

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

User Manual

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1. Introduction

a. University Course Management System

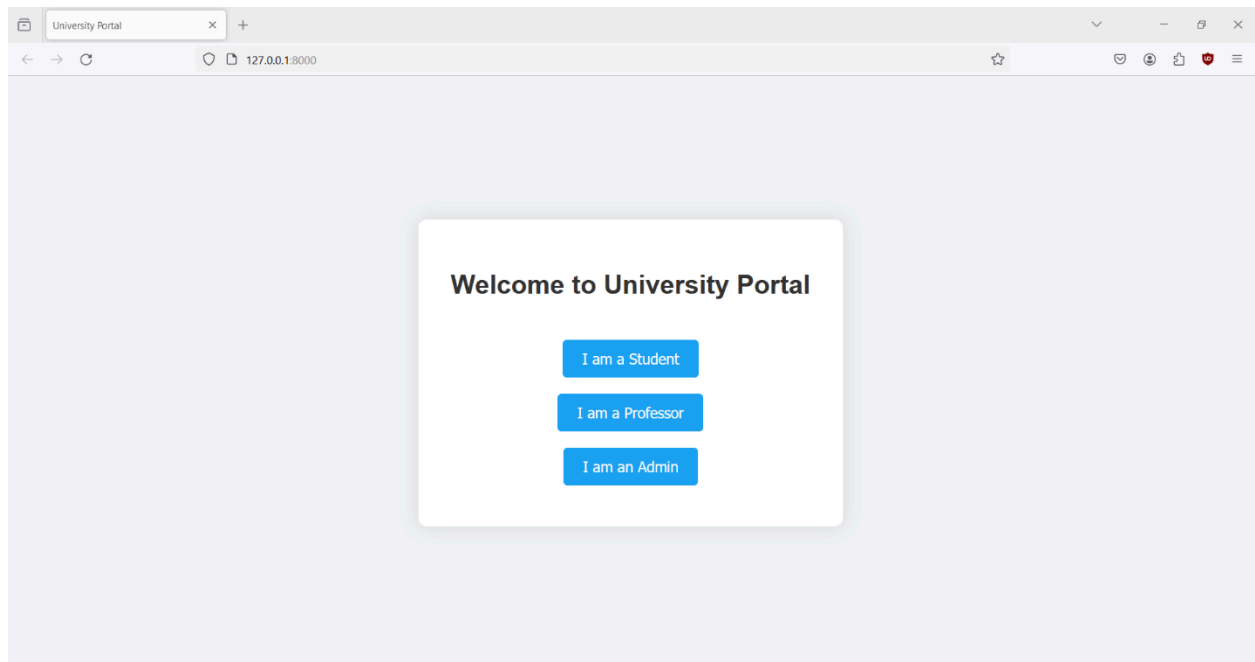
We present a prototype of the university course management system to fulfill the semester project requirement of 'EE468/EE568/CS560: Database Systems'. This is the first version. The system has three modules: Admin, Professors and Students.

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

ADD INSTRUCTOR +

Q

Search

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

<input type="checkbox"/>	NAME	DEPT NAME	SALARY
<input type="checkbox"/>	Banerjee	CS	100000
<input type="checkbox"/>	Conlon	OIS	115000
<input type="checkbox"/>	Gohl	IA	78000
<input type="checkbox"/>	Hou	ECE	100000
<input type="checkbox"/>	Hussain	ECE	90000
<input type="checkbox"/>	Imtiaz	ECE	115000
<input type="checkbox"/>	Khondker	ECE	125000
<input type="checkbox"/>	King	CHE	200000

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.

Clarkson Admin Dashboard

Home » Myproject » Salaries

Start typing to filter...

AUTHENTICATION AND AUTHORIZATION

Groups + Add

Users + Add

MYPROJECT

Instructors + Add

Salaries + Add

Select salary to change

Search 1 result (26 total)

Action: 0 of 1 selected

DEPT NAME	MIN SALARY	MAX SALARY	AVG SALARY
COMM	15000	800000	138280.0

1 salary

ADD SALARY +

FILTER

Show counts

Clear all filters

By department

All

None

CHE

COMM

CS

ECE

HIST

IA

MA

OIS

PH

PY

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 textbox for the user to insert the Instructor name, Year and Semester

Performance

Instructor Name:

Hou

Year:

2019

Semester:

