

# E-Learning Management System

**Supervisor:** *LÊ THANH NHÂN*

**Semester:** *II*

**Batch No:** *T2.2410.E0*

**Group No:** *03*

Order:	Full name	Roll No.
1.	<i>Lê Thị Hạnh Mai</i>	<i>Student1614875</i>
2.	<i>Cổng Hiến Khoa</i>	<i>Student1614878</i>
3.	<i>Dương Minh Mẫn</i>	<i>Student1614886</i>

This is to certify that

**Ms.**                      **Lê Thị Hạnh Mai**

**Mr.**                      **Công Hiến Khoa**

**Mr.**                      **Dương Minh Mẫn**

Have successfully Designed & Developed

**E-Learning Management System**

Submitted by:

Date Of Issue:

Authorized Signature:

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# Acknowledge

As we understand, the eProject is a structured step-by-step learning experience that simulates both classroom and lab-based training into real-world application. It provides an electronic, hands-on platform where learners can practice systematically, apply concepts gradually, and develop practical skills that lead to complete and functional applications. Through this process, students are encouraged to build larger, more robust systems, make use of essential utilities, and integrate unified code effectively. The phased implementation enhances knowledge, adds value, and strengthens confidence by engaging learners in realistic scenarios.

Furthermore, the eProject emphasizes the importance of real-life projects, allowing students to gain practical exposure and prepare for professional challenges. It also fosters creativity and problem-solving by guiding learners to design applications that are more useful and adaptable to actual needs. Continuous mentoring, including support through email, ensures that students are not only guided but also motivated throughout the journey.

We would like to sincerely thank our professor and fellow classmates for their kind guidance and support during the project. Despite some mistakes made along the way, these experiences have become valuable lessons that help us improve and broaden our knowledge in web development. This project has given us greater confidence, practical skills, and motivation to keep learning.

With the lessons and experience gained, we are determined to continue our journey of growth and strive for future success.

Yours sincerely,

Team Group 03

# Synopsis

The objective of our semester project is to provide students with practical experience by working on a real-life web application using PHP, Laravel, and MySQL. Rather than focusing only on theoretical knowledge, this project emphasizes applying what we have learned in class to build a functional system. By doing so, we not only strengthen our understanding of programming concepts but also develop the ability to design and implement complete solutions.

This project is not intended to re-teach the basics of PHP or Laravel, but to give us a real scenario where these tools can be applied to create dynamic and interactive web applications. It encourages us to connect various concepts, such as database management, backend logic, and user interface design, into one unified application.

The project is designed for students who have already completed the PHP and MySQL modules, and it should ideally be carried out during lab sessions with faculty guidance when necessary. Through this process, we gain exposure to essential skills such as CRUD operations, authentication, routing, and database connectivity.

Ultimately, this project helps us develop a deeper understanding of how modern web applications are built and prepares us for future challenges in professional development.

# **Review 01**

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Problem Definition	<b>SWD/Form No.01/PD/Ver1.0</b>
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## Problem Definition

Our project focuses on developing an E-Learning Management System (LMS) designed to enhance the teaching and learning experience in a professional and accessible way. The system aims to provide students, instructors, and administrators with a centralized platform to manage courses, resources, and communication effectively.

The main objective of the LMS is to create a responsive, user-friendly, and scalable solution that supports both individual learners and institutional needs. This platform allows users to easily navigate through course categories, access detailed learning materials, view grades, submit assignments, and participate in discussions. Instructors, on the other hand, can design courses, upload content, evaluate students, and track progress seamlessly.

To ensure usability, the system is developed with the following criteria:

1. User-friendly design – intuitive navigation and responsive layout.
2. Well-structured menus – clear organization of courses, lessons, and assessments.
3. Consistent design scheme – professional interface with modern visuals.
4. Smooth interactions – reliable performance and seamless communication tools.

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<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Customer Requirements Specifications	<b>SWD/Form No.02/CRSVer1.0</b>
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## Customer Requirements Specifications

### I. CRS/Requirements Specifications

Client/Project Undertaken:		
1.	List of inputs to the system	
		<i>User login credentials (username, password)</i>
		<i>Student registration details (name, email, course selection, etc.)</i>
		<i>Instructor/teacher information (profile, subjects taught, schedules)</i>
		<i>Course content (documents, videos, quizzes, assignments)</i>
		<i>Assessment data (quiz answers, assignment submissions)</i>
		<i>Feedback/ratings from students</i>
		<i>Admin configurations (course creation, user management, reports)</i>
2.	List of outputs expected from the system	
		<i>User authentication confirmation (login success/failure)</i>
		<i>Course catalog and details available to students</i>
		<i>Learning materials accessible by enrolled students</i>
		<i>Progress tracking (course completion percentage, grades, scores)</i>
		<i>Reports for instructors (student performance, attendance, submissions)</i>
		<i>Notifications/announcements (deadlines, exam schedules, updates)</i>
		<i>Certificates of completion for students</i>
		<i>Admin dashboard with statistics and analytics</i>
3.	Overview of processes involved in the system	

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	<i>User Management: Register, login, update profile, manage roles (student, teacher, admin)</i>
	<i>Course Management: Create, upload, update, and delete courses/content</i>
	<i>Learning Process: Students enroll in courses, access materials, watch lectures, complete assignments</i>
	<i>Assessment Process: Conduct quizzes, evaluate assignments, calculate grades automatically</i>
	<i>Progress Tracking: Monitor student performance and generate progress reports</i>
	<i>Communication: Forum, messaging, announcements between teachers and students</i>
	<i>Administration: Manage users, courses, permissions, and generate system reports</i>

Admin/Project Undertaken:	
1.	List of inputs to the system
	<i>User login credentials (username, password)</i>
	<i>Student registration details (name, email, course selection)</i>
	<i>Instructor details (profile, subject expertise, timetable)</i>
	<i>Course materials (PDFs, videos, presentations, assignments)</i>
	<i>Quiz/assignment submissions by students</i>
	<i>Feedback, comments, and ratings from users</i>
	<i>Admin settings (role assignment, course management, reporting options)</i>
2.	List of outputs expected from the system

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		<i>Authentication results (login success/failure message)</i>
		<i>List of available courses and modules</i>
		<i>Learning resources accessible to enrolled students</i>
		<i>Quiz/assignment results and grades</i>
		<i>Student progress reports and completion certificates</i>
		<i>Notifications and announcements (exam dates, deadlines, updates)</i>
		<i>Analytics dashboard for admin (active users, performance stats, course usage)</i>
3.	Overview of processes involved in the system	
		<i>User Management: Registration, login, role assignment (student, teacher, admin)</i>
		<i>Course Management: Create, upload, update, and delete courses/materials</i>
		<i>Learning Process: Students access content, complete lessons, submit assignments</i>
		<i>Assessment: Online quizzes, automated grading, manual evaluation of assignments</i>
		<i>Progress Tracking: Monitoring student progress and generating reports</i>
		<i>Communication: Forums, messaging, and announcements between users</i>
		<i>Administration: Manage system settings, generate analytics, oversee overall system performance</i>

### Hardware and Software required for implementing the project

#### Hardware Requirements

- Client (Student/Teacher):

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- o Computer/Laptop/Smartphone with internet connection
- o CPU: Dual Core or higher
- o RAM: Minimum 4GB
- o Hard Disk: Minimum 10GB free space
- o Modern Web Browser: Chrome, Firefox, Edge
- Server (Deployment):
  - o CPU: Quad Core or higher
  - o RAM: Minimum 16GB
  - o SSD Storage:  $\geq 256\text{GB}$
  - o High-speed Internet connection with 99.9% uptime
  - o Operating System: Linux/Windows Server

### Software Requirements

- Frontend: ReactJS, HTML5, CSS3, JavaScript, Bootstrap/Tailwind
- Base: PHP (Laravel Framework)
- Database: MySQL
- IDE/Editor: Visual Studio Code / NetBeans
- Web Server: Apache/Nginx
- Version Control: Git/GitHub

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- Testing Tools: Postman, PHPUnit/Jest
- Deployment (Optional): Docker, AWS/Azure/Heroku

## II. CRS/Customer Acceptance Criteria

S.No	Customer's Acceptance Criteria
1	Given a registered student, when they log in, then they should be able to access their enrolled courses
2	Given a teacher uploads study materials, when students access the course, then they should be able to view/download them.
3	Given an administrator creates an exam, when students log in at the scheduled time, then they should be able to attempt the online test.
4	Given a student submits an exam, when results are processed, then the student should be able to view their score immediately.
5	Given a teacher posts announcements, when students log in, then they should see the notifications.
6	Given multiple users access the system simultaneously, when up to 100 users log in, then the system should remain stable and responsive.
7	Given incorrect login credentials, when a user attempts login, then the system should display an appropriate error message.
8	Given a student loses internet connection, when they reconnect, then their learning progress should be saved and resumed.

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### III. Project Plan

1. Project Details	
+	Name of the Client: FPT Aptech
+	Date of Project Plan: 20 August 2025
+	<p>Project Vision/Objectives:</p> <p>To build an online E-Learning Management System that supports teaching, learning, course management, online assessments, and result tracking, providing a modern and accessible learning environment.</p>
+	<p>Scope:</p> <ul style="list-style-type: none"> <li>• User management (Admin, Teacher, Student)</li> <li>• Course, lecture, and study material management</li> <li>• Online examination with automatic grading</li> <li>• Notification and feedback system for communication between teachers and students</li> </ul>
+	<p>Our understanding of the client organization:</p> <p>The client requires a scalable system that can handle a large number of students, provide cross-platform accessibility, and ensure a user-friendly interface for smooth adoption.</p>
+	<p>Project Organization with Responsibilities and Authorities:</p> <ul style="list-style-type: none"> <li>• Administrator: Manage users, courses, and overall system configuration</li> <li>• Teacher: Create courses, upload materials, create/manage exams, evaluate students</li> </ul>

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	<ul style="list-style-type: none"> <li>Student: Enroll in courses, access materials, complete assignments, take exams online</li> </ul>
<b>2. Project Initiation/Requirement Documents</b>	
	Project Charter: Document defining E-Learning Management System objectives, scope, and stakeholder roles for FPT Aptech
	Business Requirements Document (BRD): Specifications for online teaching, learning, course management, and assessment functionalities
	Functional Requirements Specification (FRS): Detailed user stories and acceptance criteria for Admin, Teacher, and Student roles
	Technical Architecture Document: System design using ReactJS frontend, PHP Laravel backend, and MySQL database
	User Interface/User Experience (UI/UX) Design: Wireframes and mockups for responsive web application across devices
	Security Requirements: Authentication, authorization, data encryption, and secure exam environment specifications
	Performance Requirements: System capacity for 100+ concurrent users with 99.9% uptime guarantee
<b>3. Deliverables</b>	
	Web-based E-Learning Platform: Complete responsive application accessible via modern browsers
	Admin Dashboard: User management, course oversight, system configuration, and reporting modules
	Teacher Portal: Course creation, material upload, exam management, and student evaluation tools

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	Student Interface: Course enrollment, content access, online examination, and progress tracking features
	Database Schema: Normalized MySQL database with user, course, exam, and result management tables
	API Documentation: RESTful API endpoints documentation for frontend-backend communication
	User Manuals: Comprehensive guides for administrators, teachers, and students
	Deployment Package: Docker containers and cloud deployment scripts for production environment
<b>4. Project Dependencies</b>	
	External Dependencies: <ul style="list-style-type: none"> <li>• Internet connectivity and hosting infrastructure availability</li> <li>• Third-party libraries and frameworks (ReactJS, Laravel) compatibility updates</li> <li>• SSL certificate procurement for secure HTTPS communication</li> <li>• Cloud service provider (AWS/Azure/Heroku) service availability</li> </ul>
	Internal Dependencies: <ul style="list-style-type: none"> <li>• FPT Aptech content and curriculum materials for course population</li> <li>• User data and existing student/teacher information for system migration</li> <li>• IT infrastructure setup and server configuration by client technical team</li> <li>• Stakeholder availability for requirement validation and testing phases</li> </ul>
<b>5. Major Project Milestones</b>	
	Milestone 1 (Week 1): Requirements finalization, technical architecture approval, and project setup

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	Milestone 2 (Week 2): Database design completion, UI/UX prototypes approval, and development environment setup
	Milestone 3 (Week 3): Backend API development and authentication system implementation
	Milestone 4 (Week 4): Frontend development and API integration for core functionalities
	Milestone 5 (Week 5): Online examination module, grading system implementation, and system integration testing
	Milestone 6 (Week 6): User acceptance testing, deployment preparation, and project handover completion
<b>6. Quality Plan</b>	
+	Review Activities:
	Code Reviews: Peer review process for all developed modules using Git pull request workflow
	Architecture Reviews: Weekly technical architecture assessment to ensure scalability and maintainability
	Requirements Traceability: Regular verification that all customer acceptance criteria are being addressed
	UI/UX Reviews: Usability testing sessions with sample users from each role (Admin, Teacher, Student)
	Security Reviews: Penetration testing and vulnerability assessment for authentication and data protection
	Performance Reviews: Load testing with simulated 100+ concurrent users to validate system capacity

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	Database Reviews: Query optimization and data integrity validation for MySQL operations
+	Testing Activities:
	Unit Testing: Individual component testing using PHPUnit for backend and Jest for frontend modules
	Integration Testing: API endpoint testing using Postman to ensure seamless frontend-backend communication
	System Testing: End-to-end testing of complete user workflows for all three user roles
	User Acceptance Testing: Client validation of all acceptance criteria with real-world scenarios
	Performance Testing: Load and stress testing to verify system handles 100+ concurrent users
	Security Testing: Authentication bypass attempts, SQL injection, and cross-site scripting vulnerability tests
	Compatibility Testing: Cross-browser testing on Chrome, Firefox, and Edge browsers
	Mobile Responsiveness Testing: Verification of functionality across smartphones and tablets
+	Backup and recovery strategies:
	Database Backup: Automated daily MySQL database backups with 30-day retention policy stored in separate cloud storage
	Application Code Backup: Version control through Git repository with multiple remote backup locations

