



暨南大學  
JINAN UNIVERSITY

# ***Course Selection System***

## ***Usage Guideline***



2024/12/14

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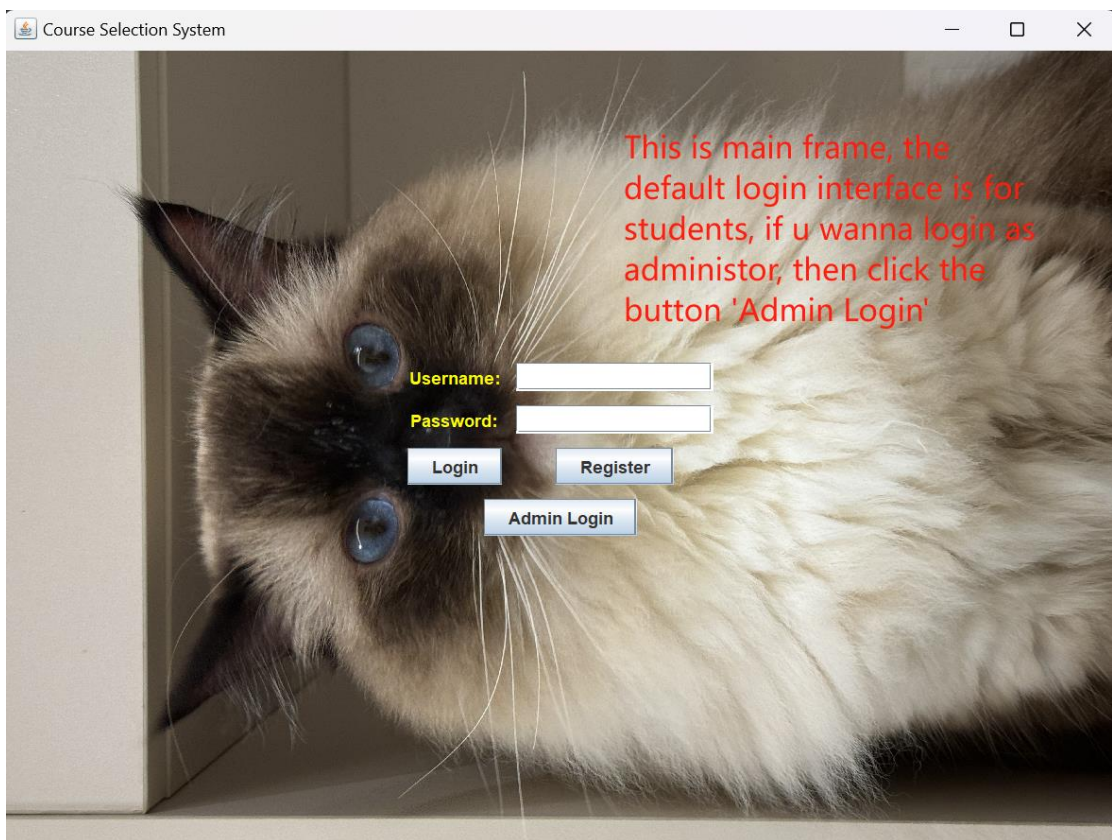
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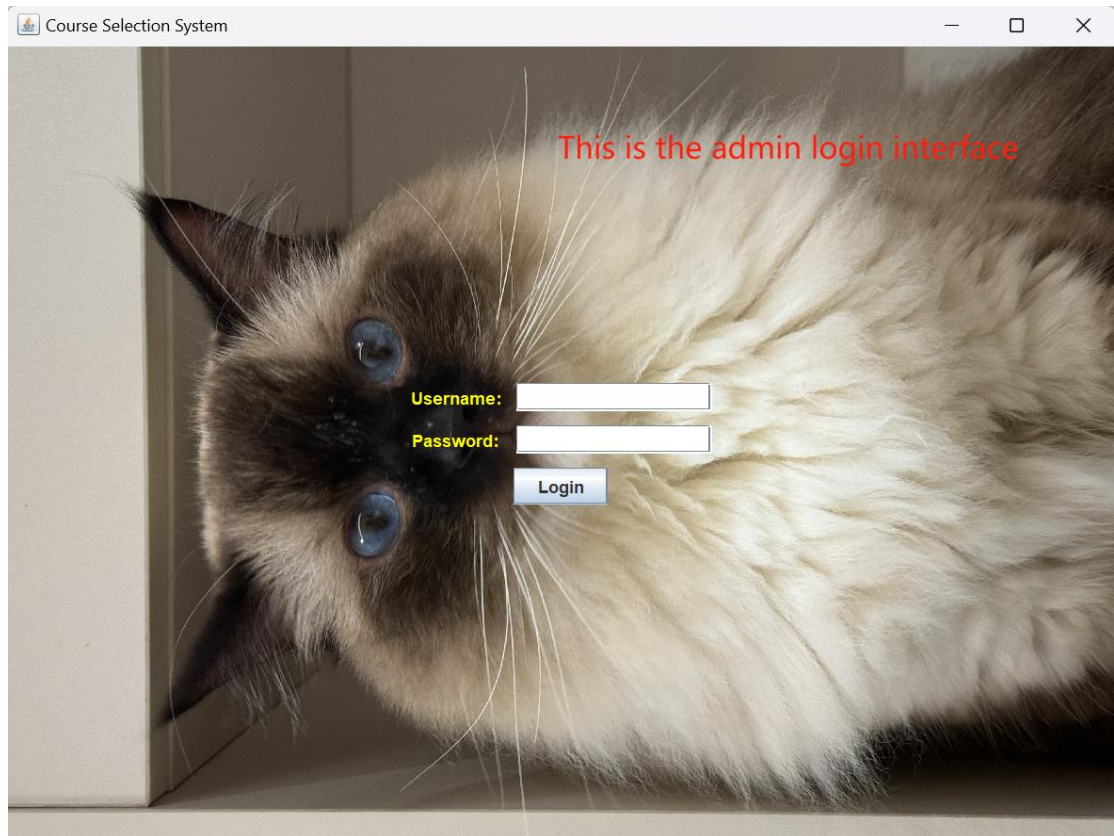
# 1. Introduction

This system develops a database-driven partial application system for Teaching Administration Management, primarily focusing on Course Enrollment functionalities. It includes essential support features like viewing available and enrolled courses and modifying course selections. The system adheres to key constraints such as prerequisite course requirements, a credit cap (**maximum of 21 credits per semester**), and the avoidance of scheduling conflicts among selected courses. It is built using **Java**, **JDBC**, and the **Swing framework**, providing separate main interfaces for **students** and **administrators**, implementing their respective functionalities.

**Student Features:** The system offers a comprehensive suite of functionalities tailored to enhance students' academic experiences. Students can securely modify their passwords, ensuring the protection of their personal data. They have access to view their personal information, allowing them to keep track of their academic records and personal details. The system enables students to select courses, providing a streamlined process for course enrollment. Additionally, students can view the courses they have enrolled in, and if necessary, they have the option to drop courses, granting them flexibility in managing their academic workload.



**Administrator Features:** The system provides administrators with tools to manage courses and view student information, aiding in the digitalization of teaching administration.



