student Login page features two fields: Student ID and Password, along with a Submit button.
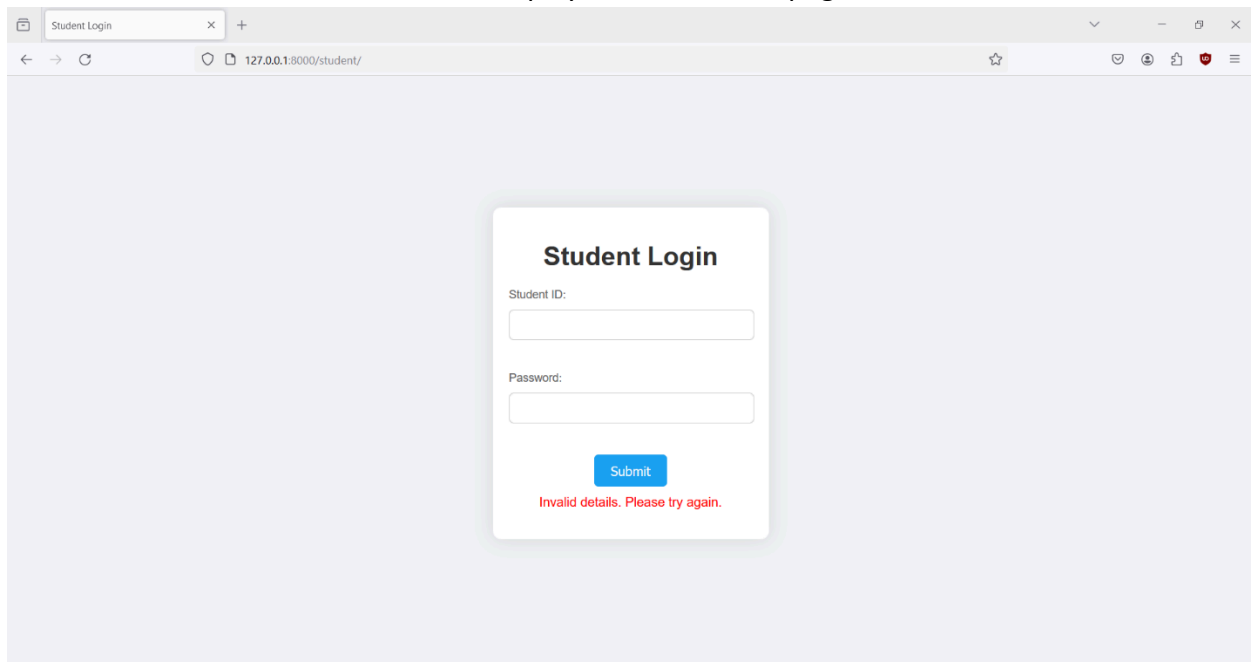
4. Enter your Student ID and Password into the respective fields and click Submit.
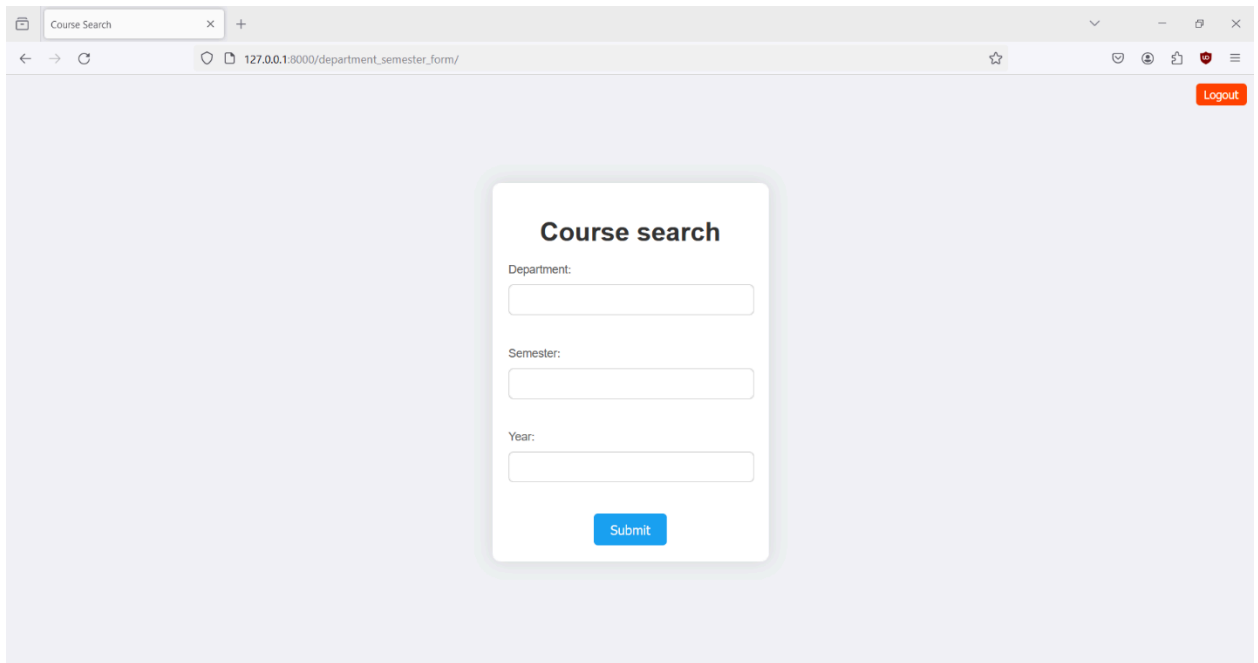