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	System Configuration Backup: Weekly snapshots of server configurations and deployment scripts
	Disaster Recovery Plan: Complete system restoration procedure with Recovery Time Objective (RTO) of 4 hours
	Data Recovery Testing: Monthly backup restoration drills to ensure data integrity and recovery processes
	Incremental Backups: Hourly incremental backups during peak usage hours to minimize data loss
	Cloud Storage Redundancy: Multi-region backup storage to protect against regional outages or disasters

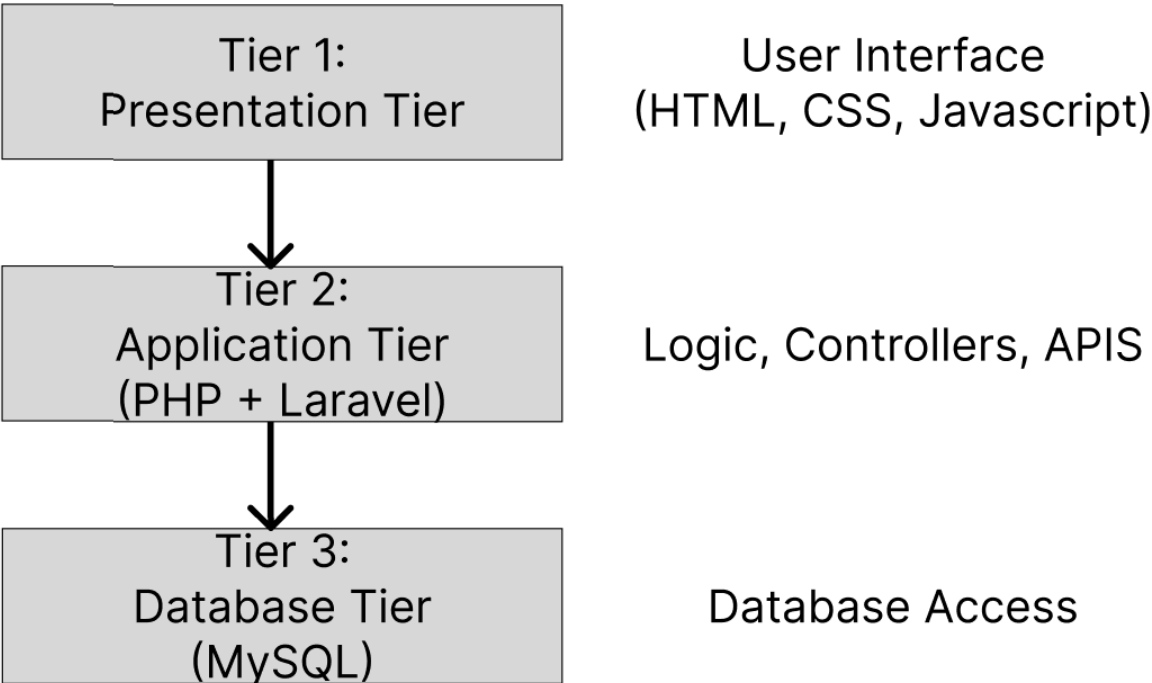
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## **Review 02**

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Architecture and design of the Application	<b>SWD/Form No.03/ARD/Ver1.0</b>
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# Architecture and design of the Application

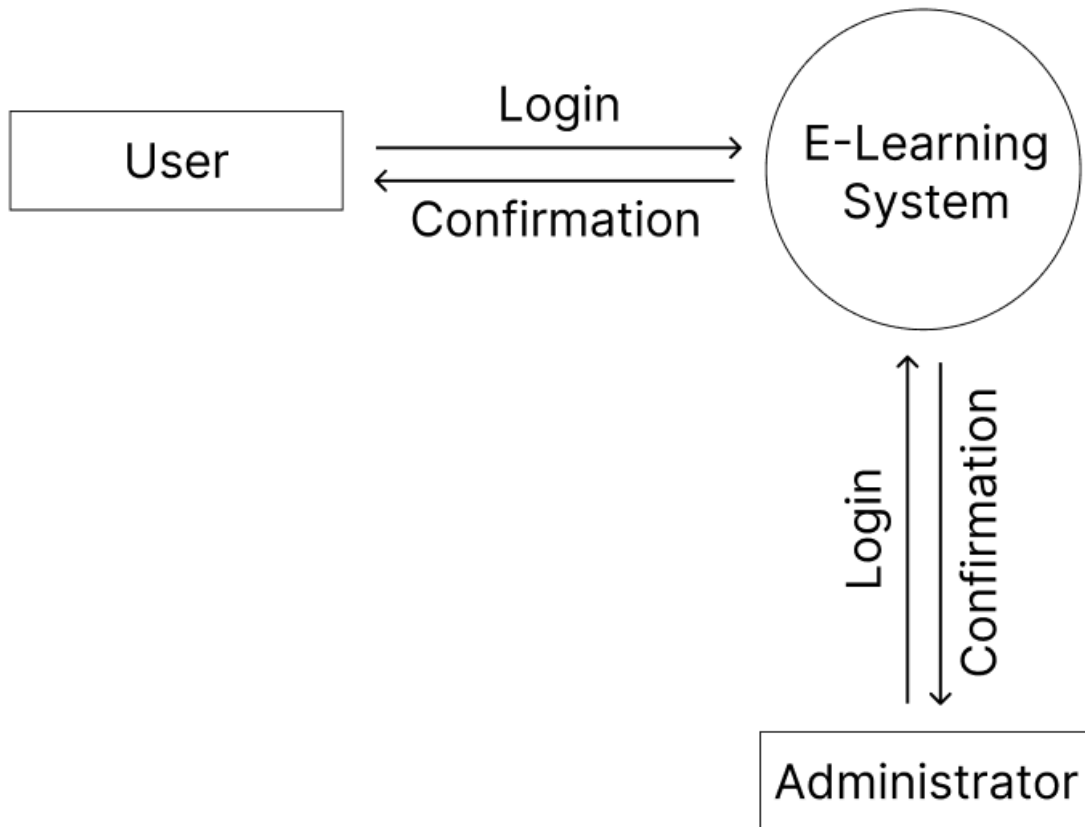
## I. Application Architecture



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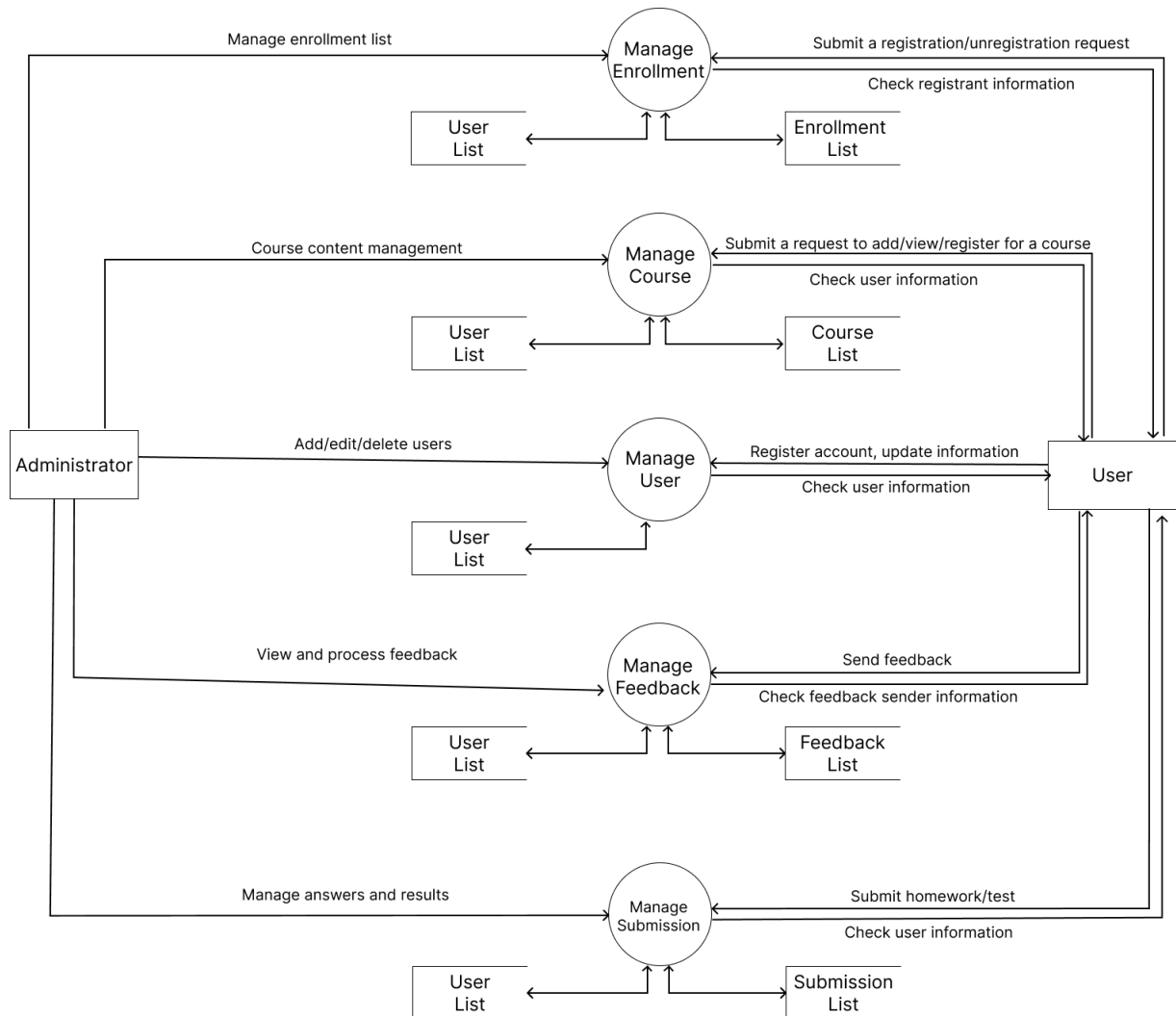
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## II. Data Flow Diagram



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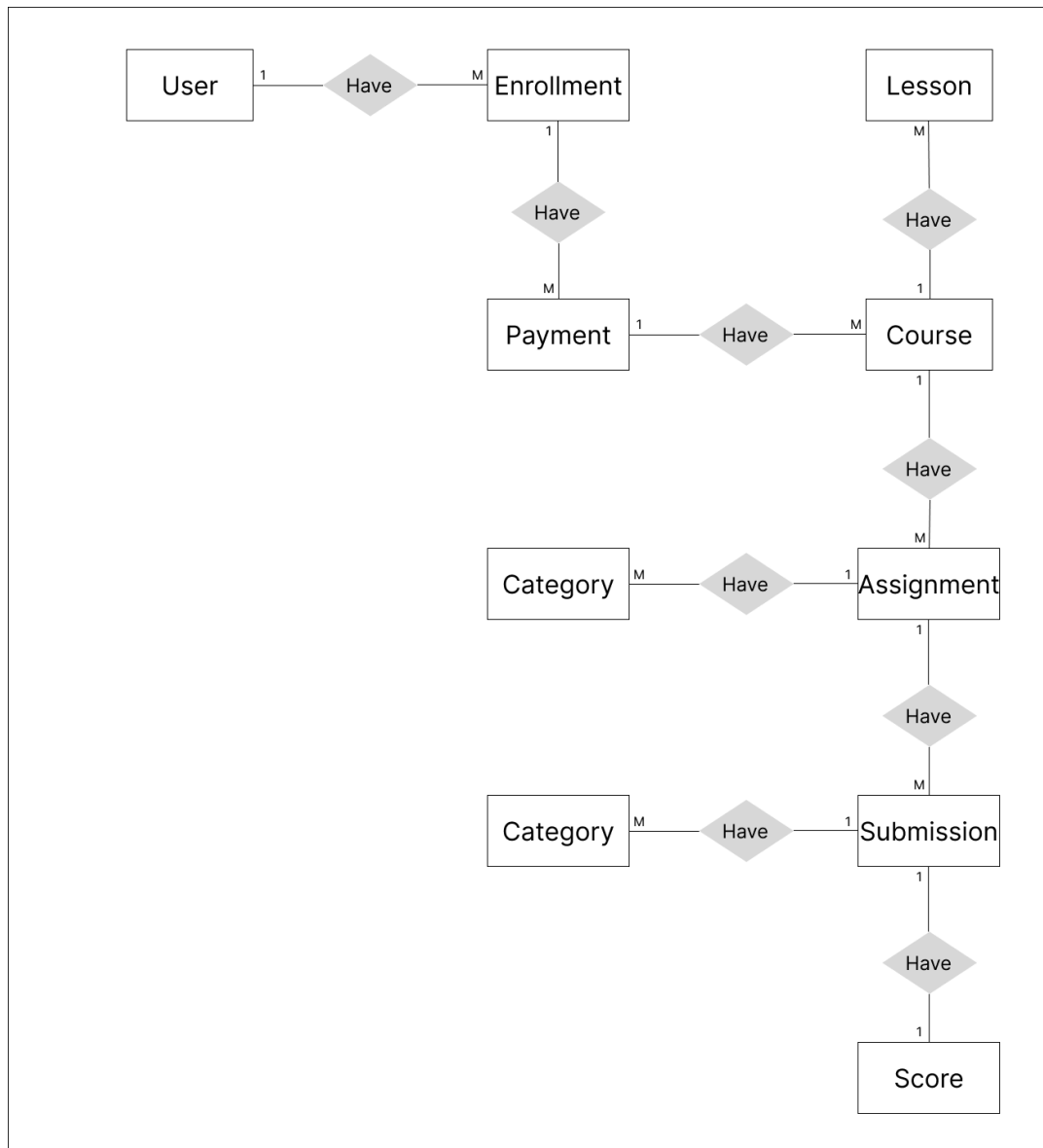


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# Entity Relationship Diagram