## 2. System Requirements

- Operating System: Windows, macOS, Linux
- Java Runtime Environment: JDK 8 or higher
- Database: MySQL 5.7 or higher

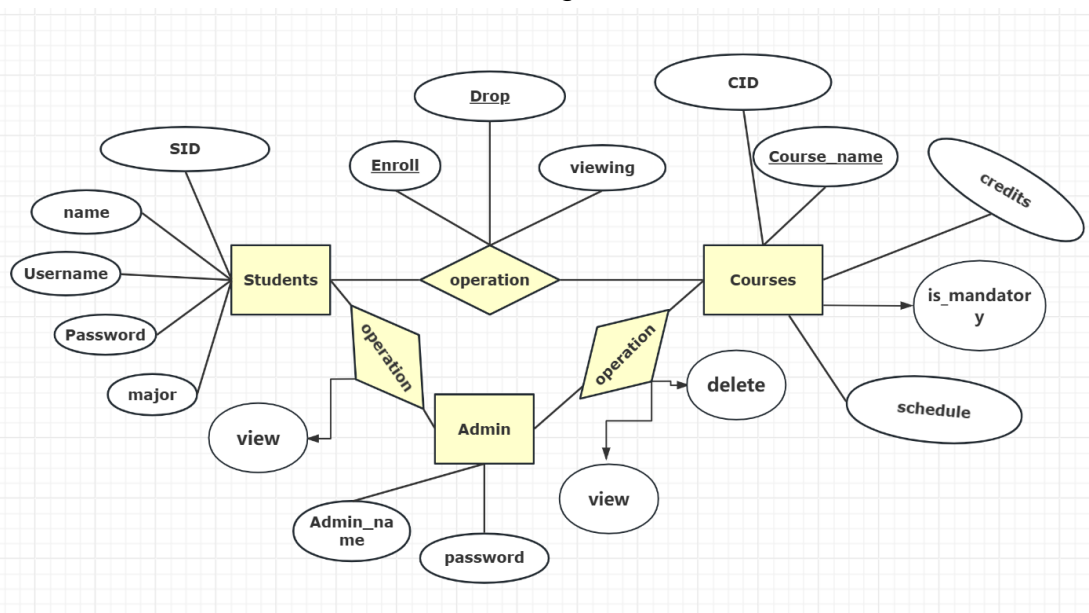
In this system, the doc folder stores usage guideline, the lib folder stores MySQL-connector, the res folder stores resource images and database backup files, the compiled executable Java class files are stored in the run folder, and finally the src folder saves the source code, which is classified into different software packages. The system file structure is shown as follows:

```

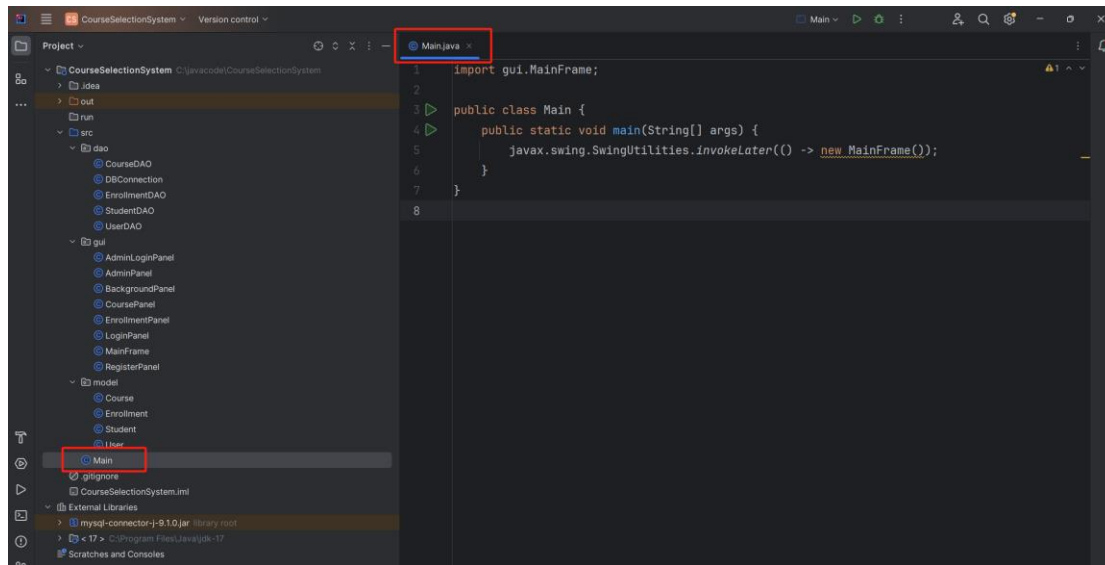
CourseSelectionSystem
├── .idea
├── out
│   └── run
├── src
│   ├── dao
│   │   ├── CourseDAO.java
│   │   ├── DBConnection.java
│   │   ├── EnrollmentDAO.java
│   │   ├── StudentDAO.java
│   │   └── UserDAO.java
│   ├── gui
│   │   ├── AdminLoginPanel.java
│   │   ├── AdminPanel.java
│   │   ├── BackgroundPanel.java
│   │   ├── CoursePanel.java
│   │   ├── EnrollmentPanel.java
│   │   ├── LoginPanel.java
│   │   ├── MainFrame.java
│   │   └── RegisterPanel.java
│   ├── model
│   │   ├── Course.java
│   │   ├── Enrollment.java
│   │   ├── Student.java
│   │   └── User.java
│   └── Main.java
├── .gitignore
├── CourseSelectionSystem.iml
├── External Libraries
│   ├── mysql-connector-j-9.1.0.jar
│   └── C:\Program Files\Java\jdk-17

```

E-R diagram:



You can execute this system simply run the Main.java to run the whole system.



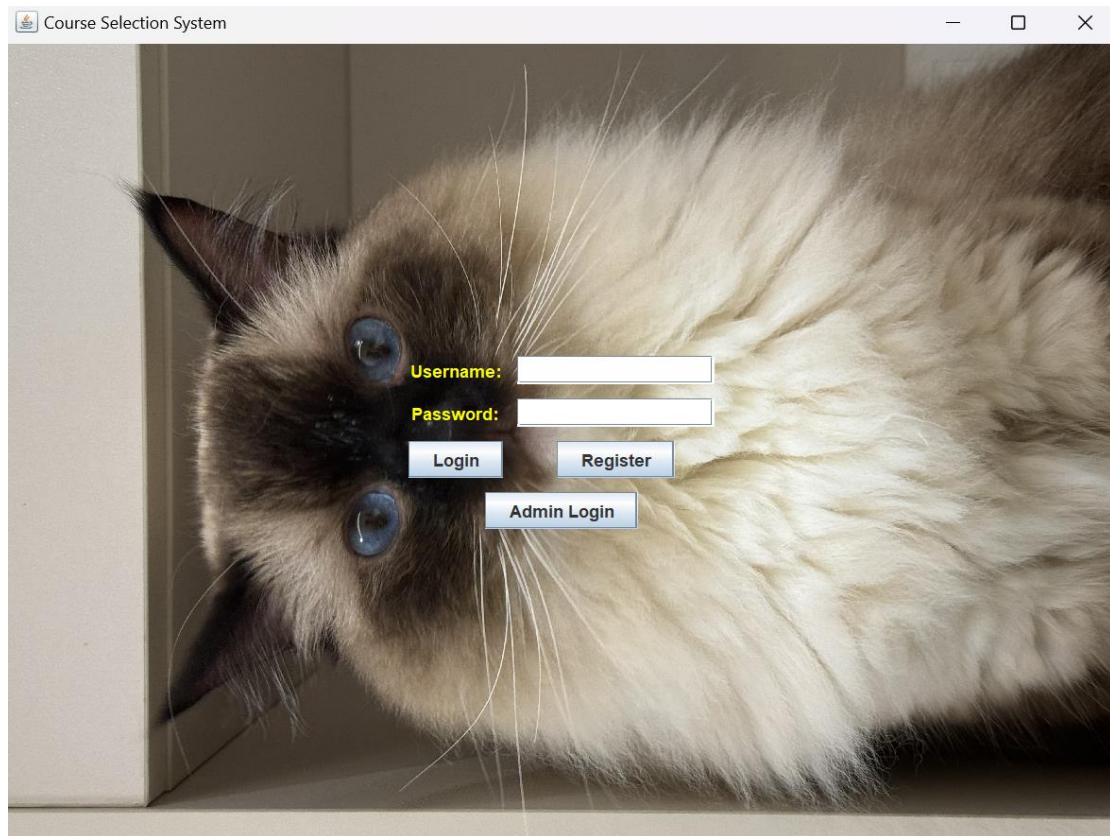
### 3. Installation and Startup

1. Ensure Java Runtime Environment and MySQL database are installed.
2. Download and unzip the project source code.
3. Open the project in an IDE (such as IntelliJ IDEA).
4. Configure the database connection information.
5. Run the Main.java file to start the system.