5. If the details provided are incorrect, a message which indicates that the details are invalid, will be displayed on the same page.
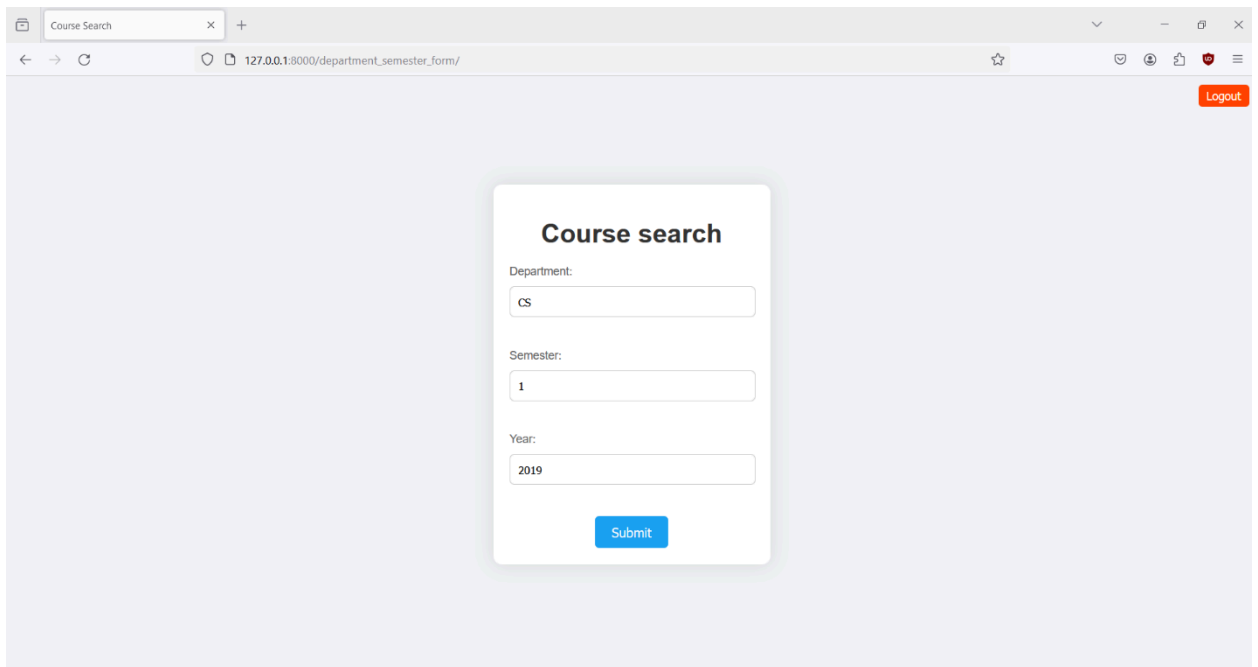
6. If the details are correct, you will be redirected to the Course Section Query form. The Course Section Query form includes three fields: Department, Year, and Semester,

