

REGIFLEX - Course Registration System

TEAM MEMBERS

MANISHAA G - 230701176(Team Leader)

MANOHARAN K - 230701177

MANOJ KUMAR S - 230701178

MANU S D - 230701179



Presentation Agenda



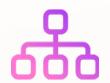
Abstract
System overview



Existing System
Review limitations



Proposed System
Detail solutions



Flow Diagrams
System structure



UML Diagrams
Diagrams



Modules
Description

Aa

Test Cases
Output

*

References
Links

Abstract

The Course Registration system is an online platform. It simplifies student course registration. Users create accounts, log in, and browse courses. The system checks prerequisites and avoids scheduling conflicts.

Personalized course recommendations improve selection. Secure payment processing ensures safety. Automated notifications confirm enrollment. Achievements are tracked and displayed on leaderboards.



Existing Systems: Challenges



Blackboard Learn:

"Hard to Navigate: Users find it complicated to use.
"Slow Performance: Can lag during peak times.



Moodle:

"Difficult to Customize: Needs technical support for modifications.
"Inconsistent Experience: Varies based on how institutions set it up.



Coursera:

"Certification Costs: Free courses, but certificates cost money.
"Limited Course Availability: Not all courses are always open.

Proposed System: Key Features

1 Smart Suggestions

AI recommends based on preferences.

2 Live and pre-recorded Sessions

Flexible learning with a mix of live and recorded content.

3 Prerequisite Checker

Ensures students meet course requirements before registering.

4 Mobile Integration

Easy access, instant notifications.

5 Real-Time Seat Availability

Live updates on available seats and automatic waitlisting.



System Advantages

Saves Time

Automates selection and scheduling.

Reduces Errors

Prevents double bookings.

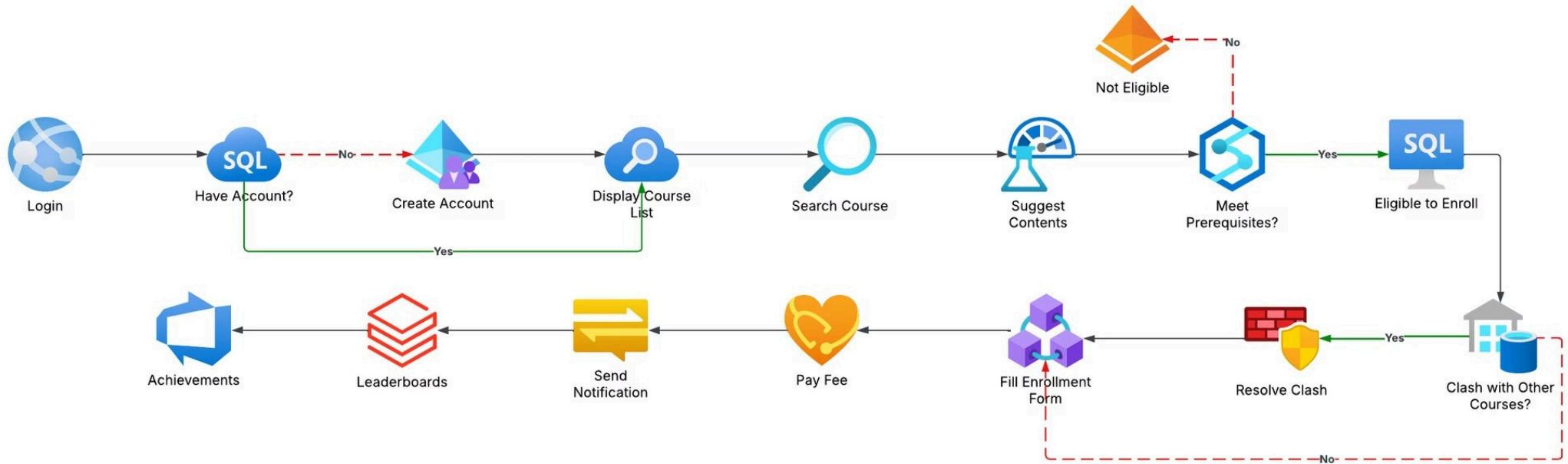
Enhances Experience

Easy mobile access and real-time updates.