### 4. User Registration and Login

1. Open the system login interface.

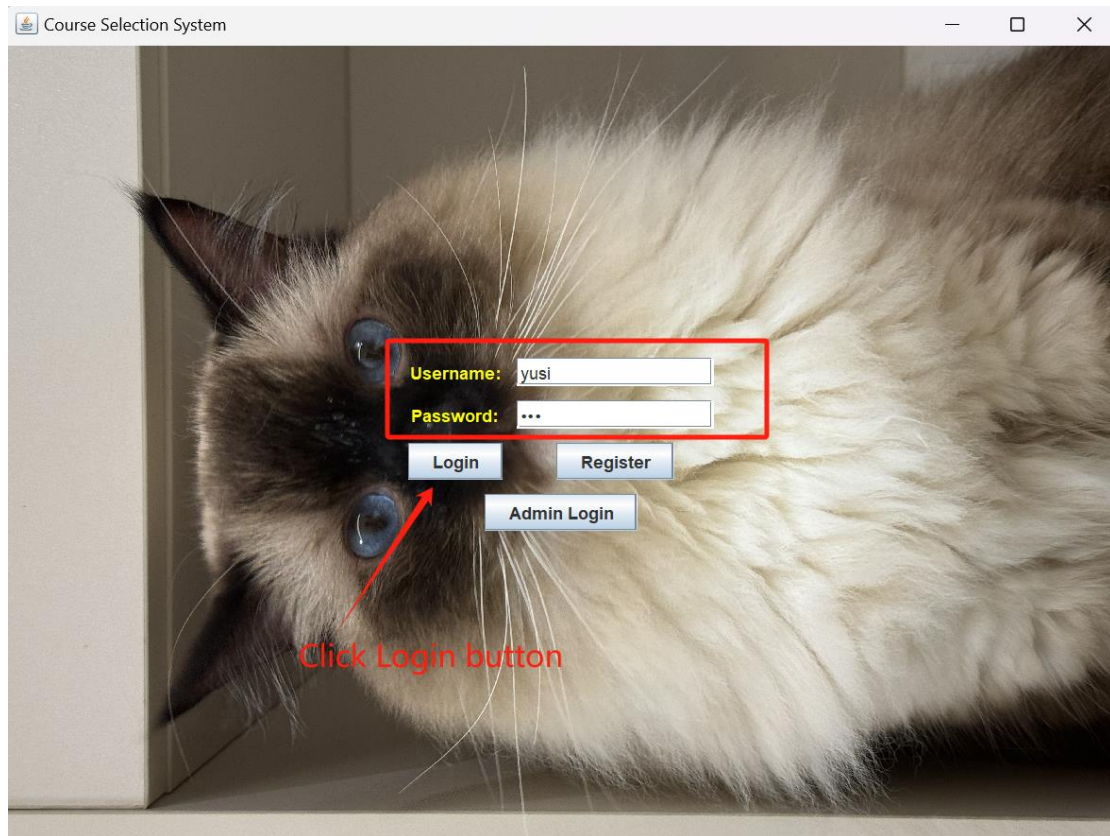




2. Click the "Register" button, fill in the username, password, student ID, name, and major, then click "Register" to complete registration.

A screenshot of a web application window titled "Register". The background image is the same Siamese cat face. Overlaid on the cat's face is a registration form. The form contains five input fields: "Username:", "Password:", "Student ID:", "Name:", and "Major:". Below these fields is a single button labeled "Register".