2

Submit

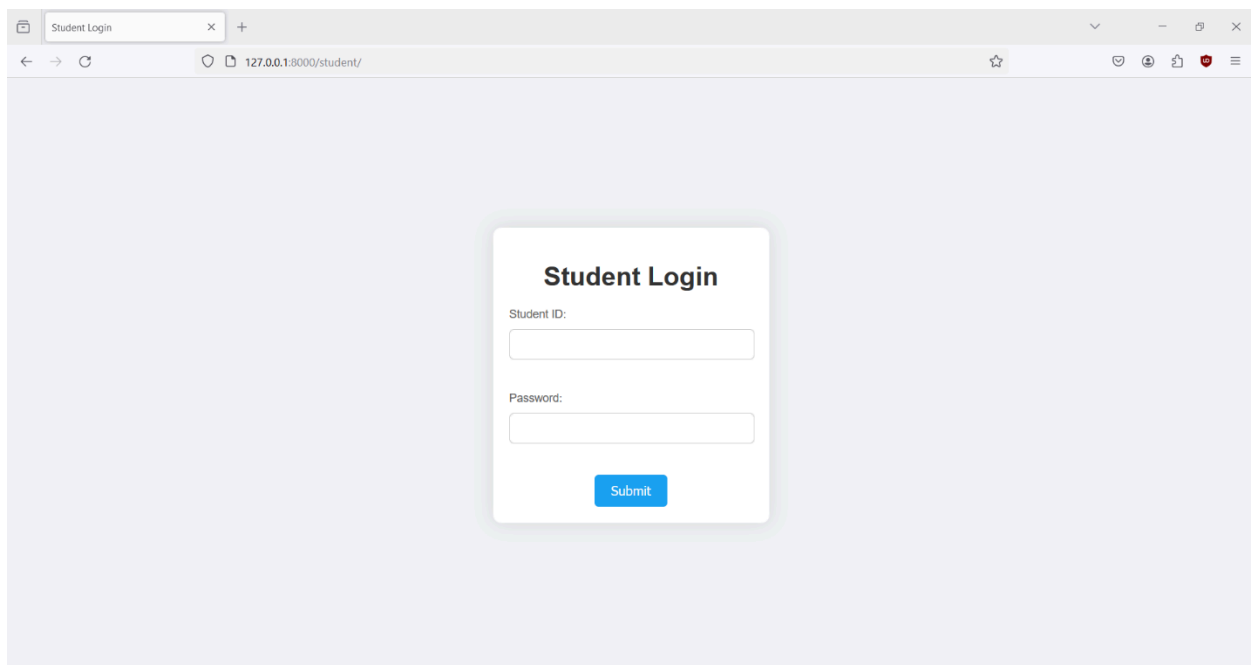
once the admin enters these details and clicks on Submit button the information is displayed

Instructor Performance

Name	Number of Sections	Number of Students	Total Funding	Number of Publications
Hou	2	2	\$1600000	4

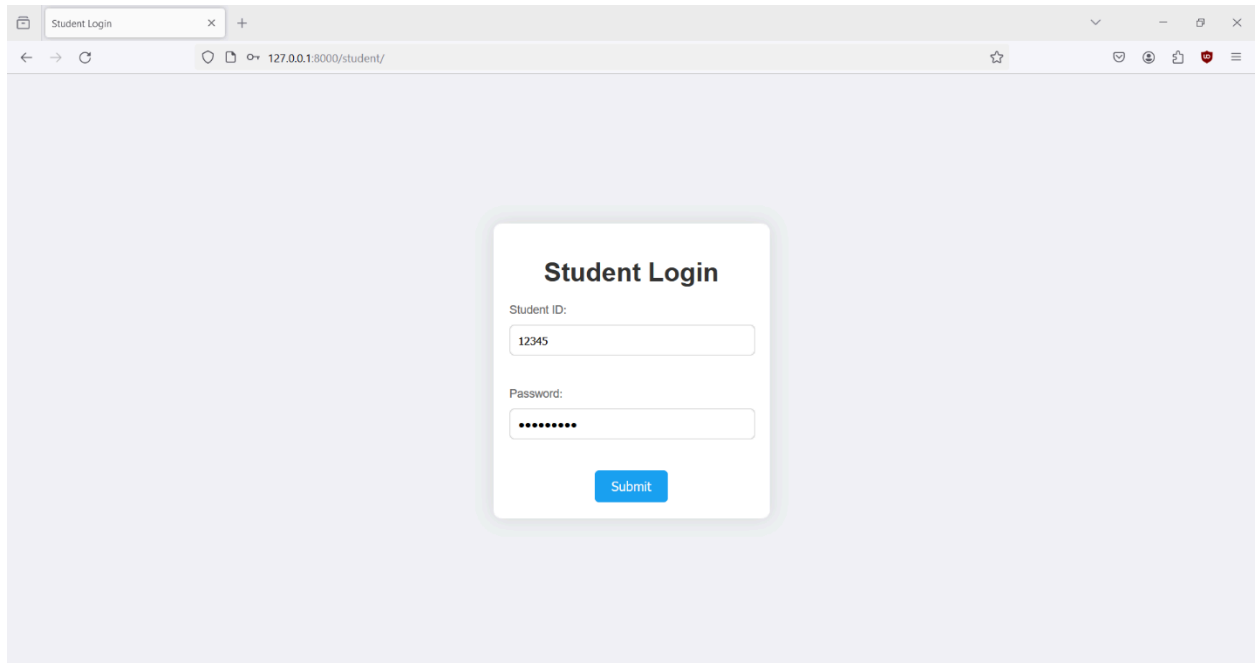
Instructions for Students

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.