along with a Submit button.

7. Logout button will be displayed on the top right corner of this page(Course Section Query Form Page); click it if you want to logout.

8. Fill in the required information for the Department, Year, and Semester fields and click Submit.

9. After clicking Submit, you will be redirected to another page displaying the course sections offered. If you entered incorrect information, the page will be empty.
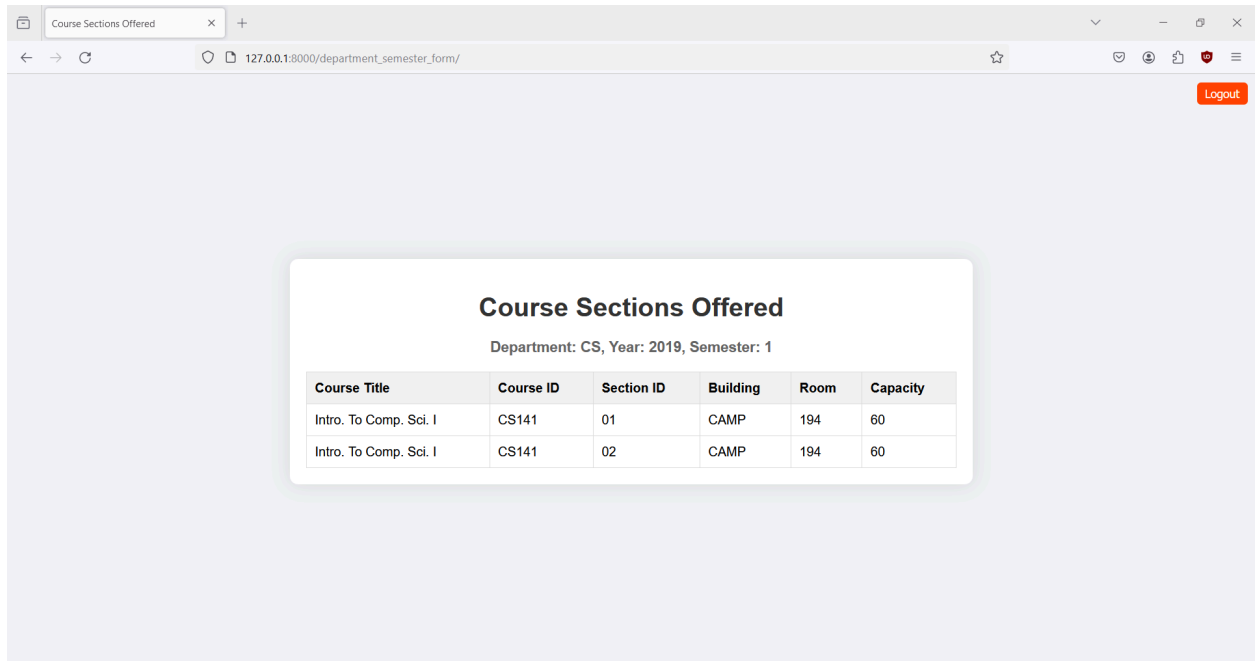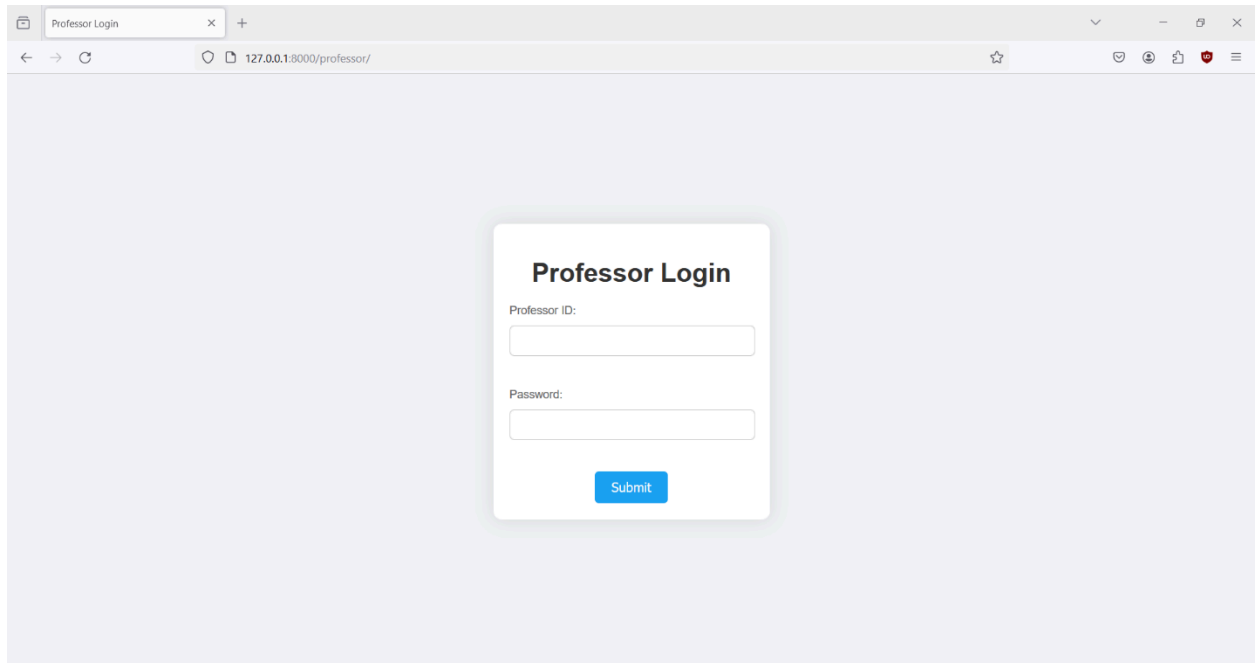
10. Logout button will be displayed on the top right corner of this page(Course Section Query results page); click it if you want to logout.