3. Log in to the system using the registered username and password.

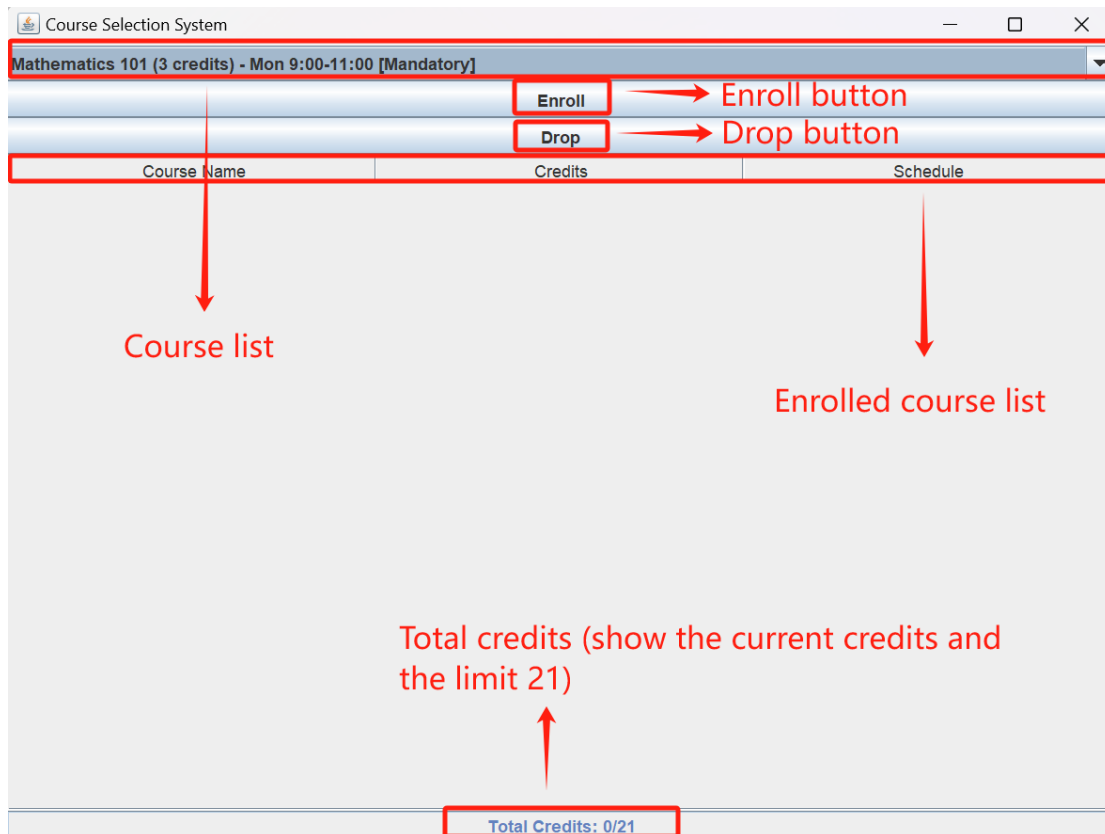


## 5. Student Features

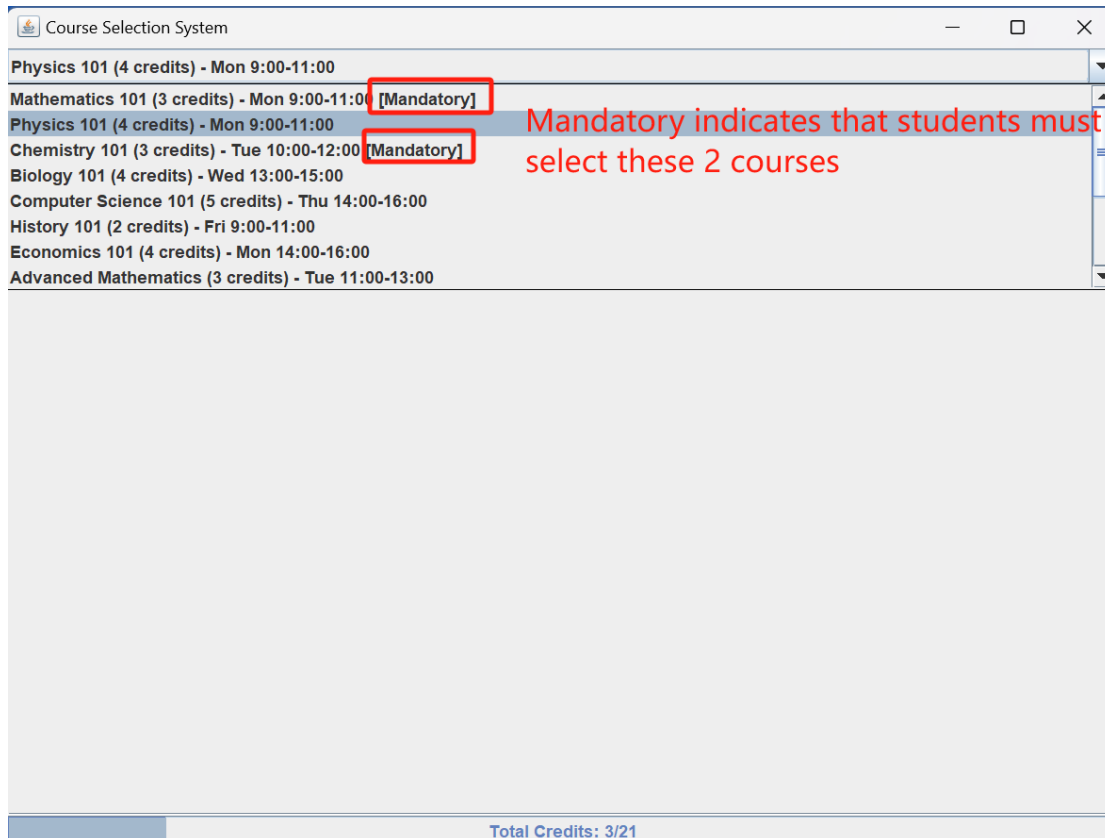
### 5.1 Course Enrollment

1. After logging in, go to the course enrollment interface.





2. Select the desired course from the dropdown list. Mandatory courses will be marked with "[Mandatory]".



3. Click the "Enroll" button to enroll in the course. The system will check

for credit and schedule conflicts.

The screenshot shows a web application window titled "Course Selection System". At the top, there is a dropdown menu currently displaying "Physics 101 (4 credits) - Mon 9:00-11:00". Below this are two buttons: "Enroll" and "Drop". A table with three columns is visible: "Course Name", "Credits", and "Schedule". The first row of the table contains "Mathematics 101", "3", and "Mon 9:00-11:00". A red arrow points from this row to a large grey area in the center of the screen. In this area, the text "Enroll Mathematics 101 successfully!!" is displayed in red. Below this, another red arrow points up to the text "Total credits increase simultaneously!". At the bottom of the screen, a status bar shows "Total Credits: 3/21" in blue text, which is also highlighted with a red border.

Course Name	Credits	Schedule
Mathematics 101	3	Mon 9:00-11:00

Enroll Mathematics 101 successfully!!

Total credits increase simultaneously!

Total Credits: 3/21

## 5.2 Dropping Courses

1. In the course enrollment interface, select a course from the list of enrolled courses.
2. Click the "Drop" button to drop the selected course.

Course Selection System

Physics 101 (4 credits) - Mon 9:00-11:00

Enroll

Drop

Course Name	Credits	Schedule
Mathematics 101	3	Mon 9:00-11:00

Drop operation:

Step1: Select the enrolled course

Step2: Click the Drop button

DONE

Total Credits: 3/21

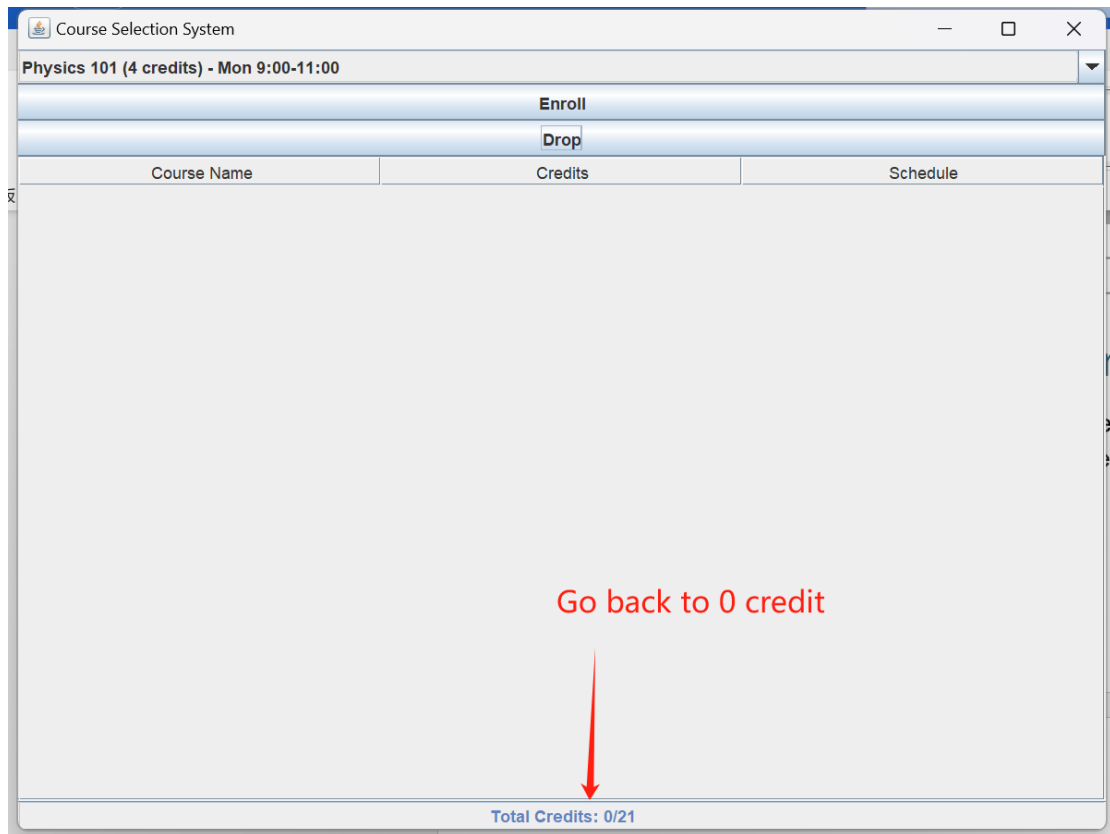
消息

×

i

Course dropped successfully!

确定



## 5.3 Viewing Enrolled Courses

1. In the course enrollment interface, you can view the list of currently enrolled courses and the total credit progress bar.

Course Selection System

Economics 101 (4 credits) - Mon 14:00-16:00

Enroll

Drop

Course Name	Credits	Schedule
Mathematics 101	3	Mon 9:00-11:00
Chemistry 101	3	Tue 10:00-12:00
Biology 101	4	Wed 13:00-15:00
Computer Science 101	5	Thu 14:00-16:00
History 101	2	Fri 9:00-11:00
Economics 101	4	Mon 14:00-16:00

This chart can show students that the enrolled courses till now!