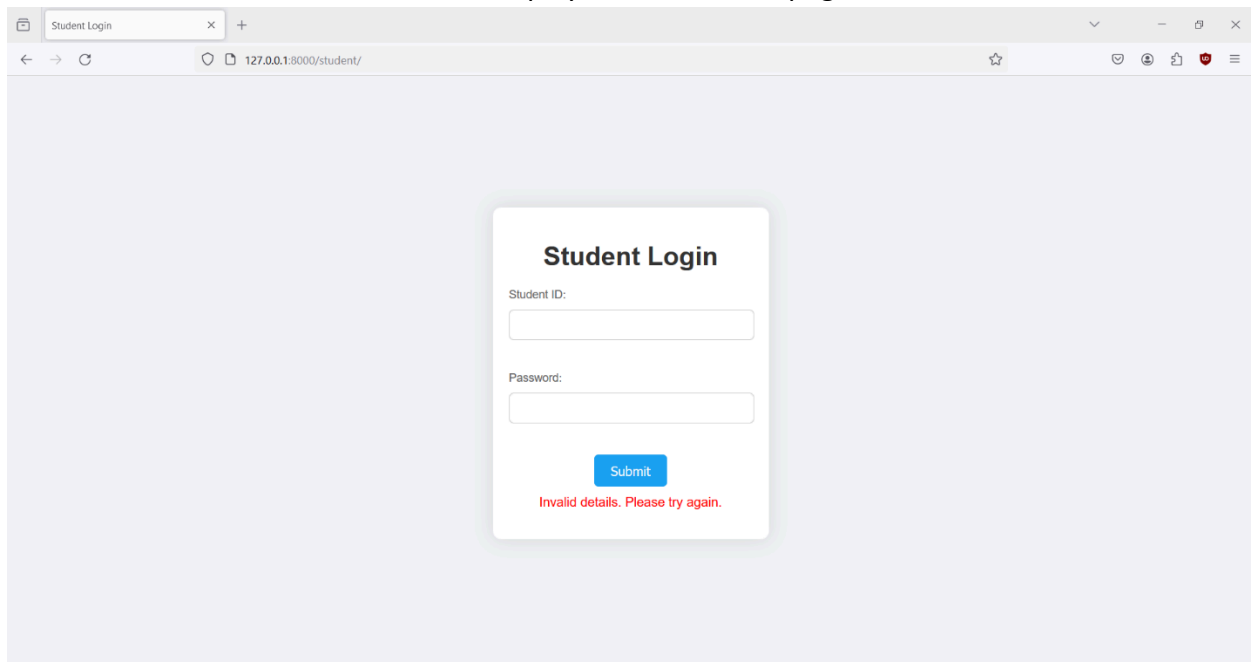
The screenshot shows a web browser window with a single tab titled "Student Login". The address bar displays "127.0.0.1:8000/student/". The main content area is a light gray background with a white login form in the center. The form has a title "Student Login", followed by two input fields labeled "Student ID:" and "Password:". Below the fields is a blue "Submit" button.

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



A screenshot of a web browser window showing the 'Student Login' page. The browser's address bar displays '127.0.0.1:8000/student/'. The login form is centered and contains the following elements: a title 'Student Login', a 'Student ID:' label above a text input field containing '12345', a 'Password:' label above a password input field filled with dots, and a blue 'Submit' button.

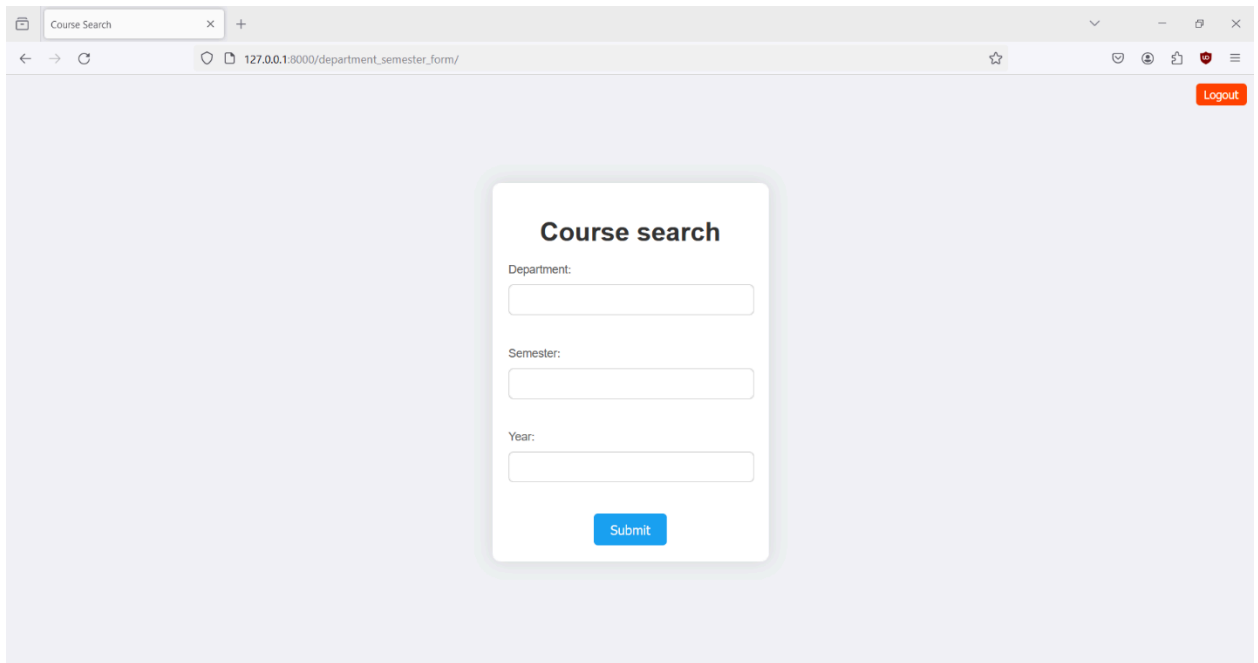
5. If the details provided are incorrect, a message which indicates that the details are invalid, will be displayed on the same page.