11. If you hit logout you will be redirected to Home page.

Instructions for Professors

1. Click on the "I am a professor" button on the home page.

2. You will be redirected to the Professor Login page.

3. The Professor Login page features two fields: Professor ID and Password, along with a Submit button.

4. Enter your Professor ID and Password into the respective fields and click Submit.

5. If the details provided are incorrect, a message indicating that the details are invalid will be displayed on the same page.

6. If the details are correct, you will be redirected to the Professor Form page. The Professor Form page includes two sections: Course Sections and Students Enrolled.

7. A Logout button will be displayed on the top right corner of the Course Section Query Form page; click it if you want to logout.

8. To view the list of course sections and the number of students enrolled in each section that you taught in a chosen semester:
Enter the semester and year into the respective fields.
Click "Get Course Sections" to retrieve the information.

9. After clicking Submit, you will be redirected to another page displaying the course sections offered. If you entered incorrect information, the page will be empty.

10. To view the list of students enrolled in a specific course section and semester that you taught:
Enter the section ID, semester, and year into the respective fields.
Click "Get Students Enrolled" to retrieve the information.

11. After clicking Submit, you will be redirected to another page displaying the students enrolled. If you entered incorrect information, the page will be empty.
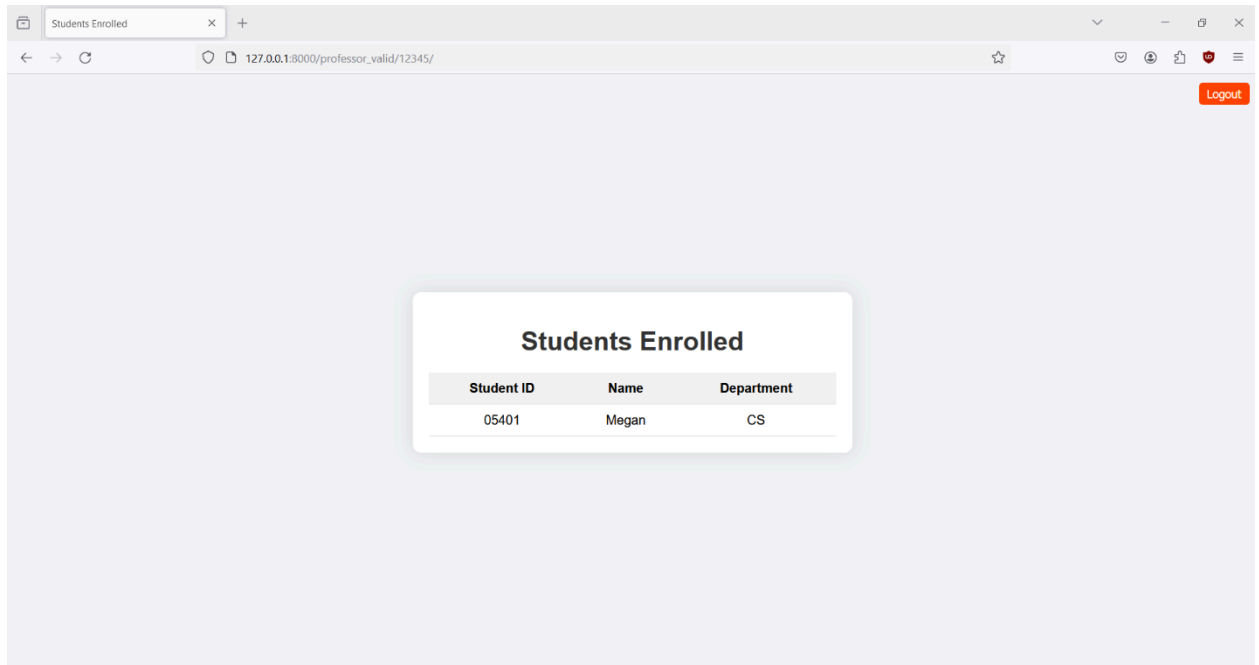
12. A Logout button will be displayed on the top right corner of the Course Section Query results page; click it if you want to logout.

13. If you hit logout you will be redirected to Home page.