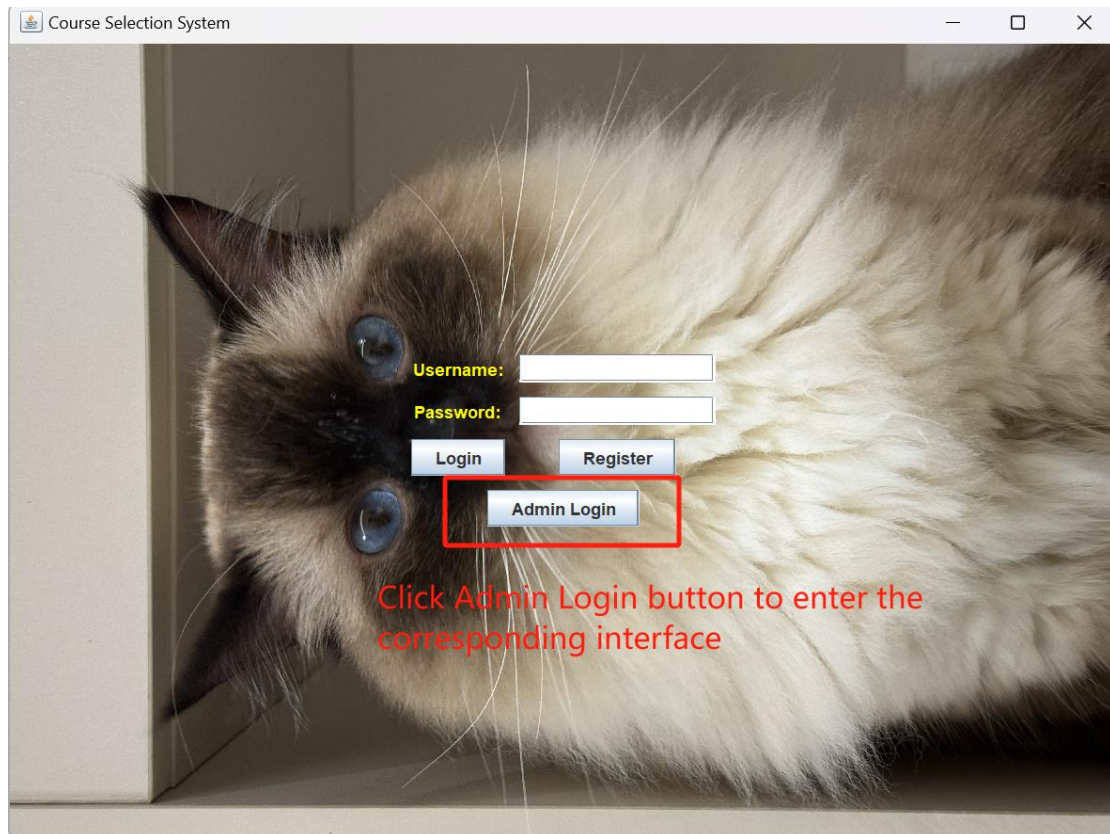
Total Credits: 21/21

## 6. Administrator Features

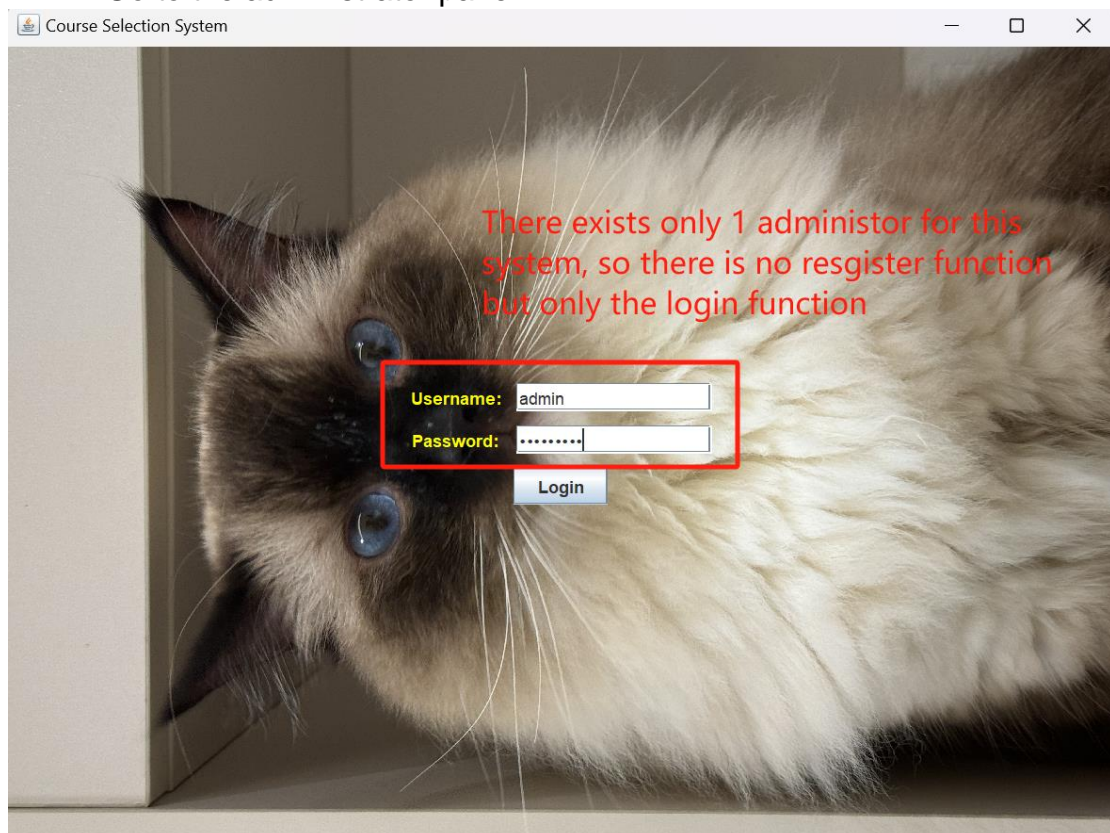
### 6.1 Adding Courses

1. Log in with an administrator account.



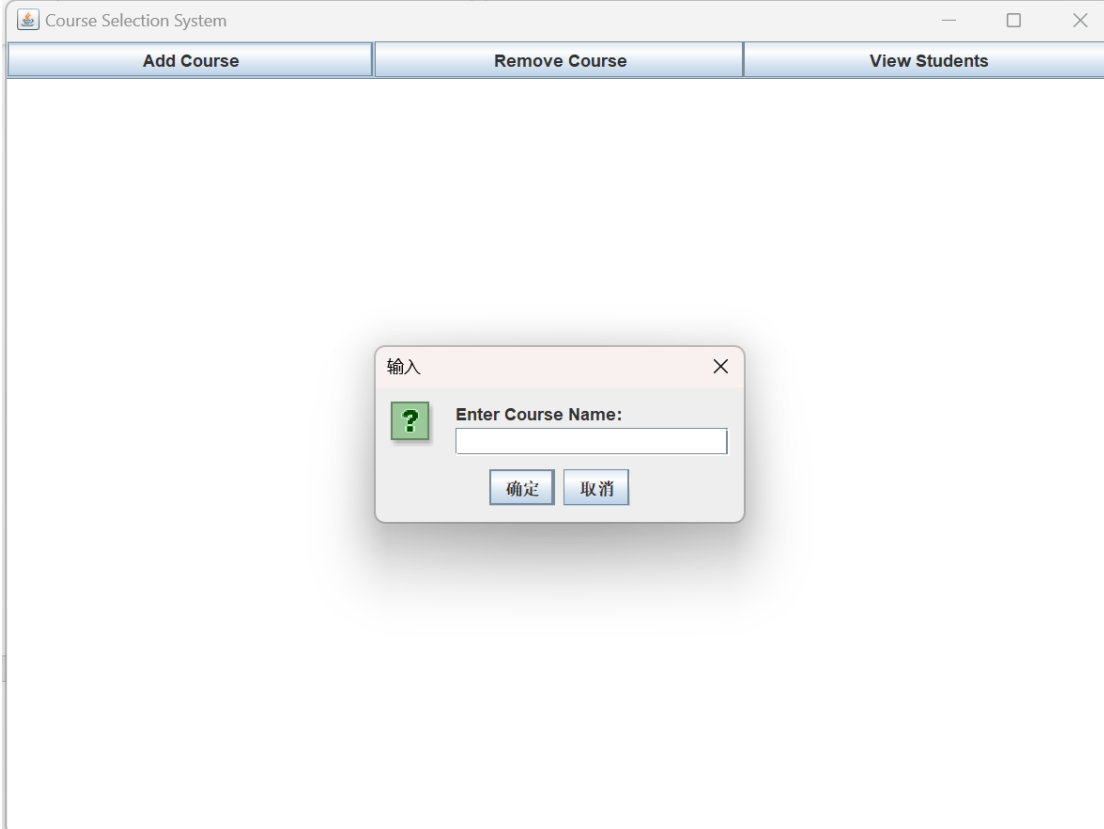


2. Go to the administrator panel.

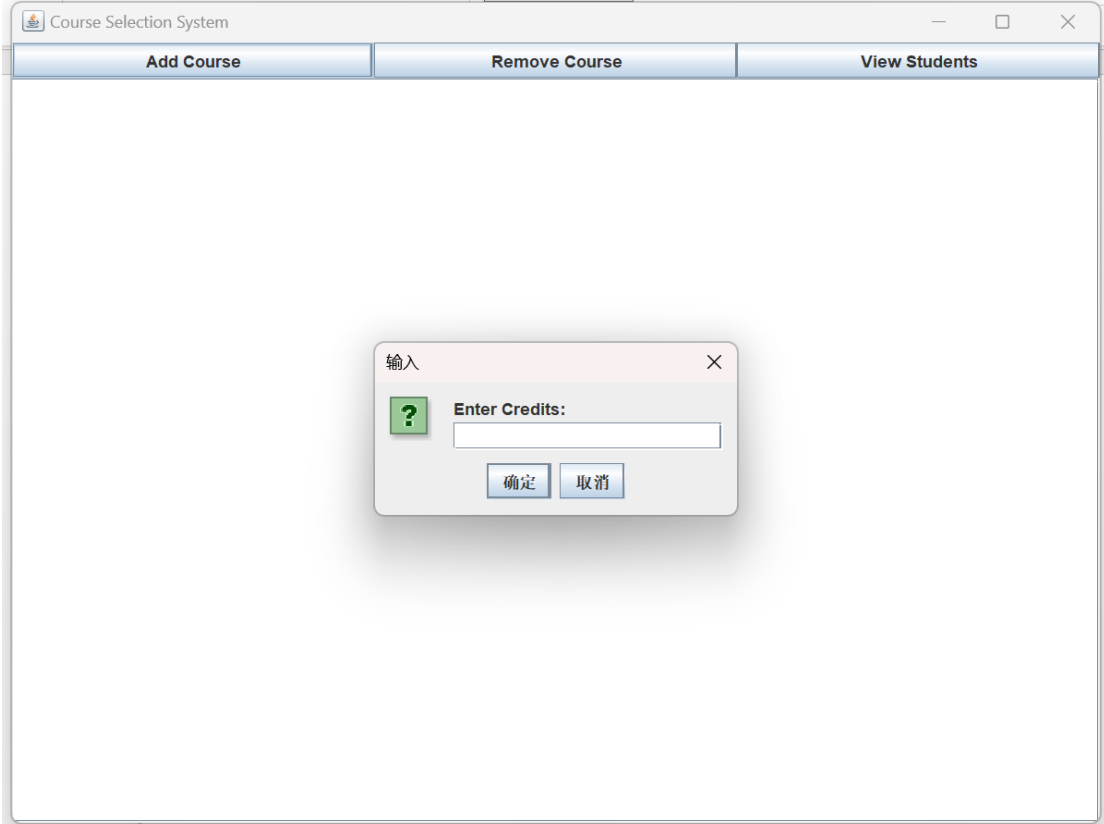


3. Click the "Add Course" button, enter the course name, credits, and

schedule, then click to confirm adding the course.