A screenshot of the same 'Student Login' page, but the input fields are now empty. Below the 'Submit' button, a red error message is displayed: 'Invalid details. Please try again.'

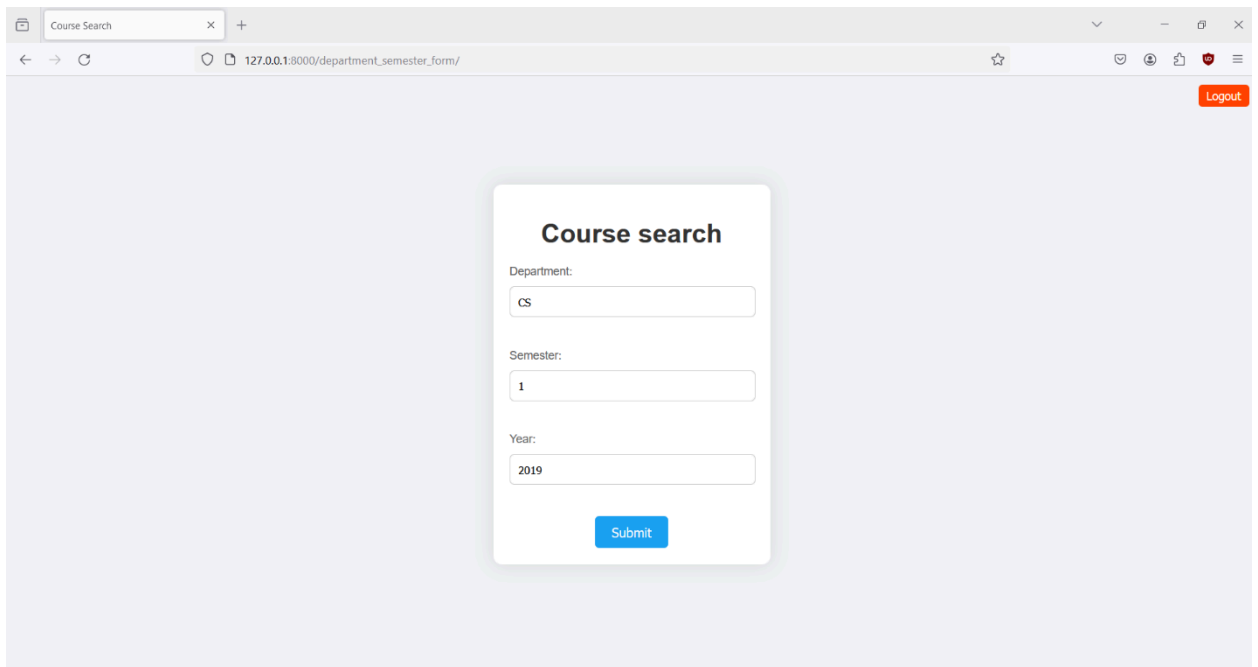
6. If the details are correct, you will be redirected to the Course Section Query form. The Course Section Query form includes three fields: Department, Year, and Semester,

along with a Submit button.