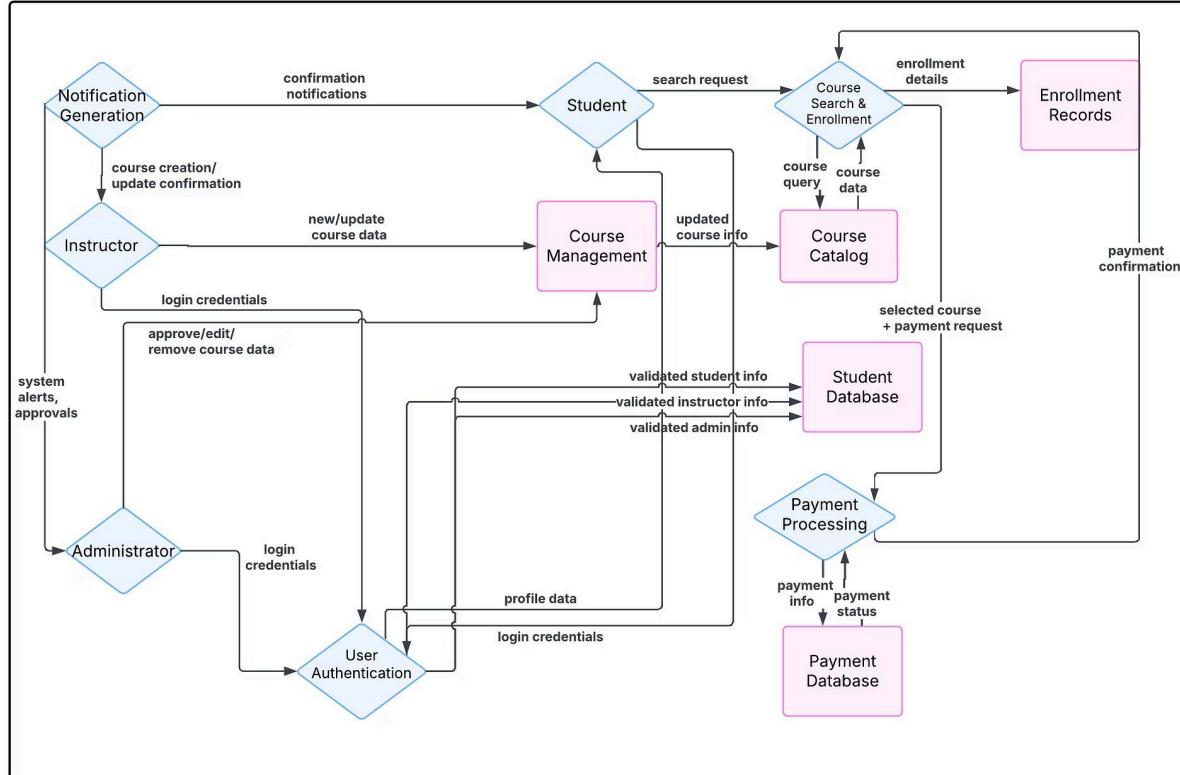
Fair & Transparent

Live seat tracking and waitlist system.