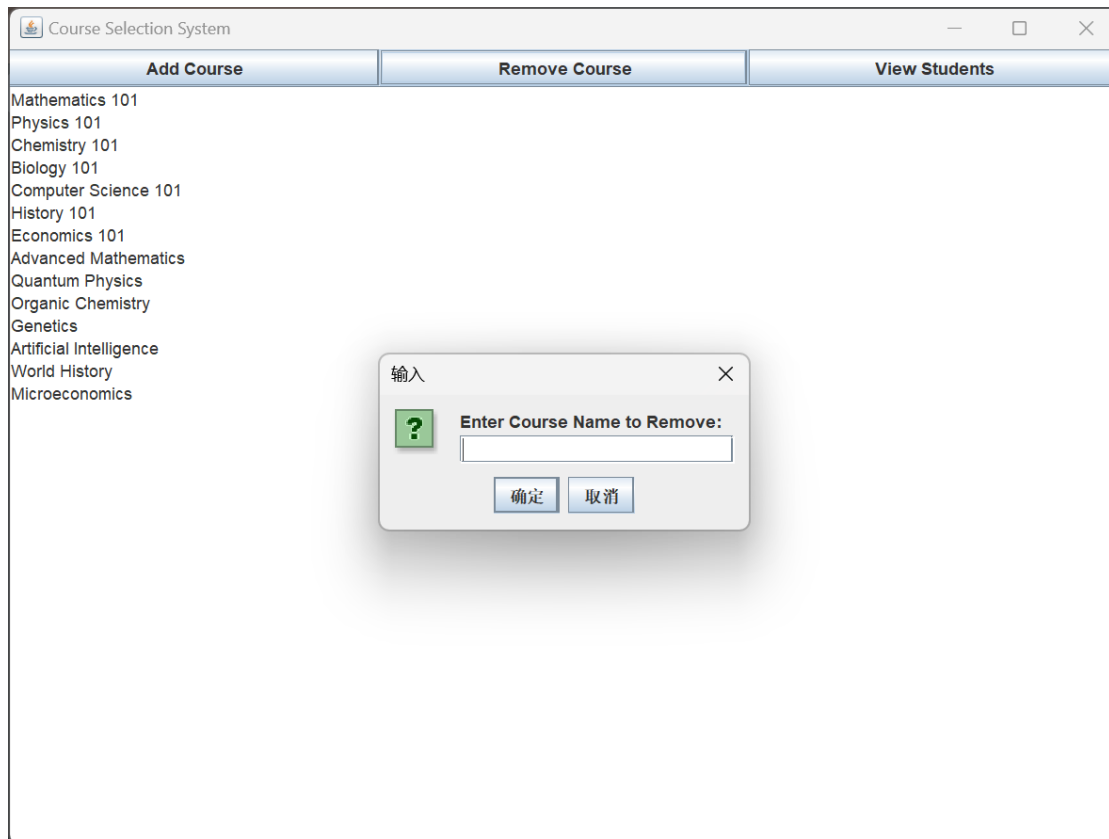
The image shows a window titled "Course Selection System" with three buttons: "Add Course", "Remove Course", and "View Students". The "Add Course" button is highlighted. A dialog box titled "输入" (Input) is open, prompting the user to "Enter Course Name:". The dialog box contains a green square icon with a white question mark, a text input field, and two buttons: "确定" (Confirm) and "取消" (Cancel).