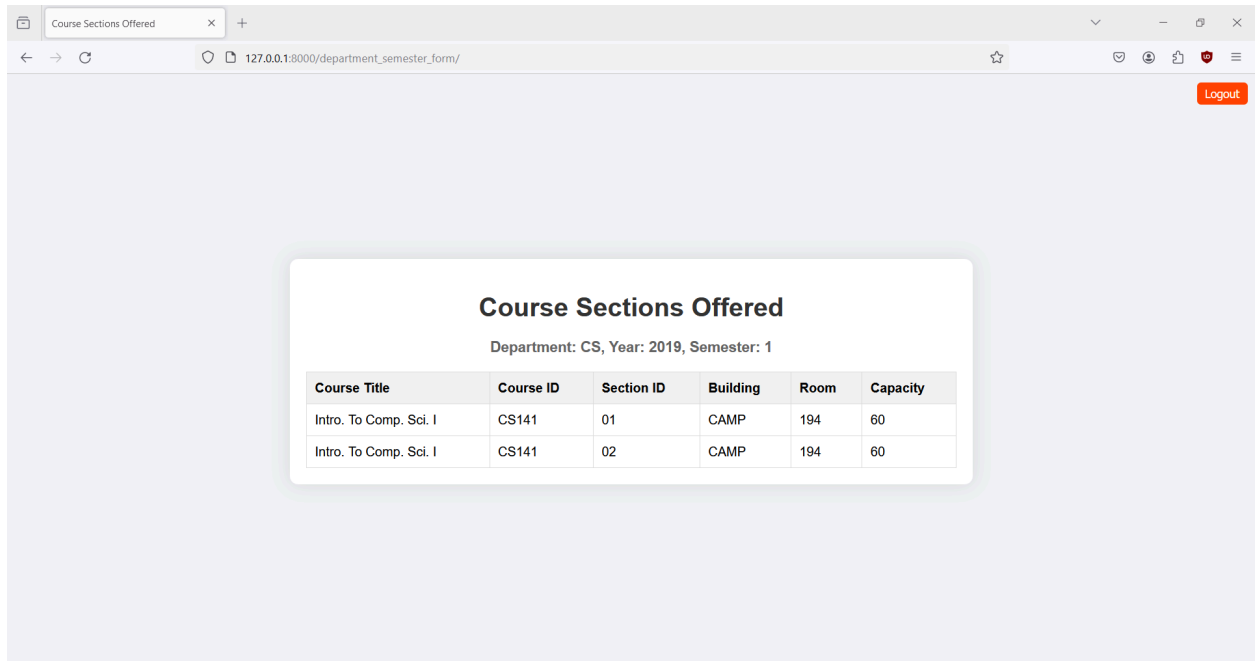
The screenshot shows a web browser window with the address bar displaying "127.0.0.1:8000/department_semester_form/". The page features a "Course search" form centered on a light gray background. The form has a title "Course search" and three input fields labeled "Department:", "Semester:", and "Year:". Below these fields is a blue "Submit" button. In the top right corner of the browser window, there is a red "Logout" 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.



This screenshot shows the same "Course search" form as the previous one, but with the input fields filled. The "Department:" field contains "CS", the "Semester:" field contains "1", and the "Year:" field contains "2019". The blue "Submit" button remains at the bottom of the form. The "Logout" button is still visible in the top right corner of the browser window.

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.

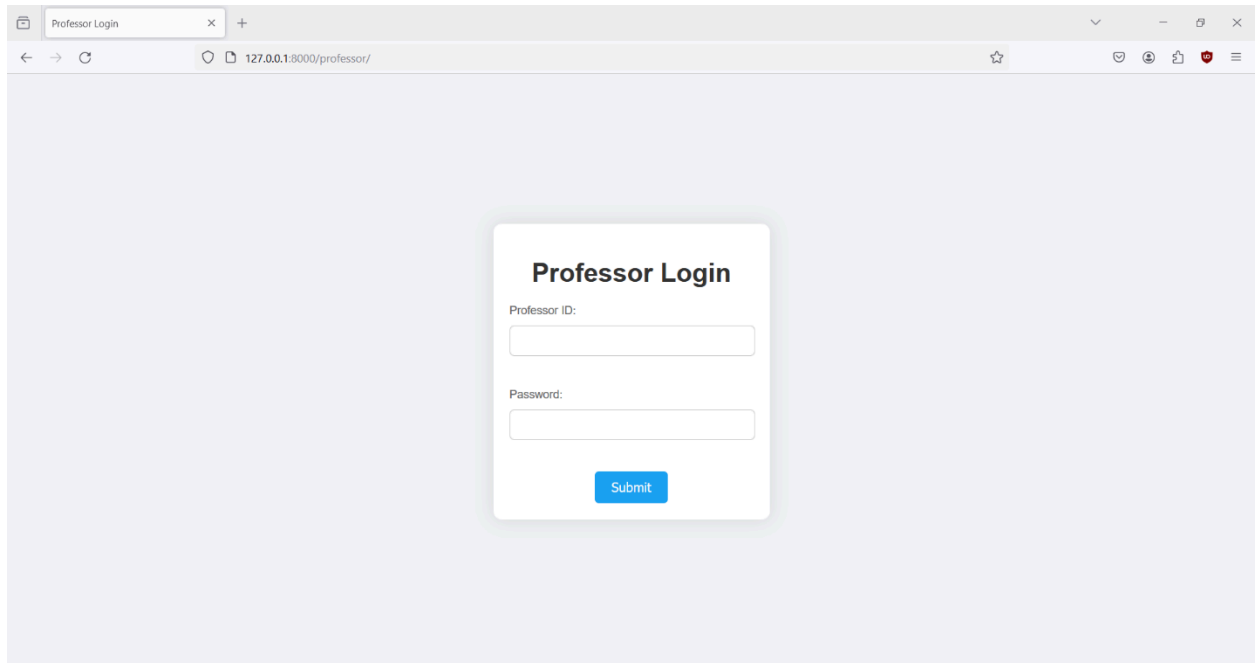


10. Logout button will be displayed on the top right corner of this page(Course Section Query results page); click it if you want to logout.
11. If you hit logout you will be redirected to Home page.