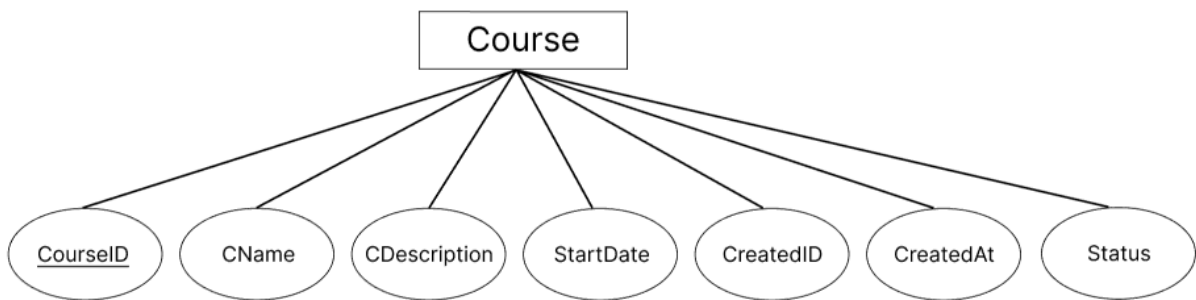
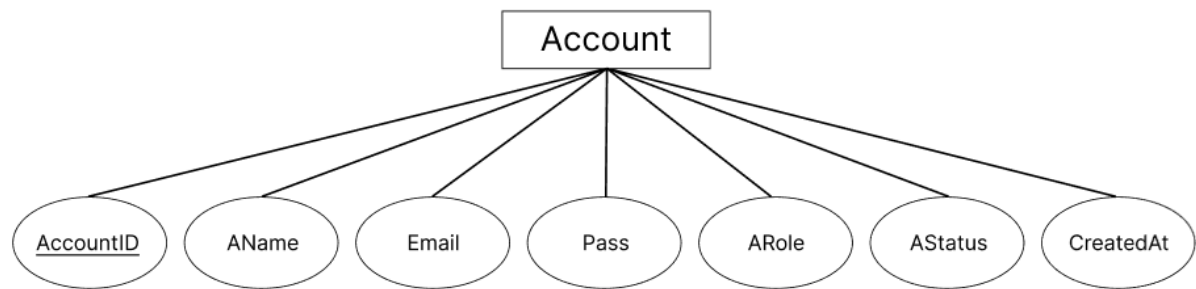
## I. ERD



	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
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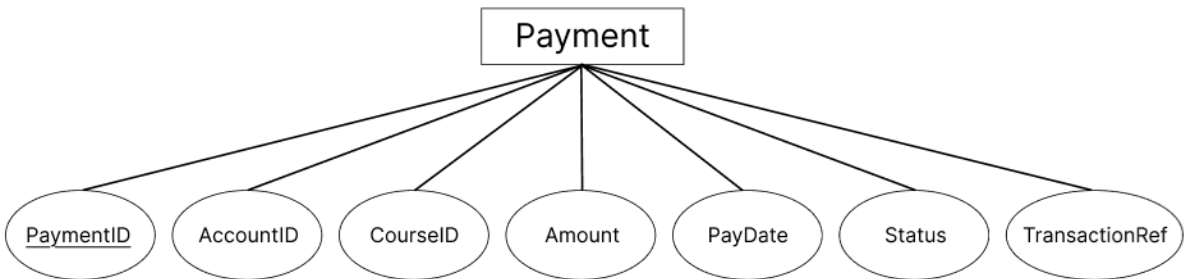
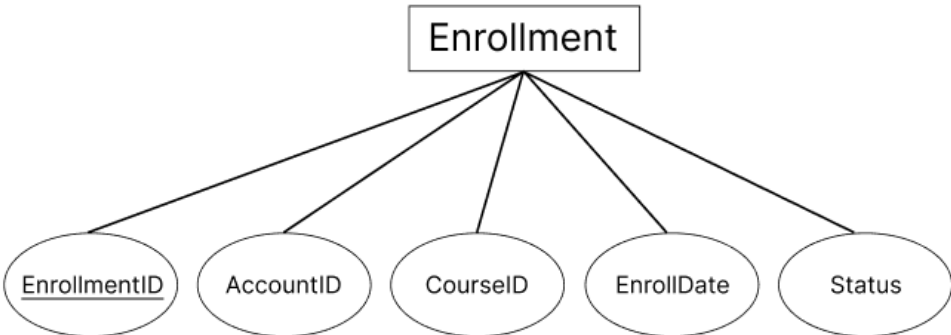
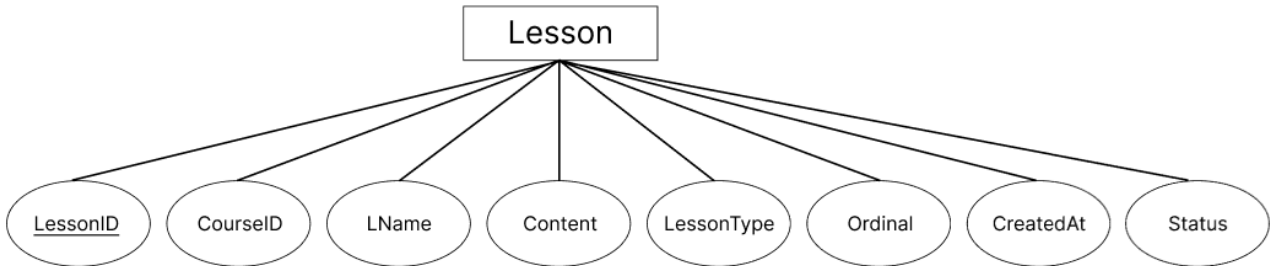
## II. ERD Properties



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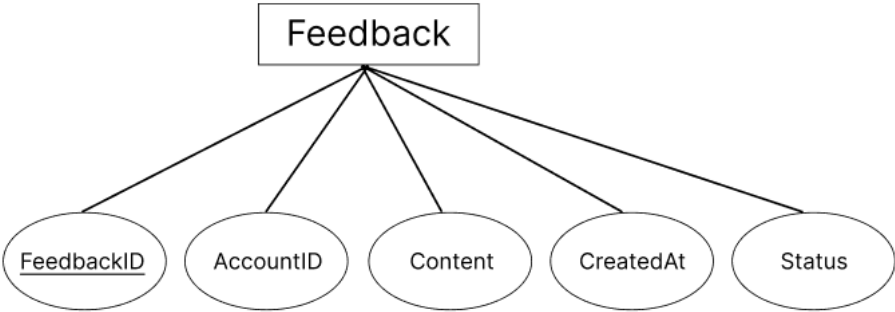
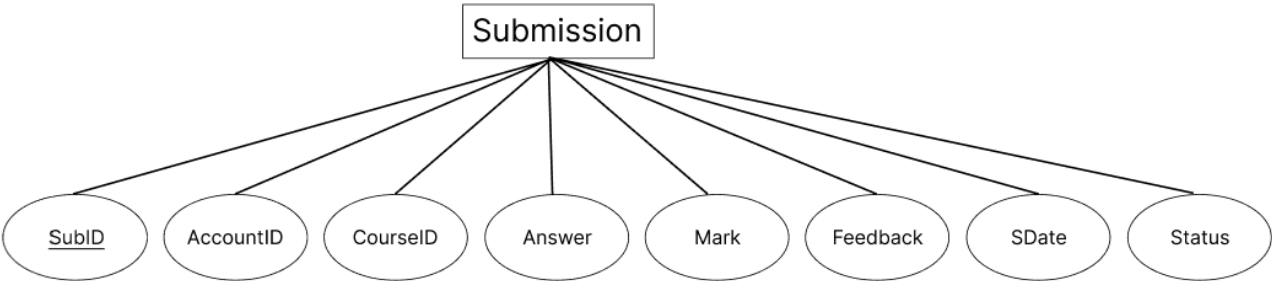


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<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Architecture and design of the Application	<b>SWD/Form No.03/ARD/Ver1.0</b>
<b>Effective Date:</b> 20-08-2025	<b>Version 1.0</b>	<b>Page No: 20 of 88</b>



	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Architecture and design of the Application	<b>SWD/Form No.03/ARD/Ver1.0</b>
<b>Effective Date:</b> 20-08-2025	<b>Version 1.0</b>	<b>Page No: 21 of 88</b>

# Table Design

## I. Table Design

Accounts					
Serial	Fields	Keys	Data Type	Constraint	Description
1	AccountID	Primary key	int	Identity	Unique identifier for each user (auto-increment).
2	AName		nvarchar(100)	Not null	Full name or display name of the user.
3	Email		nvarchar(100)	Unique, not null	Email address of the user (used for login and notifications).
4	Pass		nvarchar(100)	Not null	Encrypted password for account authentication.
5	ARole		nvarchar(50)	Not null	Role of the user (e.g., Admin, Instructor, Student).
6	AStatus		bit	Default 1	Account status (1 = active, 0 = inactive).
7	CreatedAt		datetime	Default getdate()	Date and time when the account was created.

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
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<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Architecture and design of the Application	<b>SWD/Form No.03/ARD/Ver1.0</b>
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Courses					
Serial	Fields	Keys	Data Type	Constraint	Description
1	CourseID	Primary key	int	Identity	Unique identifier for each course (auto-increment).
2	CName		nvarchar(200)	Not null	Name of the course.
3	CDescription		nvarchar(max)	Null	Detailed description of the course content.
4	StartDate		datetime	Not null	Course start date
5	CreatorID	Foreign key	int	Not null	References Account(AccountID), identifies the creator or instructor of course.
6	CreatedAt		datetime	Default getdate()	Date and time when the course was created.
7	Status		bit	Default 1	Account status (1 = active, 0 = inactive).

Enrollments					
Serial	Fields	Keys	Data Type	Constraint	Description
1	EnrollmentID	Primary key	int	Identity	Unique identifier for each enrollment record (auto-increment).
2	AccountID	Foreign key	int	Not null	References User(UserID), identifies the student who enrolled.
3	CourseID	Foreign key	int	Not null	References Course(CourseID), identifies the course being enrolled.
4	EnrollDate		datetime	Default getdate()	Date and time when the enrollment was created.
5	EStatus		nvarchar(50)	Null	Enrollment status (e.g., Active, Completed, Dropped).

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	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Architecture and design of the Application	<b>SWD/Form No.03/ARD/Ver1.0</b>
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Lessons					
Serial	Fields	Keys	Data Type	Constraint	Description
1	LessonID	Primary key	int	Identity	Unique identifier for each lesson (auto-increment).
2	CourseID	Foreign key	int	Not null	References Course(CourseID), identifies which course the lesson belongs to.
3	LName		nvarchar(200)	Not null	Title or name of the lesson.
4	Content		nvarchar(max)	Null	Lesson content (text, material, or description).
5	LessonType		nvarchar(50)	Null	Type of lesson (e.g., Video, Quiz, Document).
6	Ordinal		int	Null	Order of the lesson in the course sequence.
7	CreatedAt		datetime	Default getdate()	Date and time when the lesson was created.
8	LStatus		bit	Default 1	Account status (1 = active, 0 = inactive).

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Architecture and design of the Application	<b>SWD/Form No.03/ARD/Ver1.0</b>
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Submissions					
Serial	Fields	Keys	Data Type	Constraint	Description
1	SubID	Primary key	int	Identity	Unique identifier for each submission (auto-increment).
2	AccountID	Foreign key	int	Not null	References User(UserID), identifies the student who made the submission.
3	CourseID	Foreign key	int	Not null	References Lesson(LessonID), identifies the lesson being submitted.
4	Answer		nvarchar(max)	Null	Content of the student's answer or uploaded solution.
5	Mark		float	Null	Score/grade given for the submission.
6	Feedback		nvarchar(max)	Null	Teacher's comments or feedback on the submission.
7	SDate		datetime	Default getdate()	Date and time when the submission was created.
8	LStatus		bit	Default 1	Account status (1 = active, 0 = inactive).

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Architecture and design of the Application	<b>SWD/Form No.03/ARD/Ver1.0</b>
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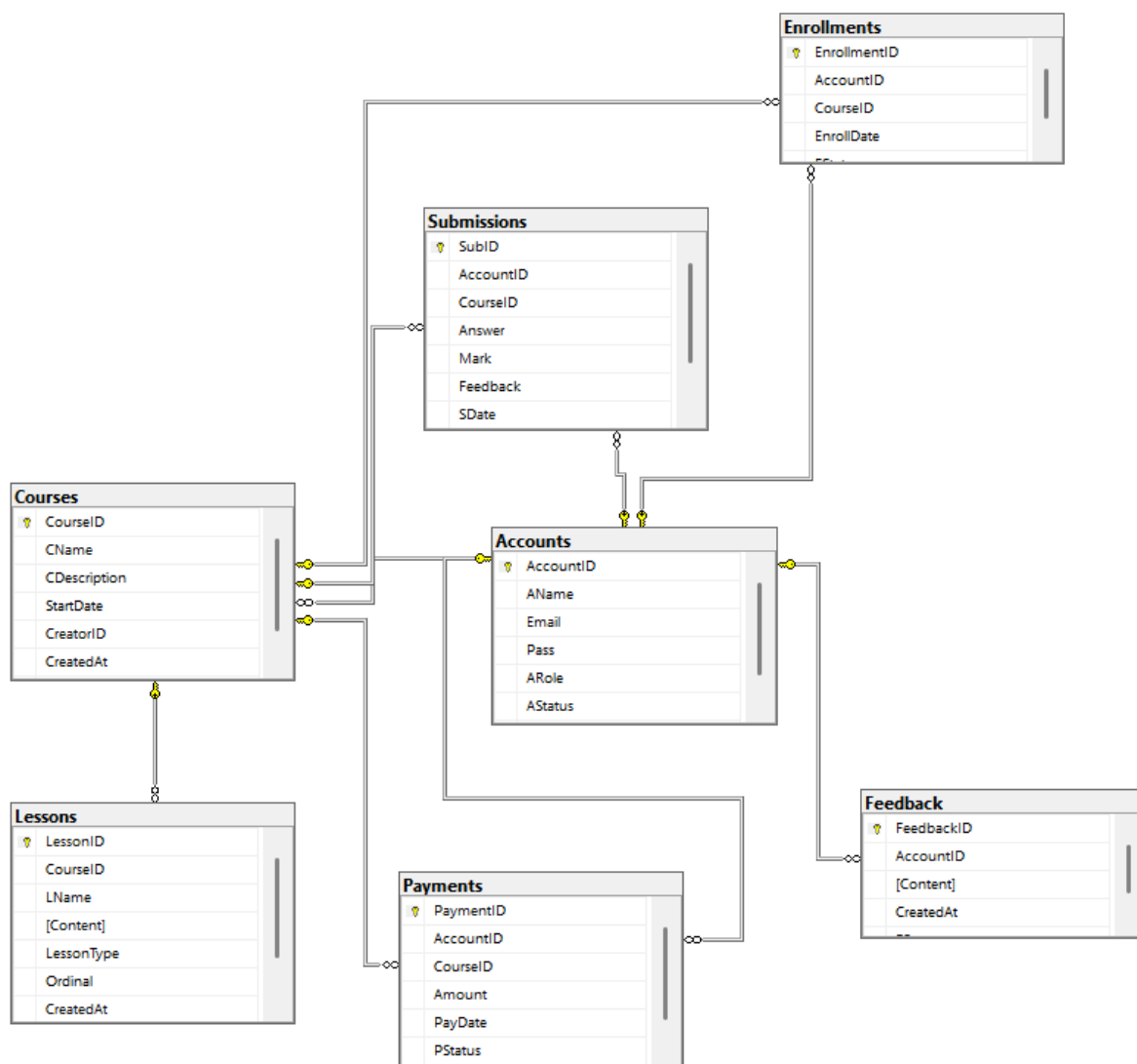
Payments					
Serial	Fields	Keys	Data Type	Constraint	Description
1	PaymentID	Primary key	int	Identity	Unique identifier for each payment transaction (auto-increment).
2	AccountID	Foreign key	int	Not null	References User(UserID), identifies the user who made the payment.
3	CourseID	Foreign key	int	Not null	References Course(CourseID), identifies the course being purchased.
4	Amount		decimal(10,2)	Not null	Payment amount for the course.
5	PayDate		datetime	Default getdate()	Date and time when the payment was made.
6	PStatus		nvarchar(50)	Null	Current status of payment (e.g., Pending, Completed, Failed, Refunded).
7	TransactionRef		nvarchar(100)	Unique	Unique transaction reference or identifier from payment gateway.