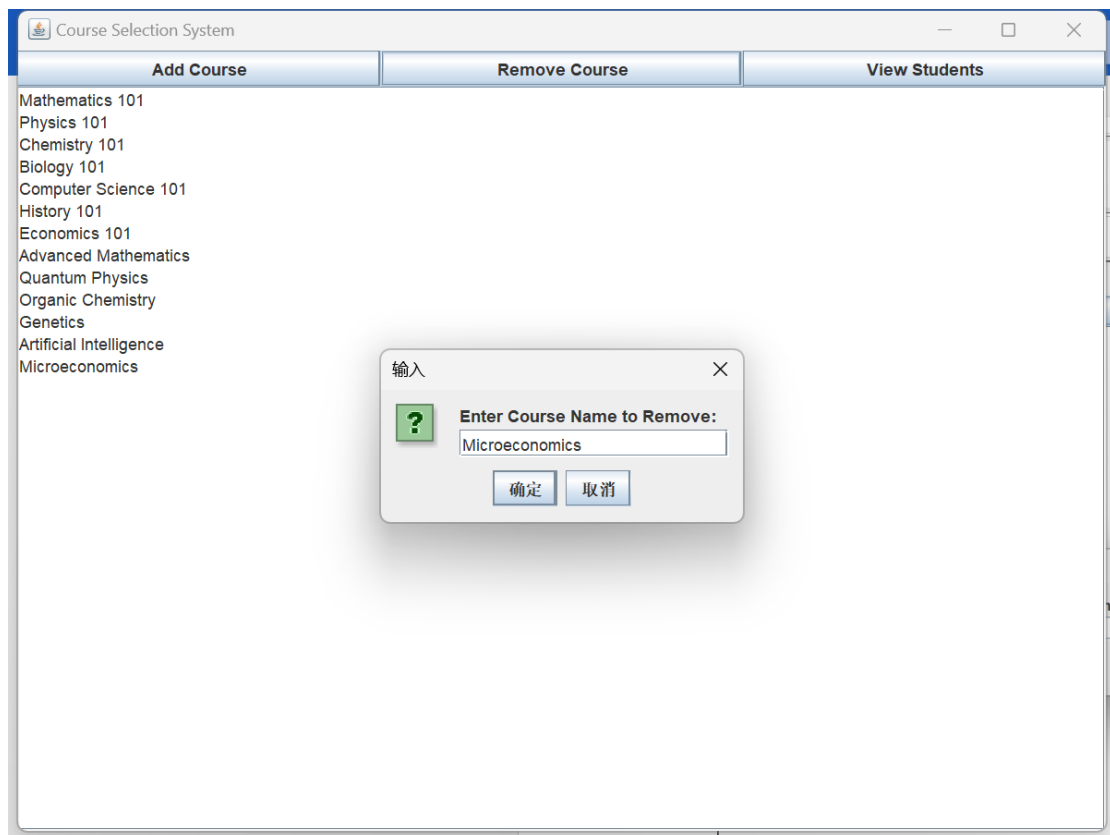
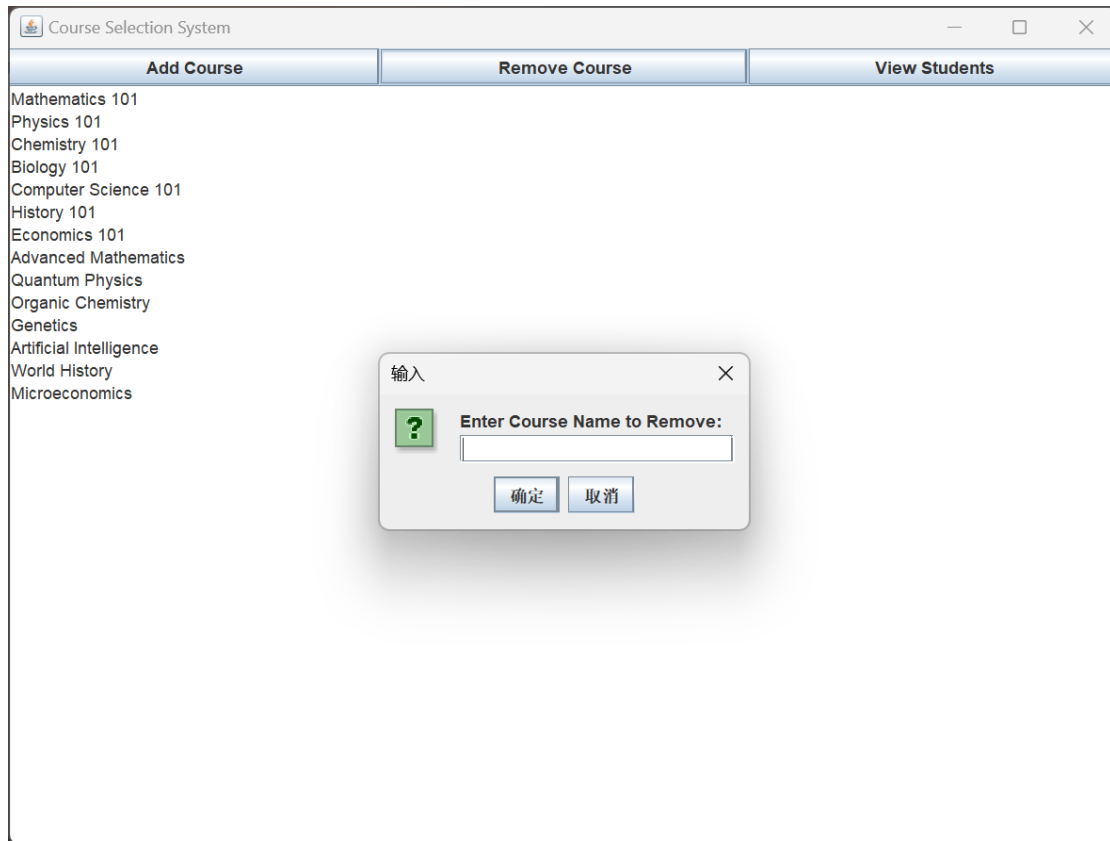
The image shows the same "Course Selection System" window. The "Add Course" button is still highlighted. A dialog box titled "输入" (Input) is open, prompting the user to "Enter Credits:". The dialog box contains a green square icon with a white question mark, a text input field, and two buttons: "确定" (Confirm) and "取消" (Cancel).

## 6.2 Removing Courses

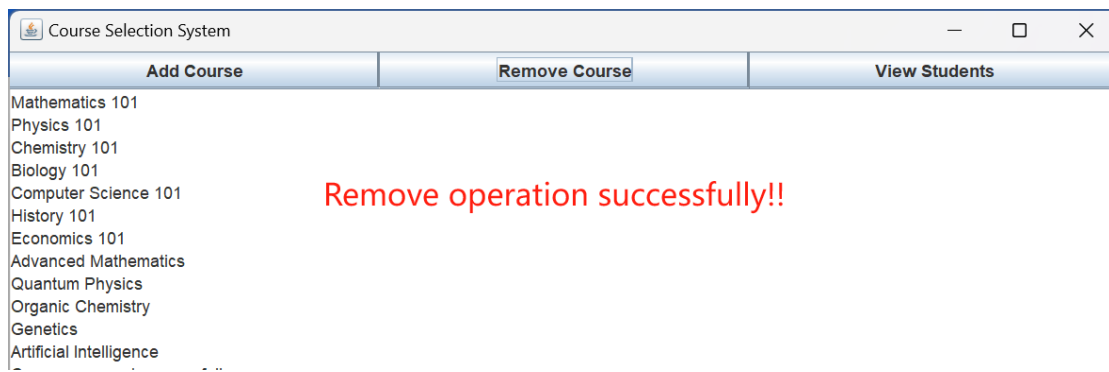
1. In the administrator panel, click the "Remove Course" button.