Instructions for Professors

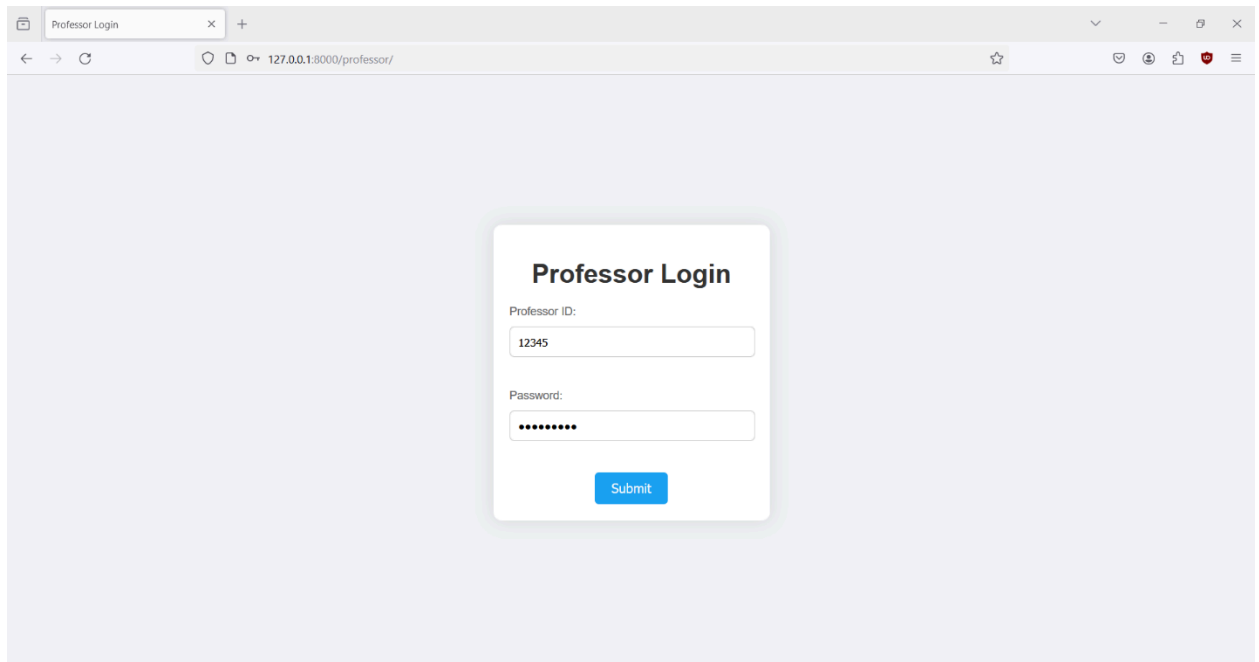
1. Click on the "I am a professor" button on the home page.
2. You will be redirected to the Professor Login page.

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



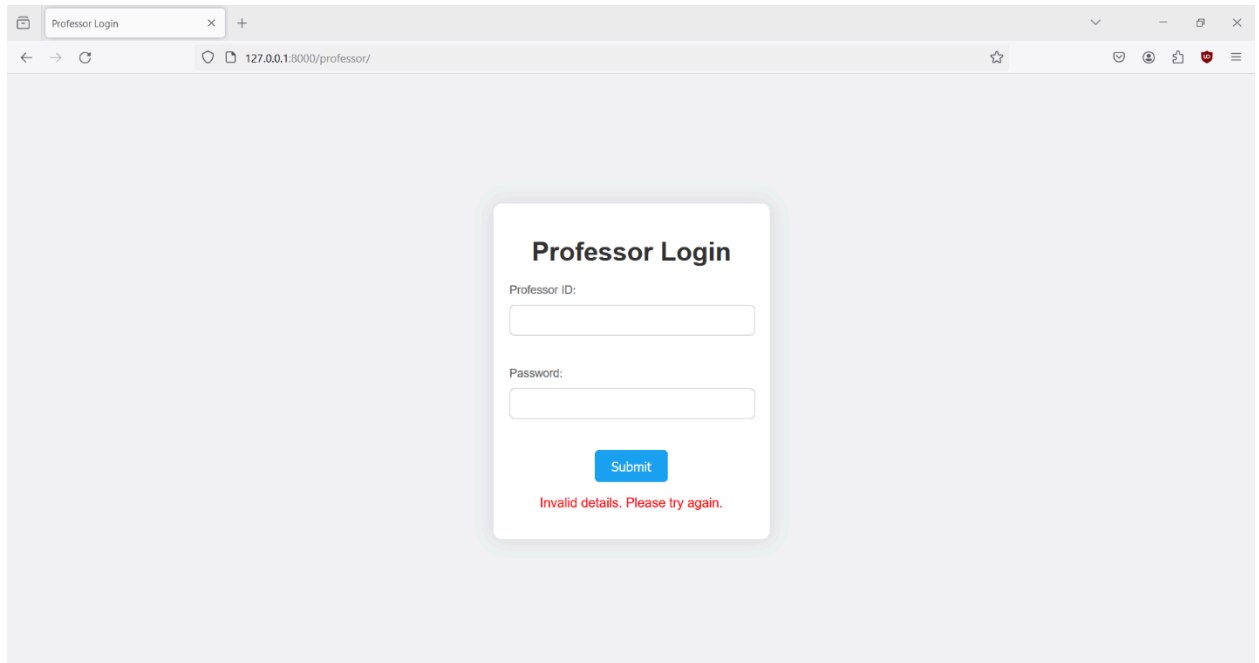
A screenshot of a web browser window showing the 'Professor Login' page. The browser's address bar displays '127.0.0.1:8000/professor/'. The page has a light purple background. In the center, there is a white login form with a blue shadow. The form is titled 'Professor Login' in bold black text. Below the title, there are two input fields: 'Professor ID:' and 'Password:'. The 'Professor ID' field contains the text '12345'. The 'Password' field is empty. Below the input fields is a blue 'Submit' button.