Feedback					
Serial	Fields	Keys	Data Type	Constraint	Description
1	FeedbackID	Primary key	int	Identity	Unique identifier for each feedback entry (auto-increment).
2	AccountID	Foreign key	int	Not null	References User(UserID), identifies the user who gave the feedback.
4	Content		nvarchar(max)	Null	The text content of the feedback message.
5	CreatedAt		datetime	Default getdate()	Date and time when the feedback was created.
6	FStatus		bit	Default 1	Feedback status (1 = active/visible, 0 = hidden/inactive).

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

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## II. Relationship Diagram

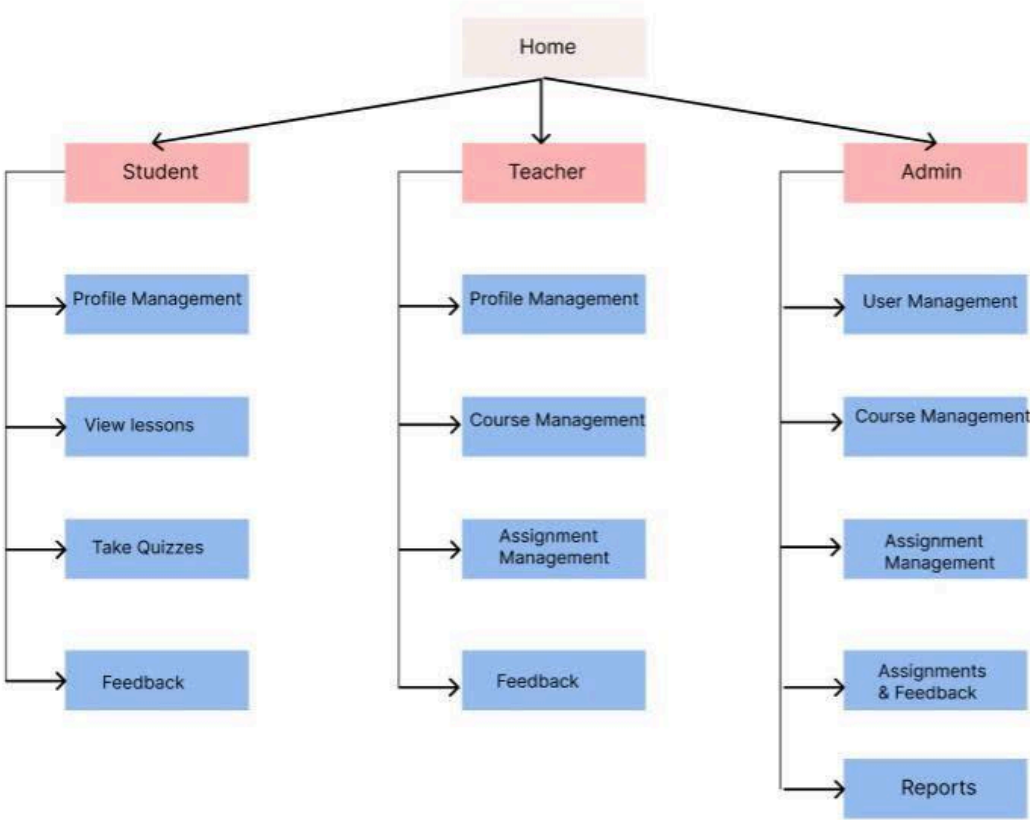


	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		



<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Architecture and design of the Application	<b>SWD/Form No.03/ARD/Ver1.0</b>
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# Site Map



	<b>Prepared by (Student)</b> Project Group No: 03	<b>Approved by (Faculty)</b> LE THANH NHAN
Signature		
Date		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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# Algorithm

## I. Administrator

### 1. User Management Algorithm

Input: User data (name, email, role, password)

Process:

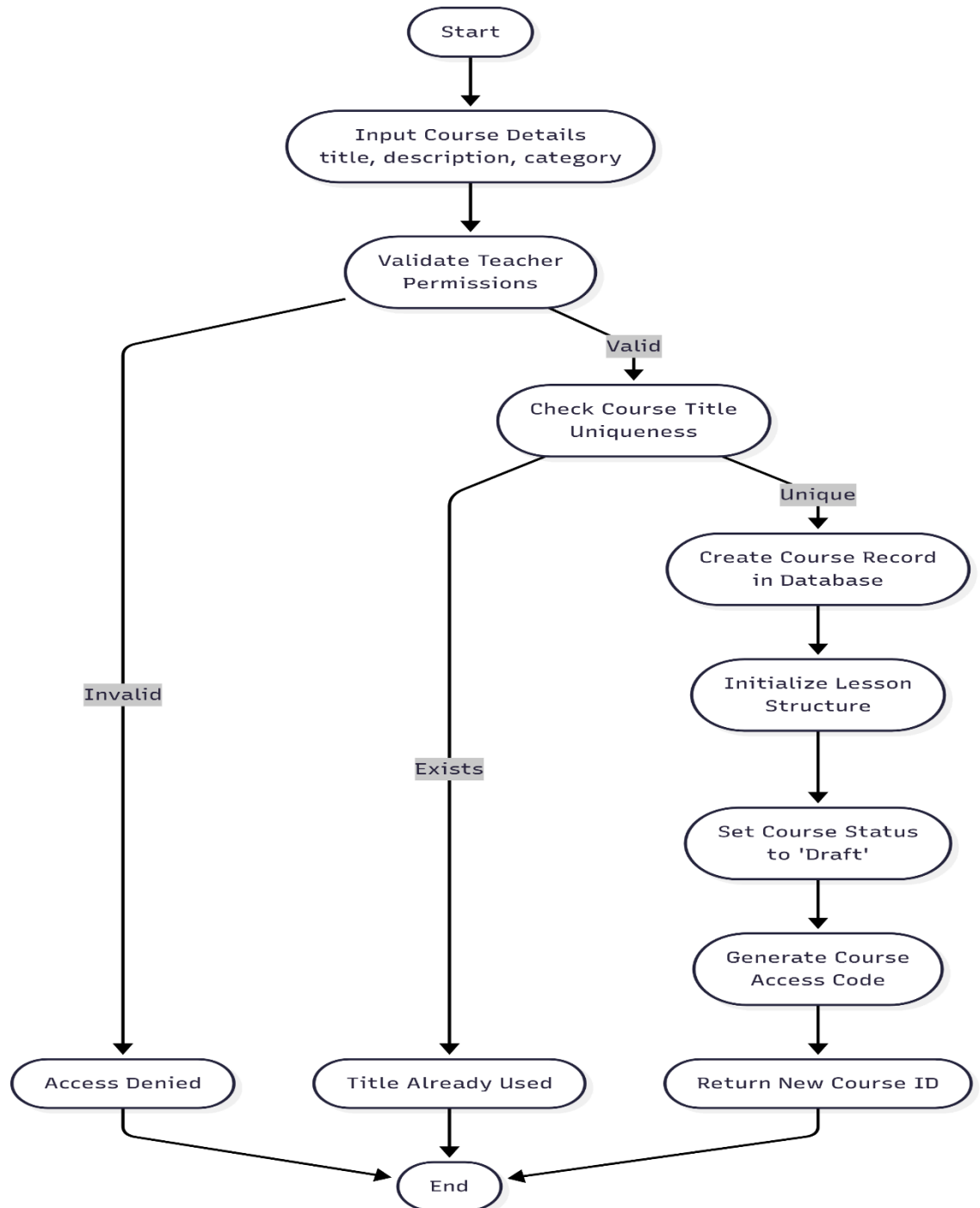
1. Validate input data format
2. Check email uniqueness in database
3. Encrypt password using bcrypt
4. Insert new user record
5. Assign role-based permissions
6. Send confirmation email

Output: User creation status message

Flowchart:

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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## 2. Course Approval Algorithm

Input: Course ID, approval status

Process:

1. Retrieve course details from database
2. Validate course content completeness
3. Check instructor qualifications
4. Update course status to "Active/Rejected"
5. Send notification to instructor
6. Log approval action

Output: Course approval confirmation

## 3. System Report Generation Algorithm

Input: Report type, date range

Process:

1. Query relevant data from multiple tables
2. Calculate statistics (enrollment, completion rates)
3. Format data for presentation
4. Generate PDF/Excel report
5. Save report to file system

Output: Comprehensive system report

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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## II. Teacher/Staff

### 1. Course Creation Algorithm

Input: Course details (title, description, category)

Process:

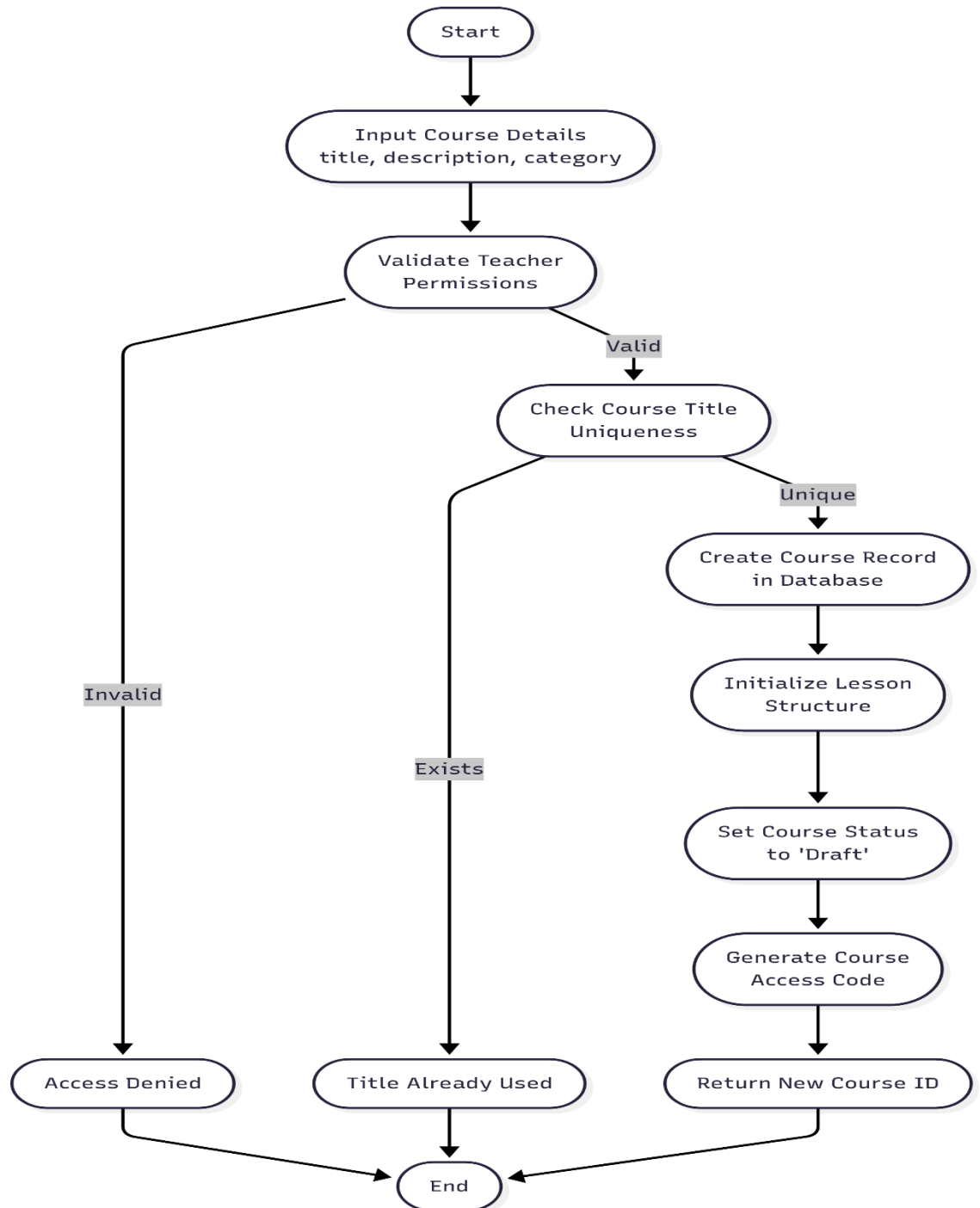
1. Validate teacher permissions
2. Check course title uniqueness
3. Create course record in database
4. Initialize lesson structure
5. Set course status to "Draft"
6. Generate course access code

Output: New course ID

Flowchart:

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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## 2. Content Upload Algorithm

Input: File data, course ID, content type

Process:

1. Validate file size and format
2. Scan for security threats
3. Generate unique filename
4. Upload to storage server
5. Create content metadata record
6. Link content to specific lesson

Output: Upload confirmation message

## 3. Assessment Grading Algorithm

Input: Student submission, answer key

Process:

1. Compare answers with correct key
2. Calculate weighted score
3. Determine pass/fail status
4. Store grade and notify student

Output: Final grade and feedback

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

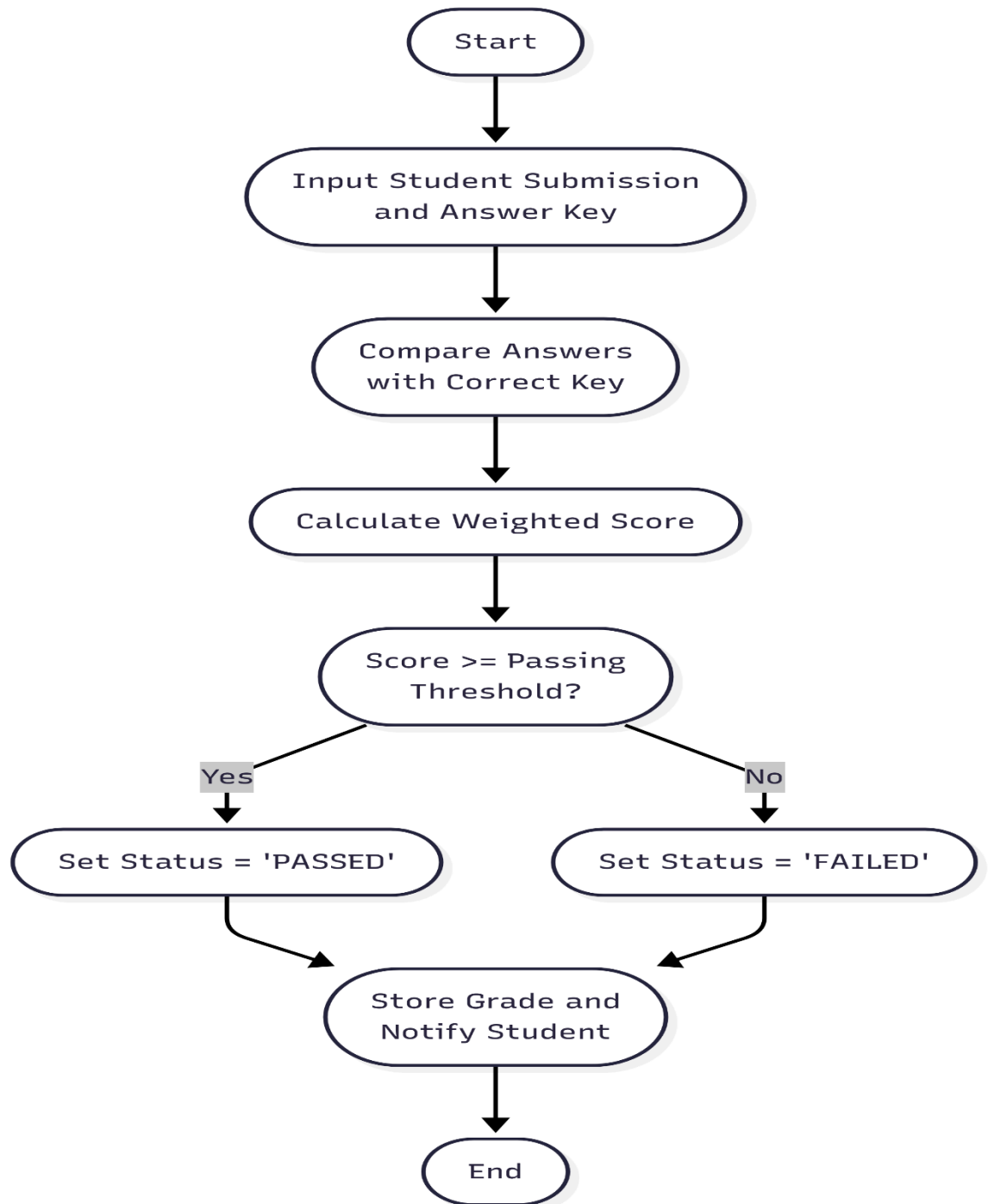
<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
<b>Effective Date:</b> 20-08-2025	<b>Version 1.0</b>	<b>Page No: 34 of 88</b>

Flowchart:

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		



<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.</b> 06/ALG/Ver1.0
<b>Effective Date:</b> 20-08-2025	<b>Version</b> 1.0	<b>Page No:</b> 35 of 88



	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	Project Group No: 03	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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### III. Student

#### 1. Course Enrollment Algorithm

Input: Student ID, course ID

Process:

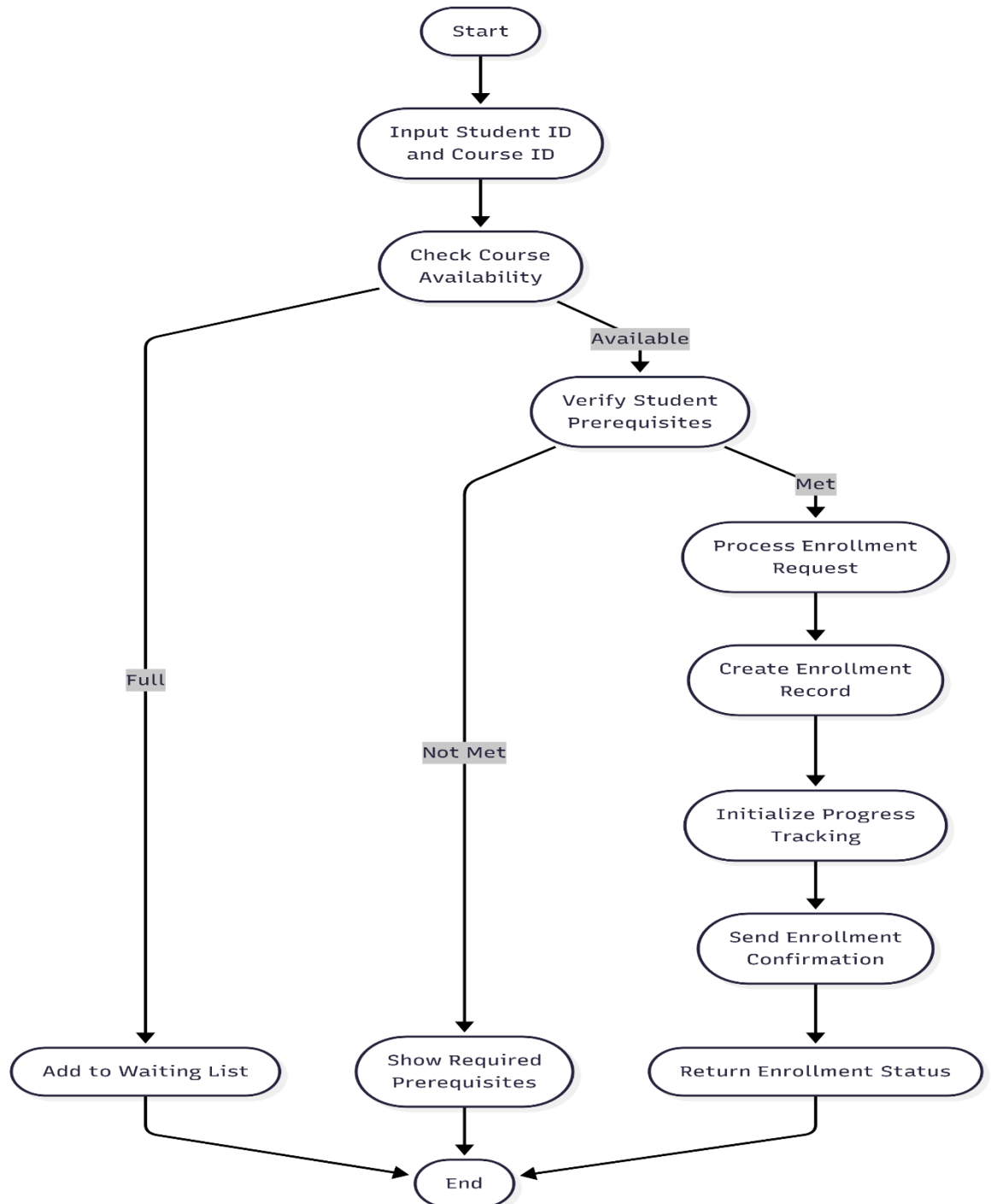
1. Check course availability and capacity
2. Verify student prerequisites
3. Process enrollment request
4. Create enrollment record
5. Initialize progress tracking
6. Send enrollment confirmation

Output: Enrollment status

Flowchart:

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	Project Group No: 03	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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## 2. Assignment Submission Algorithm

Input: Assignment file, student ID, assignment ID

Process:

1. Validate submission deadline
2. Check file format compatibility
3. Upload assignment to server
4. Create submission record
5. Update assignment status
6. Notify teacher of new submission

Output: Submission confirmation

## 3. Progress Tracking Algorithm

Input: Student activity data

Process:

1. Record lesson completion
2. Update course progress percentage
3. Check milestone achievements
4. Generate progress report
5. Update student dashboard
6. Send progress notifications

Output: Updated progress status

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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## IV. System-Level Algorithms

### 1. Authentication Algorithm

Input: Username, password

Process:

1. Retrieve user record from database
2. Verify account status (active/inactive)
3. Compare password with stored hash
4. Generate session token if valid
5. Update last login timestamp
6. Set session expiration time

Output: Authentication result and session token

### 2. Notification System Algorithm

Input: User ID, message type, content

Process:

1. Check user notification preferences
2. Determine notification priority
3. Format message according to type
4. Send notification via selected channels
5. Log notification delivery
6. Store in notification history

Output: Notification delivery status

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Algorithm	<b>SWD/Form No.06/ALG/Ver1.0</b>
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### 3. Database Backup Algorithm

Input: Backup type (full/incremental)

Process:

1. Check system resources availability
2. Create backup timestamp identifier
3. Export database according to backup type
4. Compress backup file
5. Upload to secure cloud storage
6. Verify backup file integrity
7. Update backup log records

Output: Backup completion status

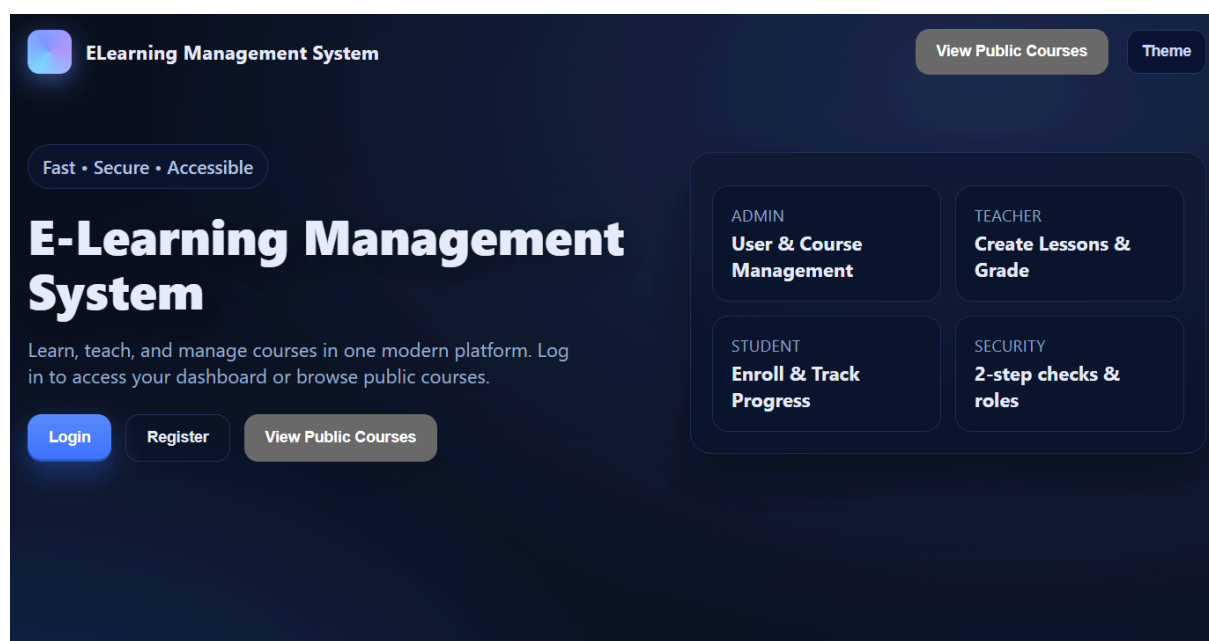
	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No: 03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

## **Review 03**

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## Screen shots

### 1. HomePage



**Description** : This is Homepage where you can login, register, view courses...

**From** :

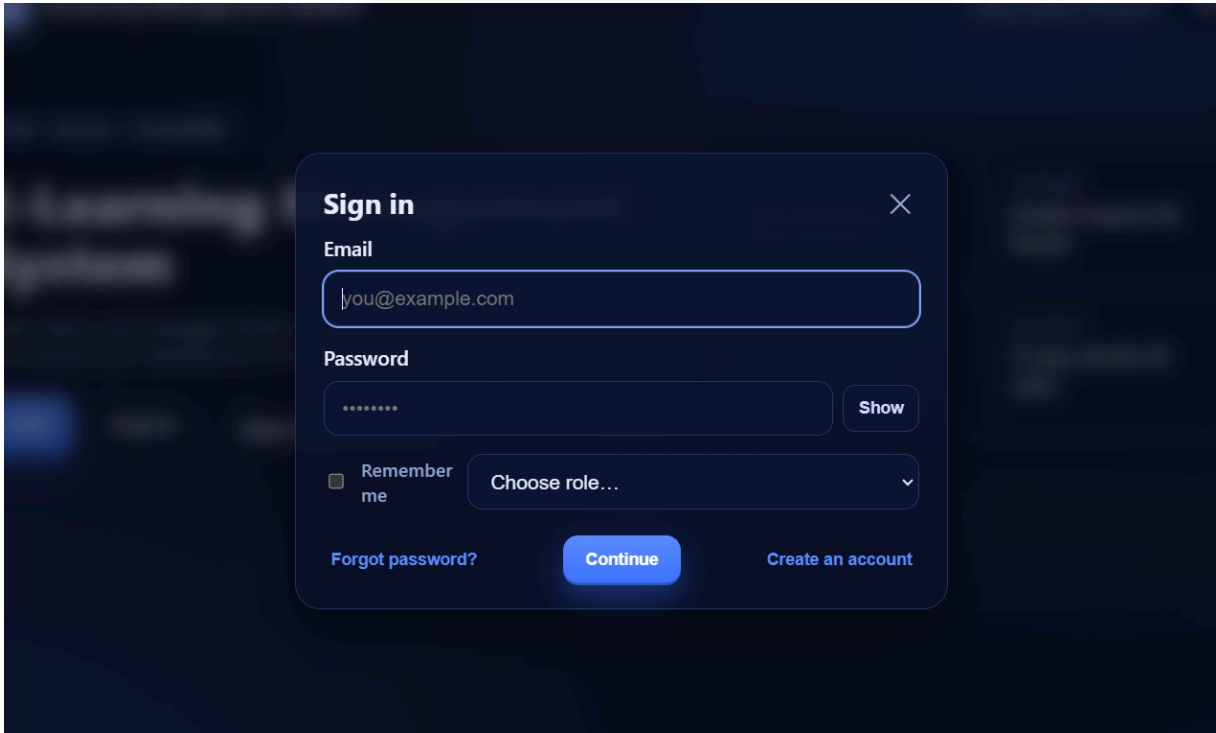
**To** : Login, Register, Courses....