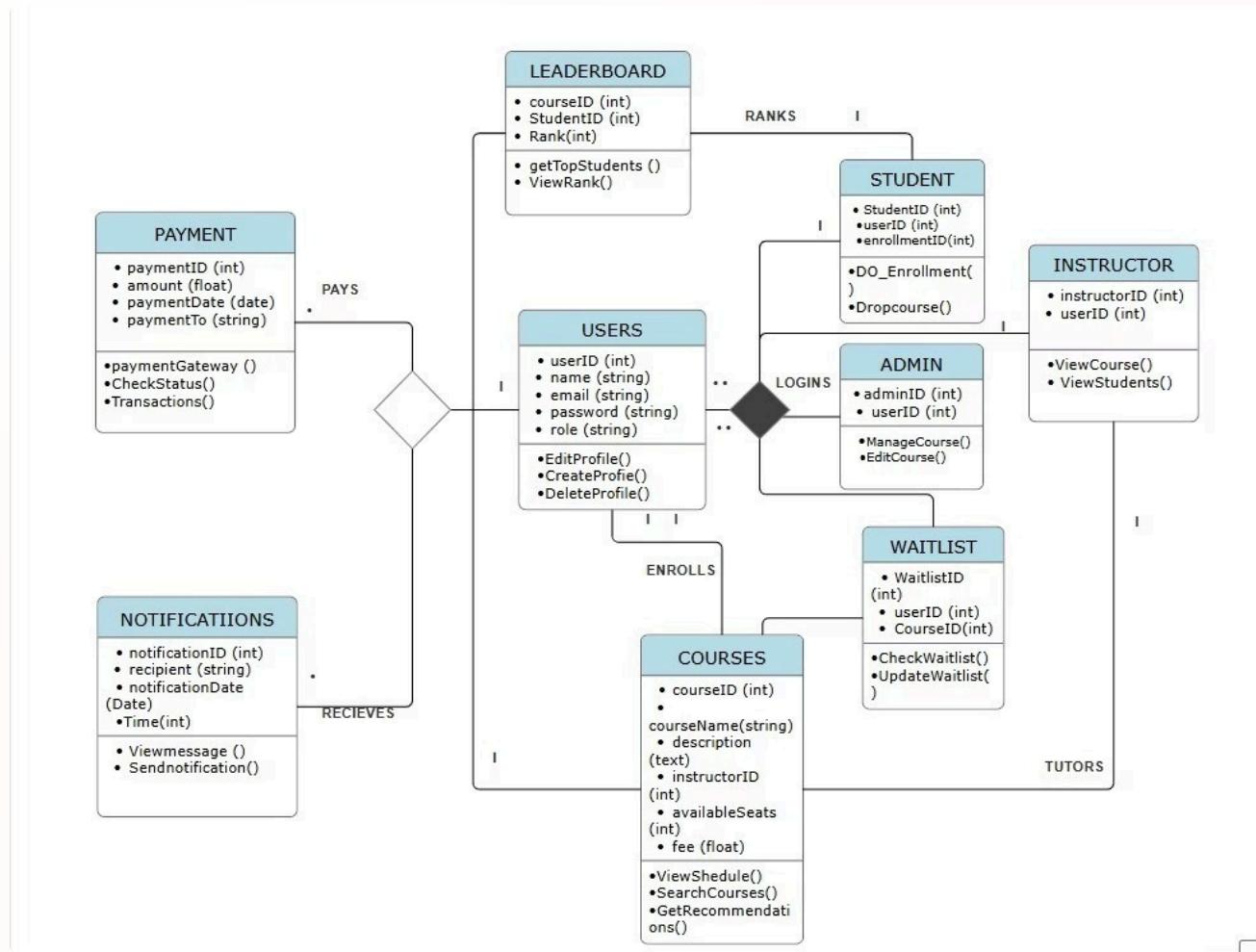
WorkFlow Diagram



DataFlow Diagram

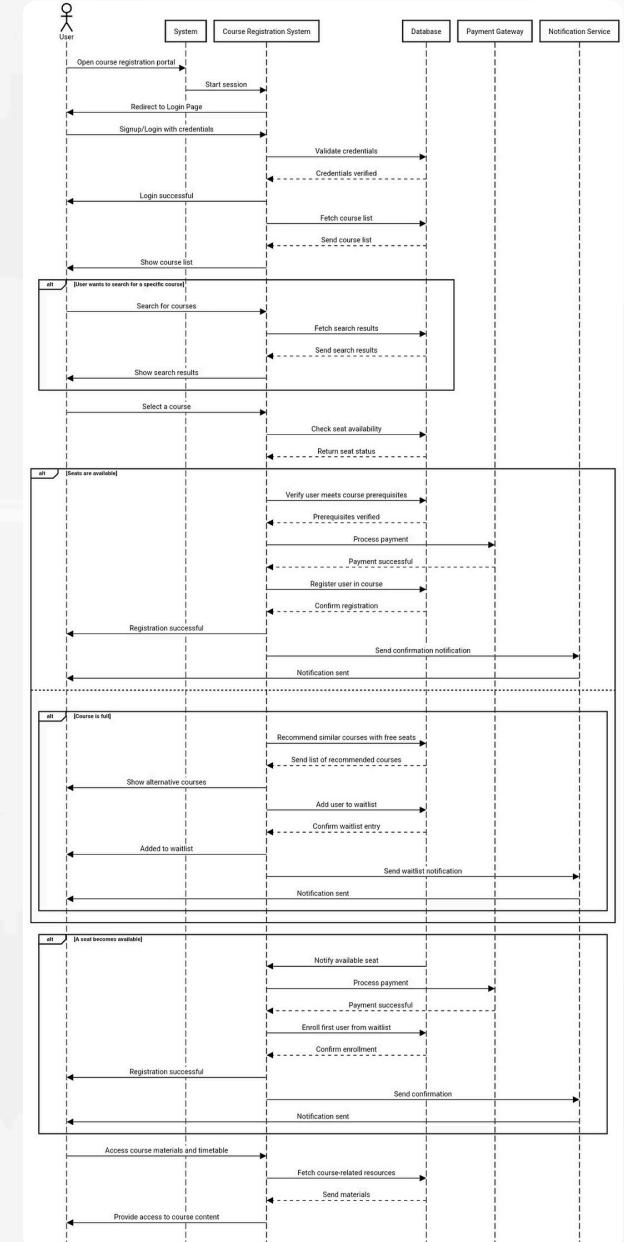


Class Diagram



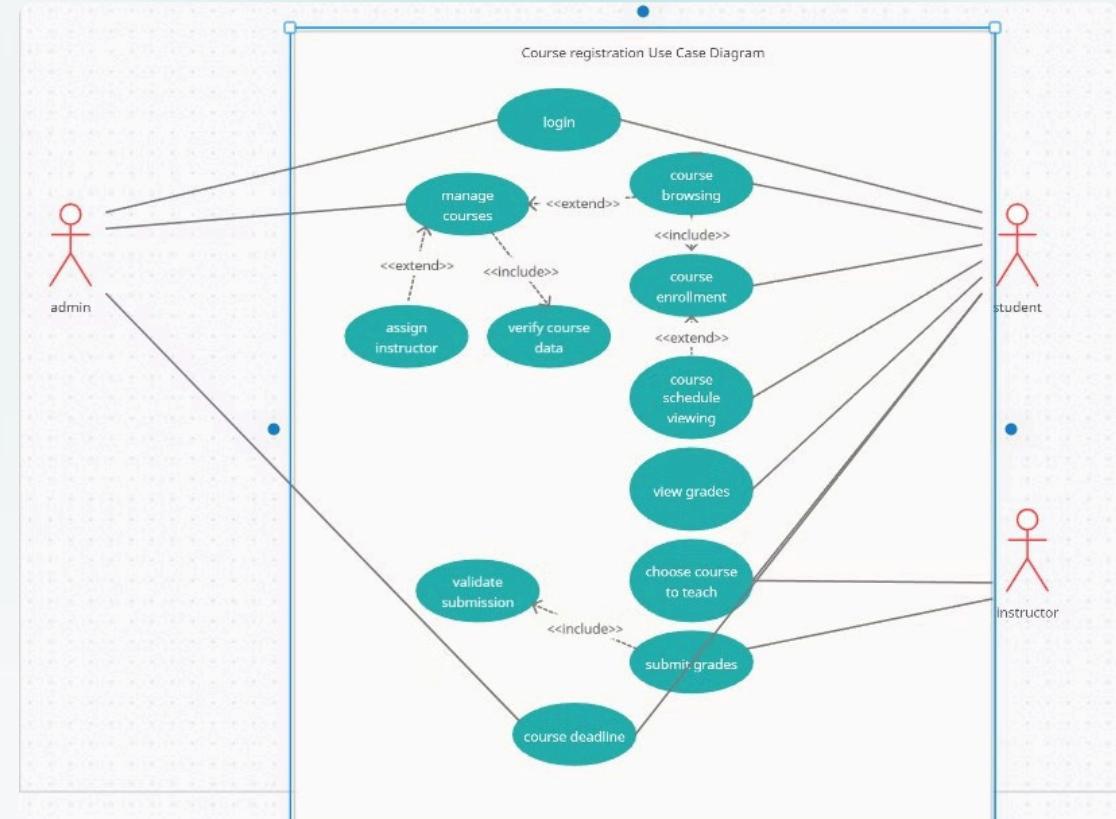
Sequence Diagram

The sequence diagram illustrates interactions between objects. It shows the flow of messages during course registration. The diagram clarifies process steps and communication.



Use Case Diagram

The use case diagram shows interactions between actors and the system. Actors include students and administrators. Main use cases involve course registration and management.



Modules

User Authentication & Profile Management

- User registration
- Secure login & access
- Profile management

Eligibility & Enrollment

- Prerequisite & eligibility
- Seat availability & waitlisting
- Enrollment & confirmation

Tracking & Analytics

- Student progress tracking
- Leaderboards & badges
- AI-driven insights

Admin & Instructor

- Course creation & management
- Student enrollment monitoring

Course Catalog & Search

- Available courses
- Search by category, instructor, interest
- AI-based recommendations

Payment & Billing

- Fee calculation & invoicing
- Secure payment gateway
- Payment confirmation & refunds

Notifications & Alerts

- Real-time updates
- Mobile & email notifications
- Personalized reminders



Modules Description with Assumptions

1. User Authentication & Profile Management

Description:

This module handles secure user access and personal profile data. It ensures only authorized users can log in, manage their accounts, and maintain profile details.