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



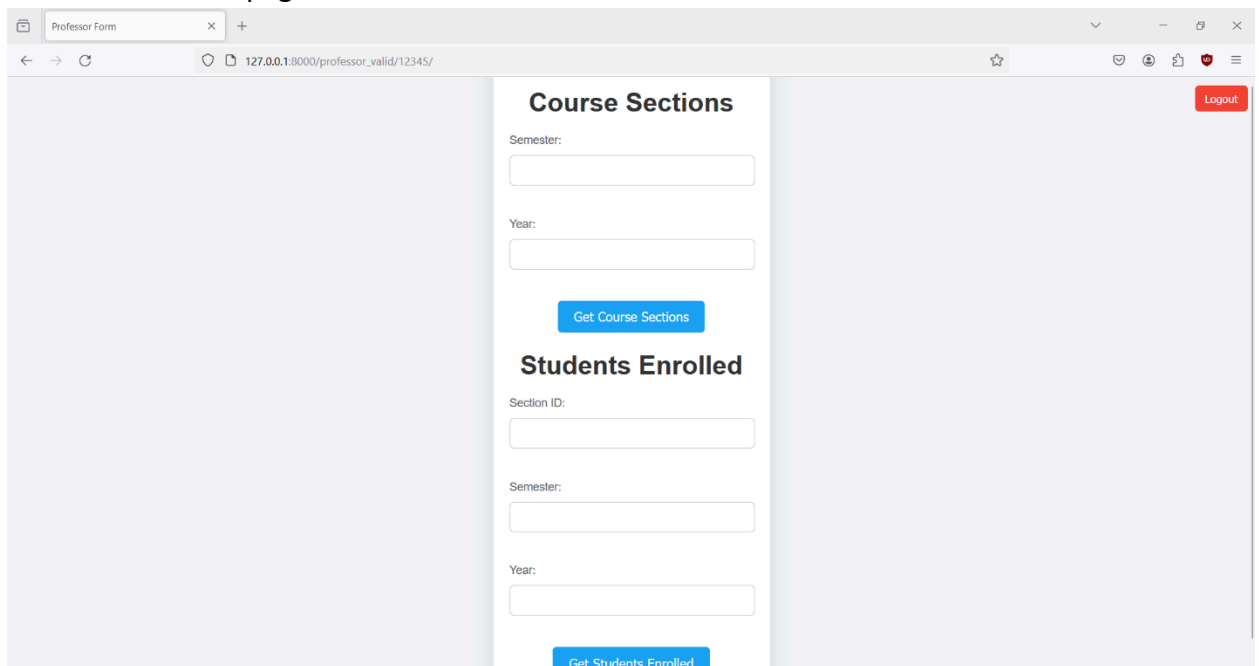
A screenshot of the same web browser window showing the 'Professor Login' page. The browser's address bar still displays '127.0.0.1:8000/professor/'. The page has a light purple background. In the center, there is a white login form with a blue shadow. The form is titled 'Professor Login' in bold black text. Below the title, there are two input fields: 'Professor ID:' and 'Password:'. The 'Professor ID' field contains the text '12345'. The 'Password' field contains a series of dots, indicating a password is entered. Below the input fields is a blue 'Submit' button.

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



The screenshot shows a web browser window with the title 'Professor Login'. The address bar displays '127.0.0.1:8000/professor/'. The main content area features a white login form with the title 'Professor Login'. It contains two input fields: 'Professor ID:' and 'Password:'. Below these fields is a blue 'Submit' button. At the bottom of the form, a red error message reads 'Invalid details. Please try again.'