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		



<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 2. Login



**Description** : This is where you can login to the web

**From** : HomePage

**To** : Public courses.

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.</b> 07/SS/Ver1.0
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### 3. Register

**Description** : This is where you can register to the web

**From** : HomePage

**To** : Public courses

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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#### 4. Admin Management



**Description** :System-wide administration functions, including user management, courses, assignments/exams, reports, and authorization.

**From** : System Access (Admin login)

**To** : User Management / Course Management / Assignment & Exam Management / Report Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 5. Forgot password form

**Description** : The form allows users to enter email/username to receive a password reset link.

**From** : Public Course / Login Page

**To** : Reset Password Form

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 6. Reset password form

**Reset Password**

Current Password

New Password

Confirm New Password

Update Password    ← Cancel

**Description** : Form for user or admin to change forgotten password.

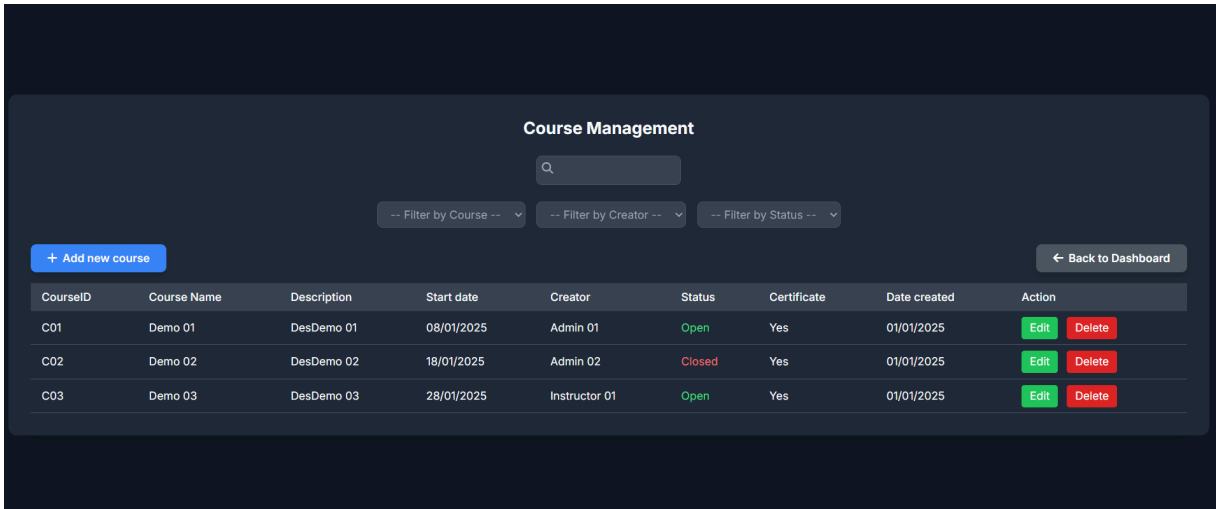
**From** : Public Course

**To** : User Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 7. Account Management



**Description** : This is where you manage accounts(Admin role)

**From** : Public course

**To** : User Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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8. Account create form

Add New Course

Course Name

Description

Start Date

dd/mm/yyyy

Status

Open

Certificate

Yes

Cancel

Save

**Description** : Form for admin to create new user account.

**From** : Account Management

**To** : User Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
<b>Effective Date:</b> 20-08-2025	<b>Version 1.0</b>	<b>Page No: 50 of 88</b>

## 9. Account edit form

The screenshot shows a dark-themed 'Edit Course' form. The fields are as follows:

- CourseID:** C01
- Course Name:** Demo 01
- Description:** DesDemo 01
- Creator:** Admin 01
- Date Created:** 01/01/2025
- Start Date:** 08/01/2025
- Status:** Open
- Certificate:** Yes

Buttons at the bottom: Cancel, Save changes.

**Description** : Form to edit existing account information.

**From** : Account Management

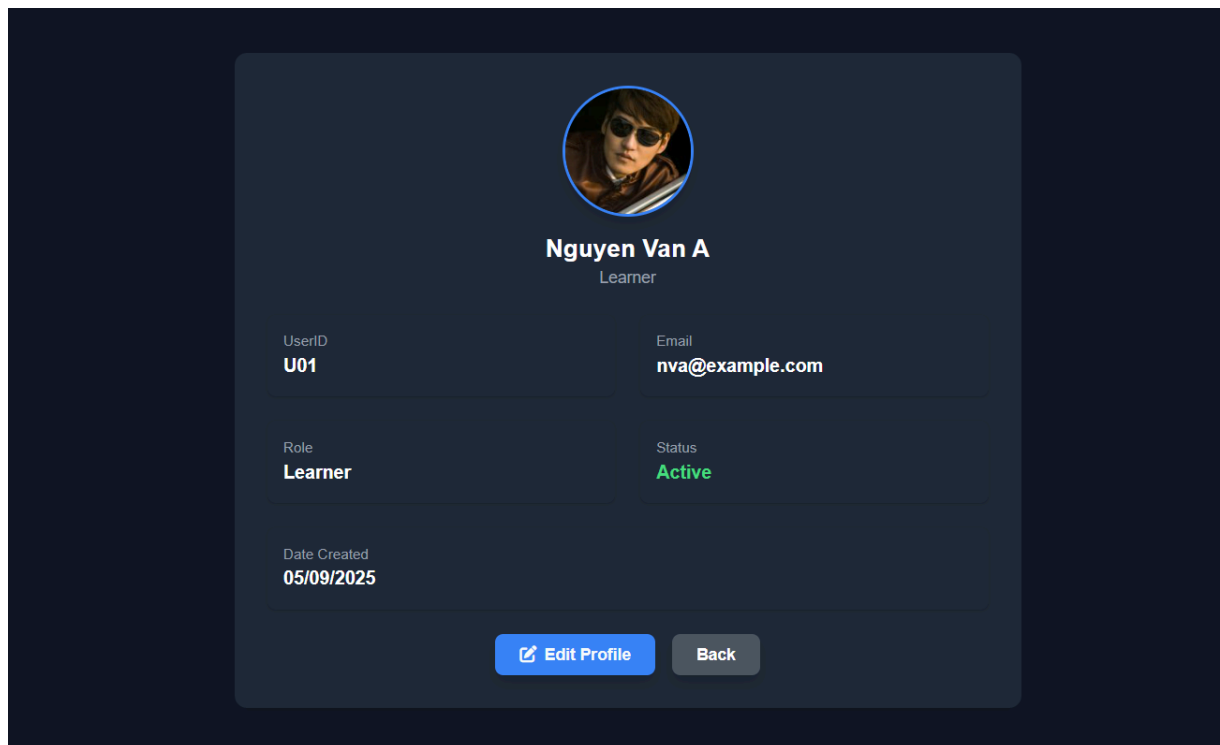
**To** : User Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		



<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 10. User Profile



**Description** : This is where you change your profile information and password

**From** : Public course

**To** : User-Profile-Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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11.Edit User Profile

Edit Account

Account name

Nguyen Van A

Email

nva@example.com

Role

Learner

Status

Active

Cancel

Save

**Description** : Allows users to edit personal information such as avatar, email, password

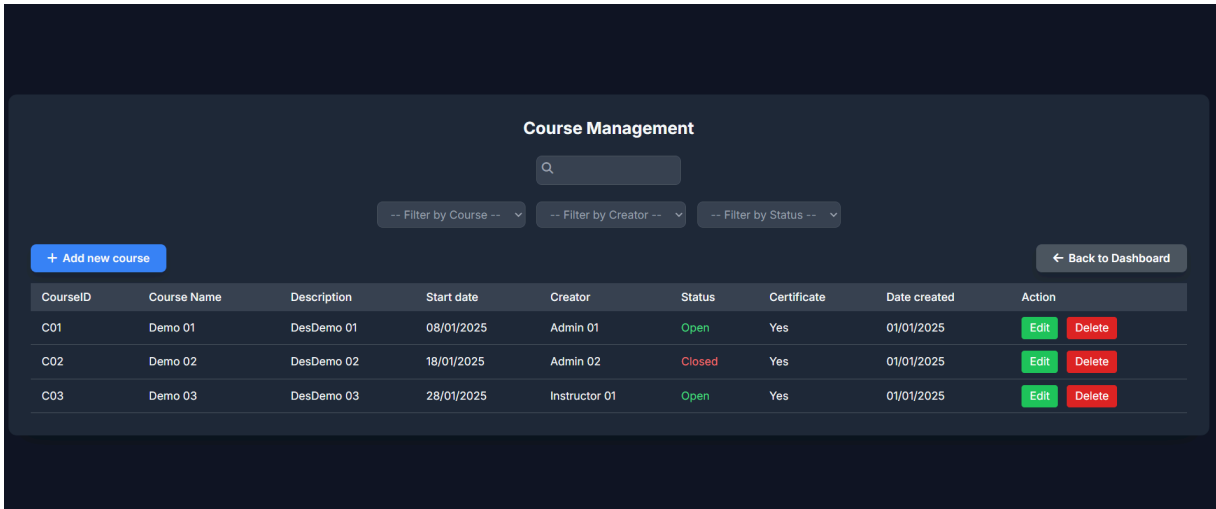
**From** : User Profile

**To** : User Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 12. Course Management



**Description** : This is where you manage courses (Admin, Teacher role)

**From** : Public course

**To** : Course Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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13. Course create form

Add New Course

Course Name

Description

Start Date

dd/mm/yyyy

Status

Open

Certificate

Yes

Cancel

Save

**Description** : Form allows admin/instructor to create new course (enter name, description, syllabus, resources).

**From** : Course Management (Admin/Instructor role)

**To** : Course Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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#### 14. Course edit form

The screenshot shows a dark-themed 'Edit Course' form. The fields are as follows:

- CourseID:** C01
- Course Name:** Demo 01
- Description:** DesDemo 01
- Creator:** Admin 01
- Date Created:** 01/01/2025
- Start Date:** 08/01/2025
- Status:** Open (dropdown menu)
- Certificate:** Yes (dropdown menu)

At the bottom right, there are two buttons: 'Cancel' and 'Save changes'.

**Description** :Form allows admin/instructor to edit course information (name, description, syllabus, resources).

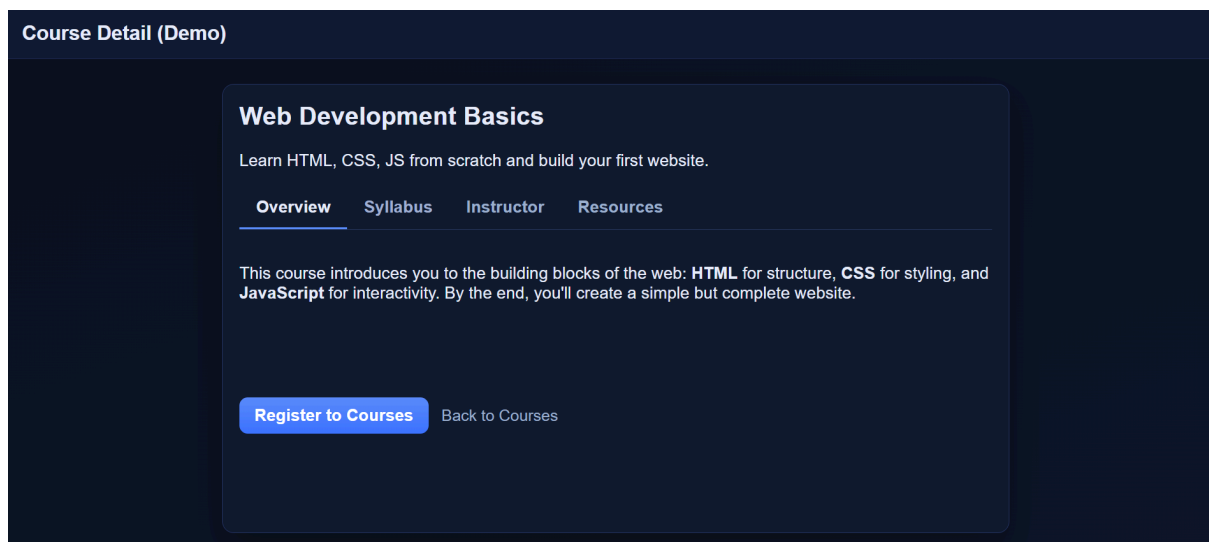
**From** : Course Management (Admin/Instructor role)

**To** : Course Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 15. Course detail



**Description** : Page that shows details of a course to the learner (Overview, Syllabus, Instructor, Resources, Lessons, Quiz).