2. In the pop-up dialog, enter the name of the course to be removed and click to confirm deletion.

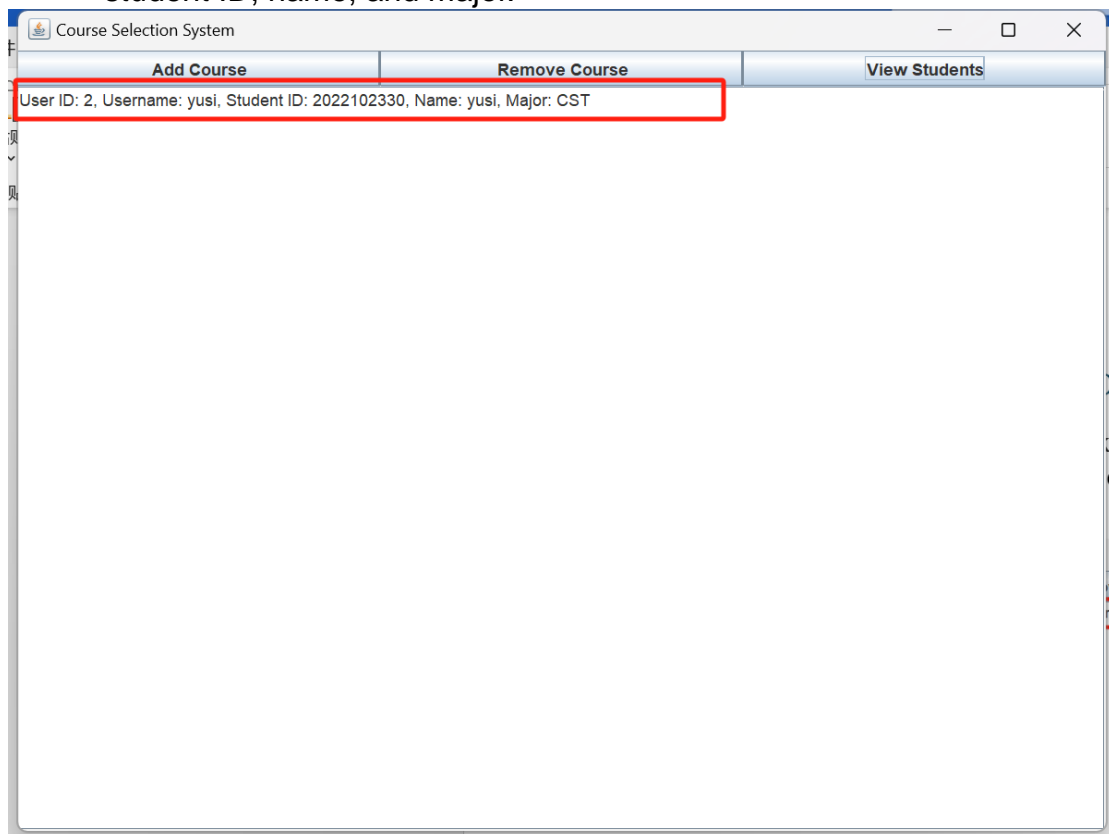


Course removed successfully.



## 6.3 Viewing Student Information

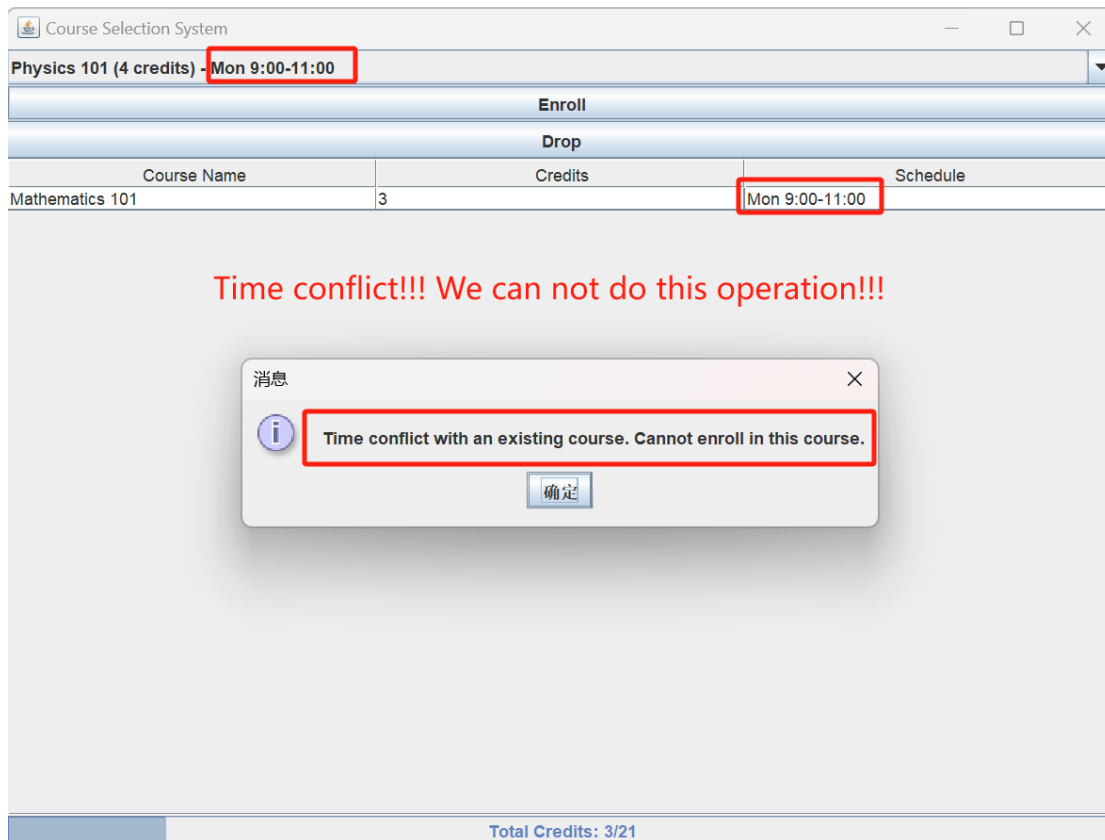
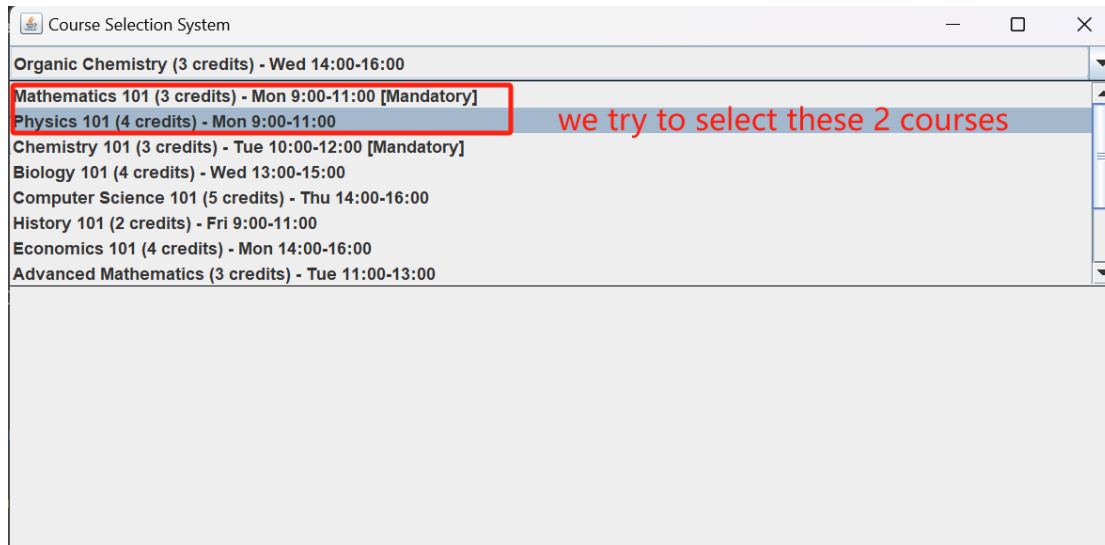
1. In the administrator panel, click the "View Students" button.
2. The system will display all student information, including username, student ID, name, and major.



## 7. Some restricts and FAQs

- Can not choose courses that conflict with your schedule





- The total credit limit per student is 21.

Course Selection System


Organic Chemistry (3 credits) - Wed 14:00-16:00

Enroll

Drop

Course Name	Credits	Schedule
Mathematics 101	3	Mon 9:00-11:00
Chemistry 101	3	Tue 10:00-12:00
Biology 101	4	Wed 13:00-15:00
Computer Science 101	5	Thu 14:00-16:00
History 101	2	Fri 9:00-11:00
Economics 101	4	Mon 14:00-16:00

消息

 Credit limit exceeded. Cannot enroll in this course.

确定

Reach the limited credits, we can not select more courses

Total Credits: 21/21

- Mandatory courses are marked with "[Mandatory]" and must be enrolled by students.
- If you encounter any issues, please contact the system administrator.