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.



The screenshot shows a web browser window with the title 'Professor Form'. The address bar displays '127.0.0.1:8000/professor_valid/12345/'. The main content area is divided into two sections. The first section, 'Course Sections', has input fields for 'Semester:' and 'Year:', followed by a blue 'Get Course Sections' button. The second section, 'Students Enrolled', has input fields for 'Section ID:', 'Semester:', and 'Year:', followed by a blue 'Get Students Enrolled' button. A red 'Logout' button is located in the top right corner of the page.

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.

The screenshot shows a web browser window with the address bar displaying '127.0.0.1:8000/professor_valid/12345/'. The page title is 'Professor Form'. The main content area is titled 'Course Sections' and contains two input fields: 'Semester:' with the value '1' and 'Year:' with the value '2020'. Below these fields is a blue button labeled 'Get Course Sections'. Underneath this button is a section titled 'Students Enrolled' with three input fields: 'Section ID:', 'Semester:', and 'Year:'. At the bottom of this section is a blue button labeled 'Get Students Enrolled'. A red 'Logout' button is located in the top right corner of the page.

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.

The screenshot shows a web browser window with the address bar displaying '127.0.0.1:8000/professor_valid/12345/'. The page title is 'Course Sections and Students'. The main content area is titled 'Course Sections and Students' and contains a table with the following data:

Course ID	Section ID	Semester	Year	Number of Students
EE468	01	1	2020	2

A red 'Logout' button is located in the top right corner of the page.

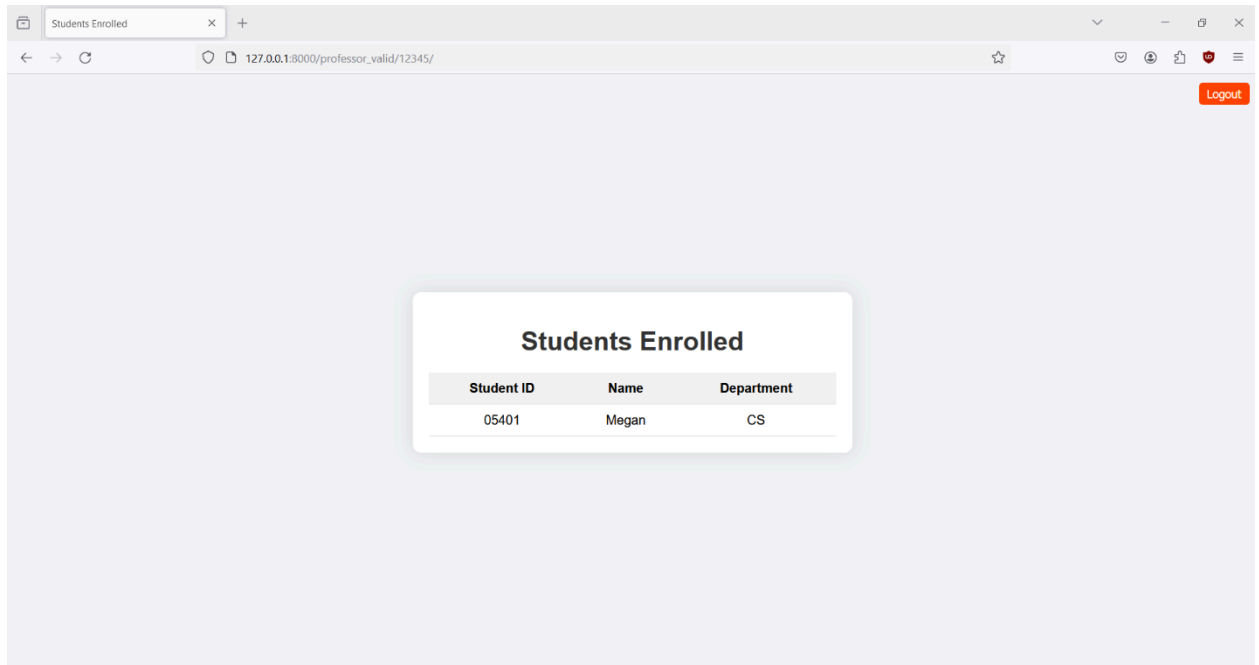
10. To view the list of students enrolled in a specific course section and semester that you taught:

Enter the section ID, semester, and year into the respective fields.

Click "Get Students Enrolled" to retrieve the information.

The screenshot shows a web browser window with a single tab titled "Professor Form". The address bar displays the URL "127.0.0.1:8000/professor_valid/12345/". The page content is divided into two main sections. The top section, titled "Course Sections", contains input fields for "Semester:" and "Year:", followed by a blue button labeled "Get Course Sections". The bottom section, titled "Students Enrolled", contains input fields for "Section ID:" (with the value "02"), "Semester:" (with the value "2"), and "Year:" (with the value "2019"), followed by a blue button labeled "Get Students Enrolled". A red "Logout" button is located in the top right corner of the page.

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.