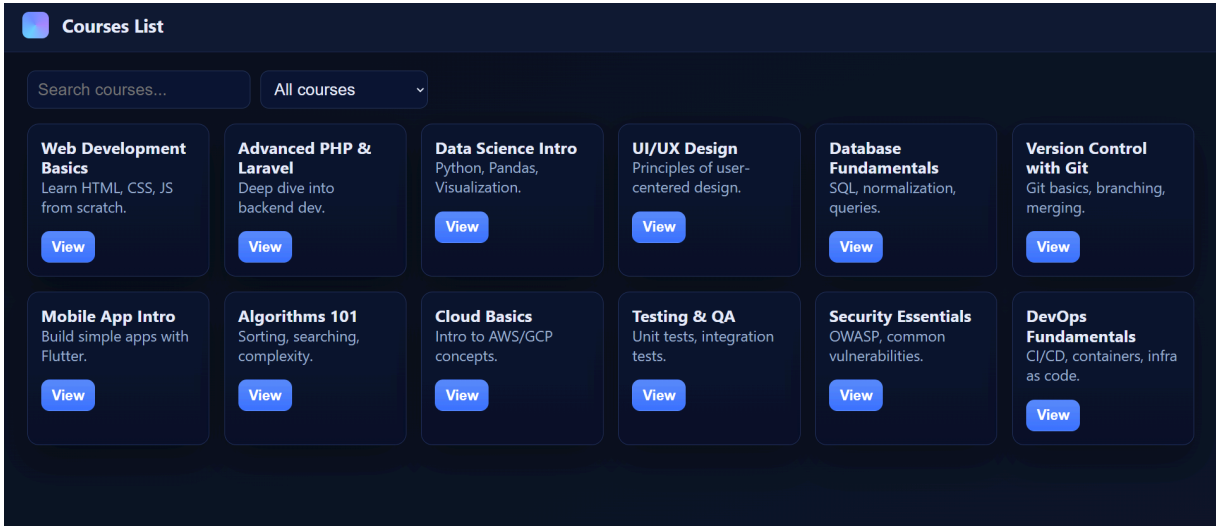
**From** : Course List

**To** : Lesson View / Enrollment / Resources

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.</b> 07/SS/Ver1.0
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## 16. Public courses



**Description** : This is where you view the courses you are taking

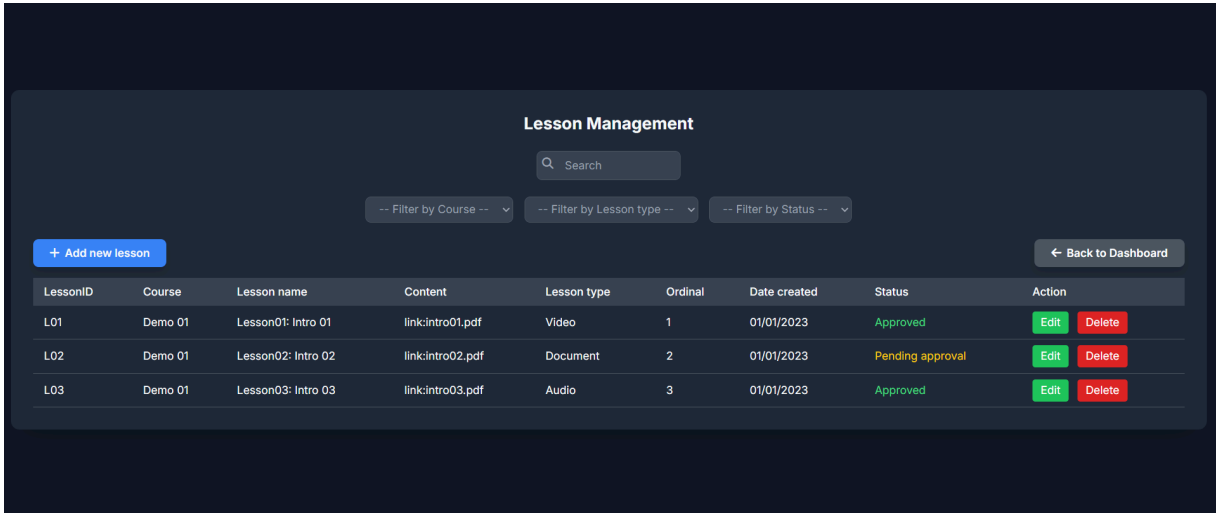
**From** : HomePage, login, register

**To** : Each course progress (Student), or course management (Teacher or Admin)

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:</b> 03	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 17. Lesson Management



**Description** : Manage all lessons of courses (add, edit, delete, assign to courses).

**From** : Course Management (Admin/Instructor role)

**To** : Lesson Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		



<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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18. Lesson create form

Add New Lesson

Course

Demo 01

Lesson Name

Enter lesson name

Content (link/file)

e.g., link:intro01.pdf

Lesson Type

Video

Ordinal

Enter order (1, 2, 3...)

Status

Approved

Cancel

Save

**Description** : Form allows admin/instructor to create new lesson (title, content, documents).

**From** : Lesson Management

**To** : Lesson Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.</b> 07/SS/Ver1.0
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## 19. Lesson edit form

### Edit Lesson

Lesson ID

L01

Course

Demo 01

Lesson Name

Lesson01: Intro 01

Content (link/file)

linkintro01.pdf

Lesson Type

Video

Ordinal

1

Status

Approved

Cancel

Update

**Description** : Form allows admin/instructor to edit lesson information.

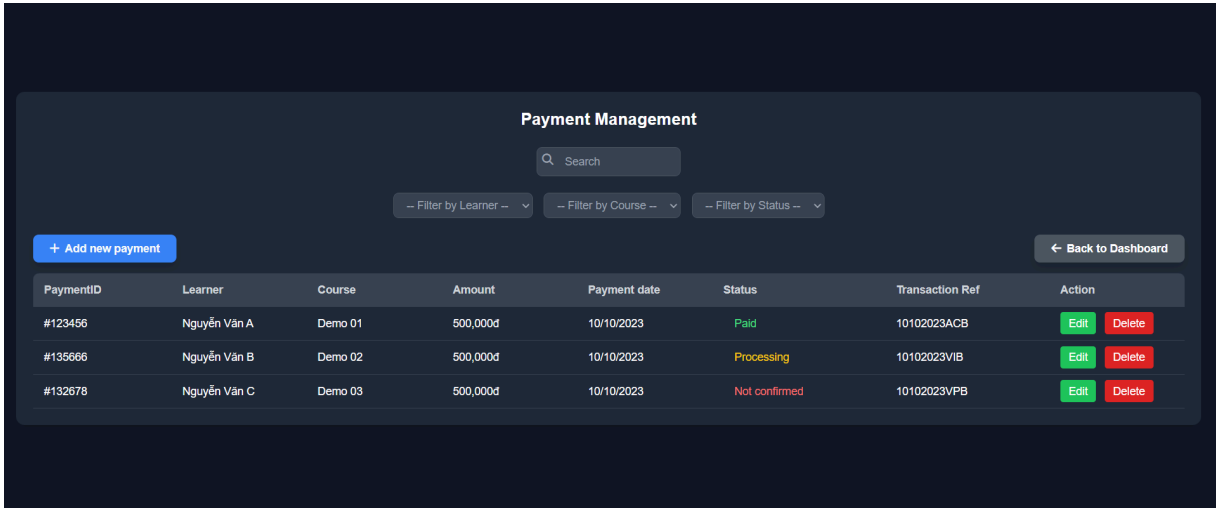
**From** : Lesson Management

**To** : Lesson Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 20. Payment Management



**Description** : Manage payment transactions (by user, by course).

**From** : Admin/Finance Dashboard

**To** : Payment Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 21. Payment create form

**Description** : Form for admin to add a new transaction/payment manually.

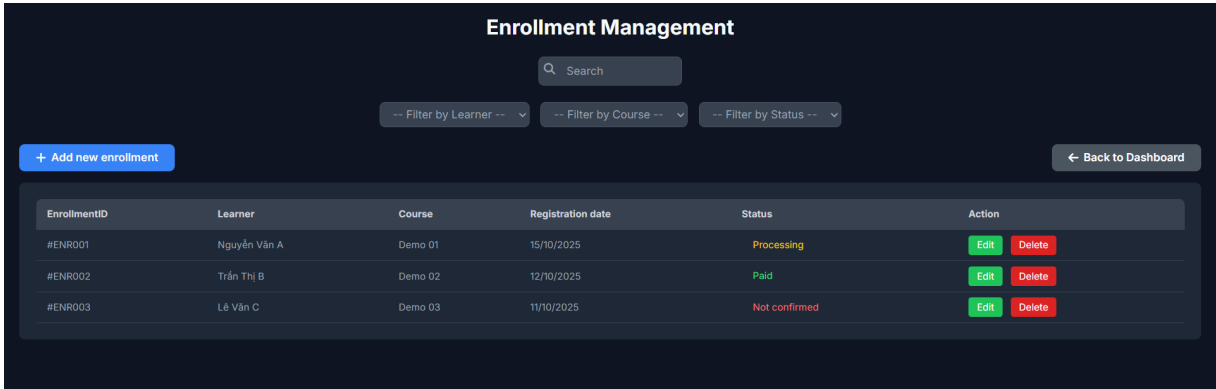
**From** : Payment Management

**To** : Payment Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 22. Enrollment Management



**Description** : Manage list of students registering for courses.

**From** : Course Detail / Course Management

**To** : Enrollment Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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23. Enrollment create form

Add New Enrollment

Learner

Enter learner name

Course

Demo 01

Registration Date

dd/mm/yyyy

Status

Paid

Cancel

Save

**Description** : Form to record new students registering for the course.

**From** : Course Detail / Enrollment Management

**To** : Enrollment Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.</b> 07/SS/Ver1.0
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## 24. Enrollment edit form

### Edit Enrollment

Enrollment ID

#ENR001

Learner

Nguyễn Văn A

Course

Demo 01

Registration Date

15/10/2025

Status

Paid

Cancel

Save

**Description :** The form allows editing of registration status (Active, Cancelled, Completed).

**From** : Enrollment Management

**To** : Enrollment Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 25. Feedback Management

**Feedback Management**

Search

-- Filter by User -- -- Filter by Rating -- -- Filter by Status --

[← Back to Dashboard](#)

FeedbackID	User	Rate	Content	Response date	Status	Action
FE01	Learner01	★★★★★	Very good and easy to understand, but needs more real life e...	05/08/2025	Processed	<a href="#">View</a>
FE02	Guest01	★★★★☆	The content is a bit old. Need to update with new software.	05/08/2025	Waiting	<a href="#">View</a>
FE03	Guest02	★★★★☆	Need more practical examples to understand the concepts e...	05/08/2025	Processed	<a href="#">View</a>

**Description** : Manage all feedback from learners about courses, lessons, instructors.

**From** : Learner Dashboard / Course Detail

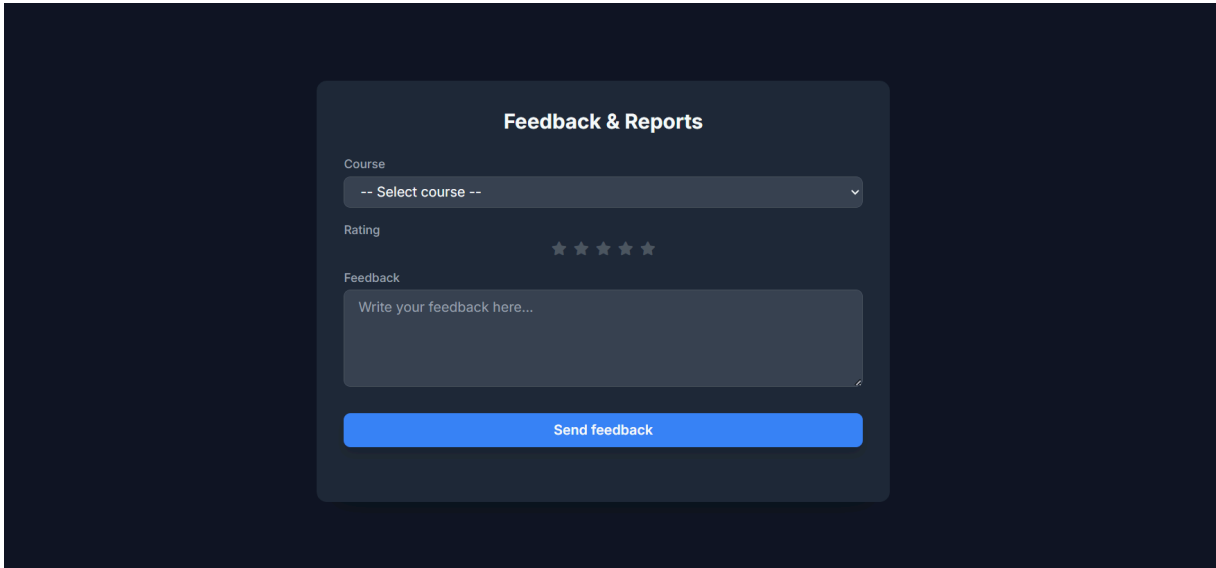
**To** : Feedback Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		



<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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26. Feedback create form



**Description** : Form for learners to send feedback (rating, comments, suggestions).

**From** : Course Detail / Lesson View

**To** : Feedback Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.</b> 07/SS/Ver1.0
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## 27. Feedback reply form

**Feedback details** [← Come back](#)

FeedbackID  
**FE01**

User  
**Guest01**

Rate  
★★★★★

Content  
Very good and easy to understand, but needs more real life examples.

Response date  
**05/08/2025**

Status  
**Waiting**

**Admin Action**

Reply to feedback

Enter your answer here...