Assumptions:

- Users will have unique credentials (email, ID) for secure login.
- The system supports password recovery or 2FA (two-factor authentication).
- Users can update profile details like name, photo, and contact info.

2. Course Catalog & Search

Description:

Allows users to explore available courses, filter based on interests, instructors, and receive smart recommendations using AI.

Assumptions:

- Courses are tagged with metadata (subject, level, instructor, etc.).
- AI has access to user behavior/history to suggest courses.
- The search engine supports keyword and filter-based queries.

3. Eligibility & Enrollment

Description:

Manages student qualifications for courses, availability of seats, and enrollment confirmation.

Assumptions:

- Courses may have prerequisites (e.g., prior courses completed).
- Enrollment is limited based on available seats.
- Waitlisting is automatically managed if a course is full.

4. Payment & Billing

Description:

Handles all financial transactions including course fee calculation, secure payments, and managing refunds.

Assumptions:

- The platform integrates with trusted payment gateways (e.g., Razorpay, Stripe).
- Some courses are paid while others may be free.
- The system supports automatic invoice generation and refund processing.

Modules Description with Assumptions

5. Tracking & Analytics

Description:

Monitors student engagement, performance, and progress with the help of visual dashboards and AI-based insights.

Assumptions:

- Student interactions (logins, quiz results, completion status) are tracked.
- Gamification elements (badges, leaderboards) are used for motivation.
- AI identifies students at risk and suggests interventions.

6. Notifications & Alerts

Description:

Keeps users informed about course updates, deadlines, and personal reminders via multiple channels.

Assumptions:

- Users have opted in to receive notifications via email/SMS/push.
- Alerts are triggered by actions/events (new assignment, deadline approaching).
- Users can customize notification preferences.

7. Admin & Instructor

Description:

Provides tools for instructors and admins to create and manage course content, and monitor student engagement and performance.

Assumptions:

- Instructors have roles/permissions different from students.
- Course materials (videos, PDFs, quizzes) can be uploaded and edited.
- Admins can view analytics and reports on student participation.

Test Cases

1: User Authentication & Profile Management



Test Case	Scenario	Input	Expected Output	Result
ID	Register with valid details	Name, Email, Password	Account created, redirected to login	Type
TC001	Register with existing email	Existing Email	Error: Email already in use	Pass Pass
TC002	Login with correct credentials	Email & Password	Redirected to dashboard	Pass Pass
TC003	Login with wrong password	Email & Wrong Password	Error: Invalid credentials	
TC004				

2 : Course Search & Catalog



Test Case	Scenario	Input	Expected Output	Result
ID	Search by course name	"Python"	List of Python-related courses	Type
TC005	Filter by instructor	Instructor Name	Courses by that instructor	Pass Pass
TC006	Search with invalid input	Random symbols	"No results found" message	Pass
TC007				

3 : Prerequisite & Eligibility Checker



Test Case ID	Scenario	Input	Expected Output	Result Type
TC008	Register with completed prerequisites	Student meets course conditions	Allowed to enroll	Pass
	Register without prerequisites			
TC009		Student lacks required course	Error: Prerequisite not met	Pass

4: Course Enrollment



Test Case ID	Scenario	Input	Expected Output	Result Type
TC010	Enroll when seats available	Valid Course ID	Enrollment successful, seat count decreases Added to waitlist	Pass
TC011	Enroll in full course	Valid Course ID (no seats)	Error: Schedule conflict	Pass
TC012	Enroll in overlapping courses	Conflicting schedules		Pass

5: Payment & Billing



Test Case	Scenario	Input	Expected Output	Result	
ID	Pay with valid card	Card details	Payment success, invoice generated	Type	
TC013	Pay with expired card	Invalid details	Payment failed, error message	Pass	Pass
TC014	Request refund	Course drop within policy	Refund initiated	Pass	
TC015					

6: Notifications & Alerts



Test Case	Scenario	Input	Expected Output	Result	
ID	Course enrollment confirmation	Enroll in course	Email/SMS confirmation sent	Type	
TC016	Payment notification	Payment success	Receipt & invoice via email	Pass	Pass
TC017	Waitlist notification	Seat available	Alert sent to next student	Pass	
TC018					

References

- 1 <https://github.com/nikhilkeshava/online-course-> _____
- 2 [registration- https://www.coursera.org/](https://www.coursera.org/)
- 3 <https://www.udemy.com/>

THANK YOU!