[Send reply](#) [Delete feedback](#)

**Description** : Form for instructor/admin to respond to learner feedback.

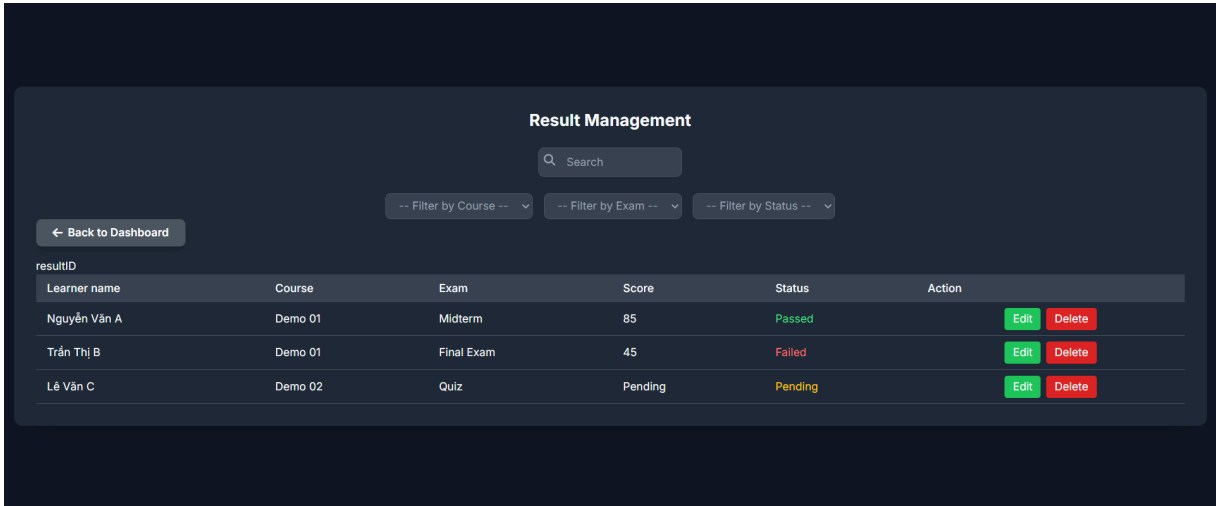
**From** : Feedback Management

**To** : Feedback Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 28. Result Management



**Description** : Manage learners' learning results, quiz/exam scores.

**From** : Instructor Dashboard / Exam Submission

**To** : Result Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.</b> 07/SS/Ver1.0
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## 29. Result edit form

## Edit Result

Learner Name

Nguyễn Văn A

Course

Demo 01

Exam

Midterm

Score

85

Status

Passed

Cancel

Save changes

**Description** : Form cho phép instructor chỉnh sửa, cập nhật điểm và nhận xét.

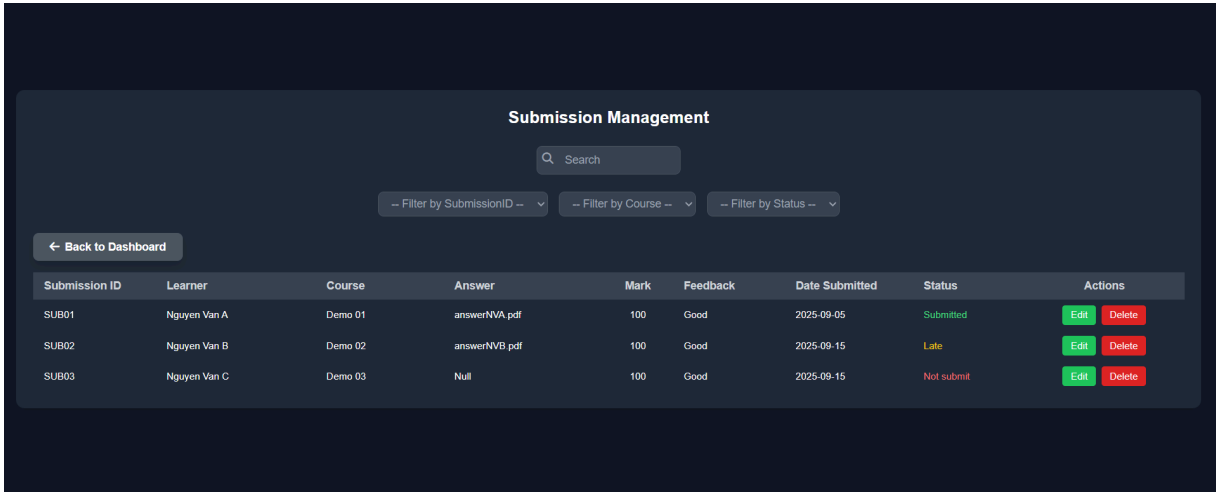
**From** : Result Management

**To** : Result Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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### 30. Submission Management



**Description** : Quản lý bài nộp assignment/exam của learner.

**From** : Learner Dashboard / Assignment Page

**To** : Submission Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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31. Submission edit form

Edit Submission

SubmissionID

Sub01

Learner

Nguyễn Văn A

Course

Demo 01

Answer

answer.pdf

Mark

answer detail

Feedback

Good

Date Submitted

05/09/2025

Status

Submitted

Cancel

Save

**Description** : Form cho phép instructor chỉnh sửa/trả lời/chấm điểm bài nộp.

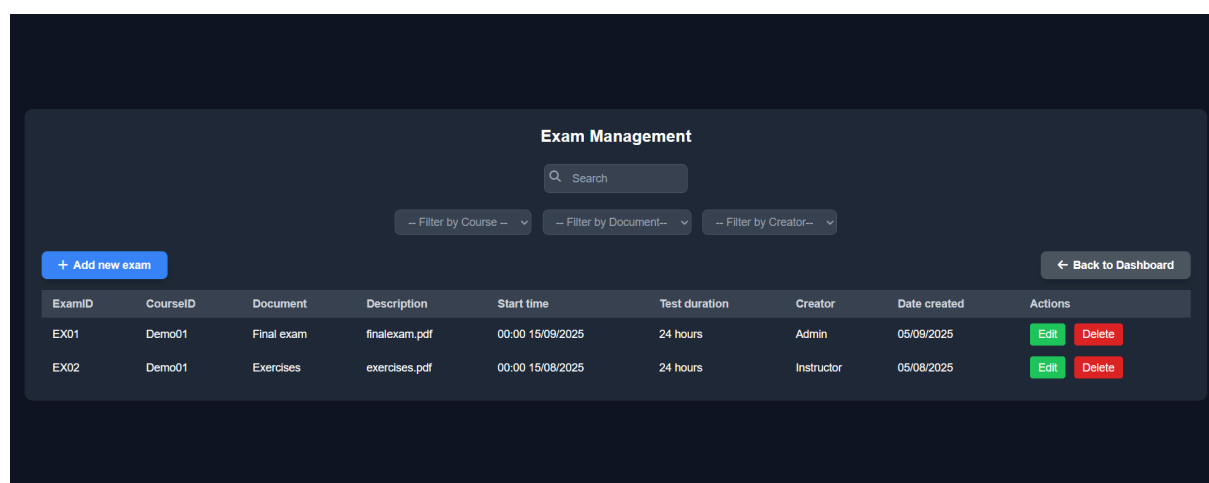
**From** : Submission Management

**To** : Submission Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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## 32. Assignment Management



**Description** : This is where you manage assignment (Admin, Teacher role)

**From** : Public course

**To** : Course Management

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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### 33. Assignment create form

**Add New Exam**

Course ID  
Demo01

Document  
Exam

Description  
finalexam.pdf

Start Time  
dd/mm/yyyy --:-- --

Test Duration  
24 hours

Cancel Save Exam

**Description** : Form for instructors to create a new assignment, including title, description, due date, and attached resources.

**From** : Assignment Management

**To** : Assignment Database

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		



<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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### 34. Assignment edit form

**Description** : Form for instructors to edit an existing assignment's details and resources.

**From** : Assignment Management

**To** : Assignment Database

### 35. Reports

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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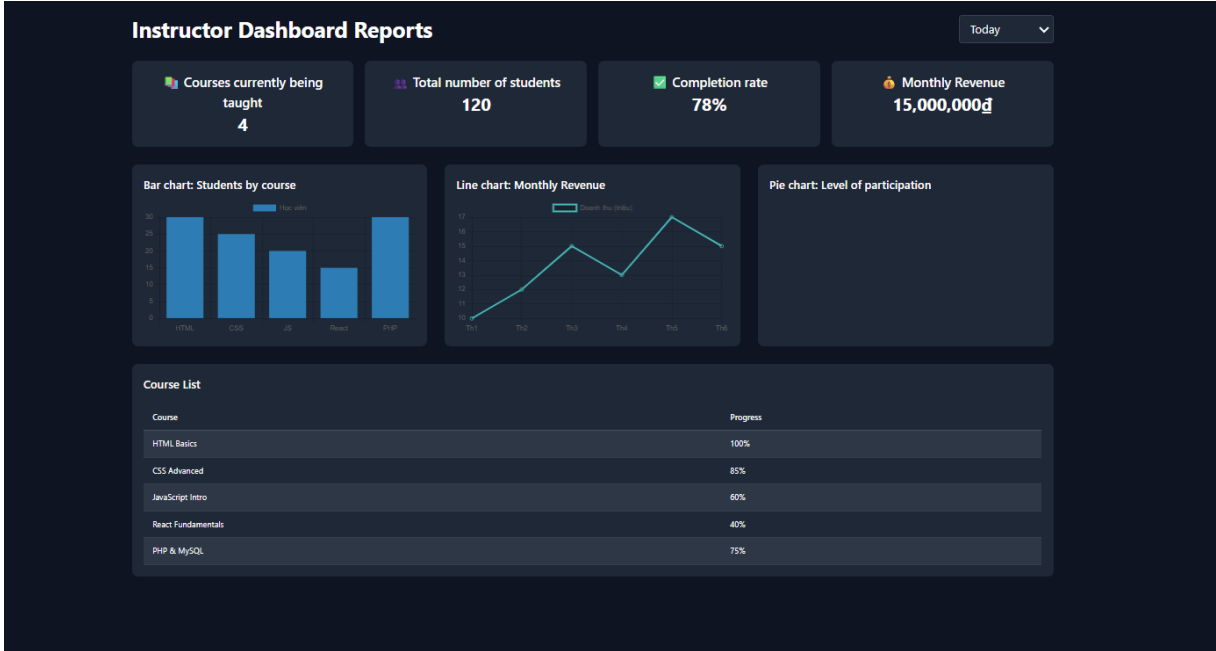
Report\_manage\_admin



Report\_manage\_instructor

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

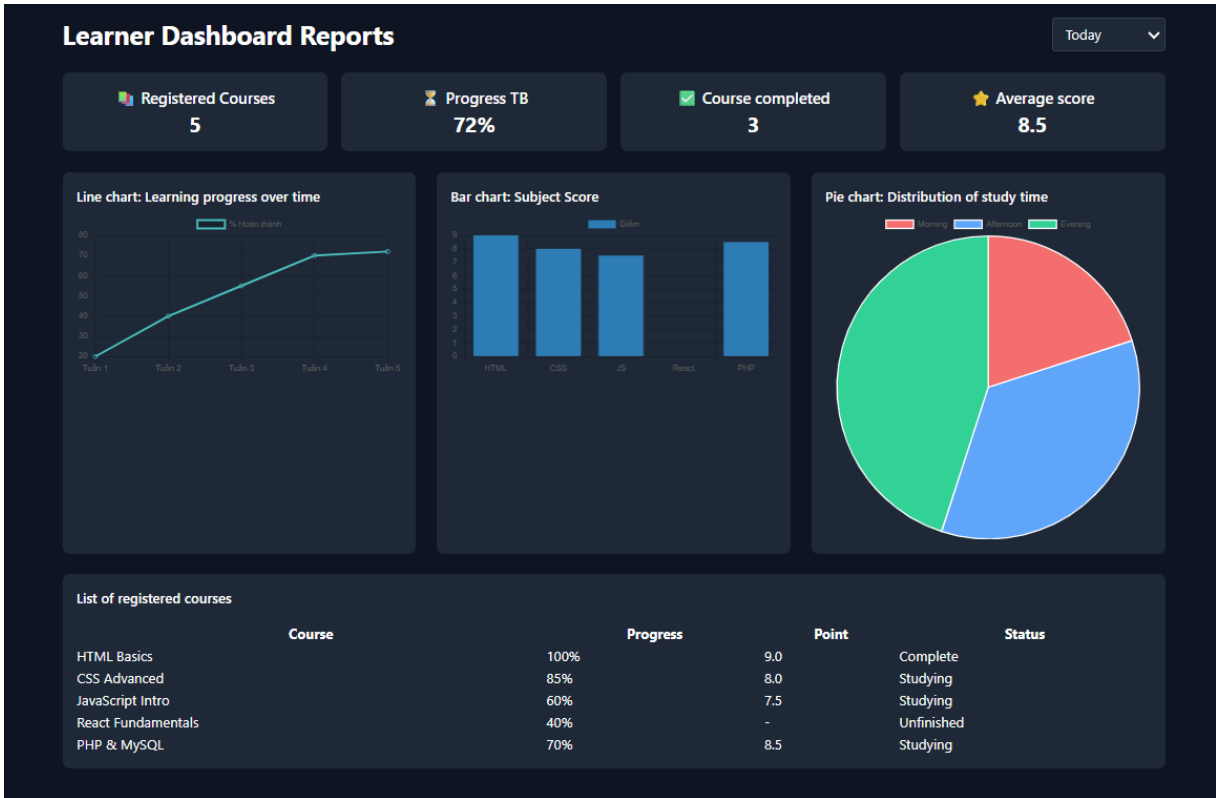
<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
<b>Effective Date:</b> 20-08-2025	<b>Version 1.0</b>	<b>Page No: 77 of 88</b>



Report\_manage\_learner

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
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**Description** : This is where you give feedback or report to Admin (Student, Teacher role)

**From** : Homepage, Public course,...

**To** : Course Management

	<b>Prepared by (Student)</b> Project Group No:03	<b>Approved by (Faculty)</b> LE THANH NHAN
Signature		
Date		

<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Screen shots	<b>SWD/Form No.07/SS/Ver1.0</b>
<b>Effective Date:</b> 20-08-2025	<b>Version 1.0</b>	<b>Page No: 79 of 88</b>

## Testing document

Sr.No	Features Tested	Remarks
1	User Registration and Login	Tested login with valid/invalid credentials
2	Admin Dashboard Access	Verified admin can access user and course management
3	Teacher Course Creation	Tested creating new courses and uploading materials
4	Student Course Enrollment	Verified students can enroll and view course content
5	File Upload Functionality	Tested uploading documents and videos
6	Basic Quiz/Assignment Features	Tested creating and submitting simple quizzes
7	User Profile Management	Verified users can update their profiles
8	Database CRUD Operations	Tested basic create, read, update, delete functions
9	Form Validation	Verified input validation on registration and login forms
10	Navigation and Routing	Tested page navigation and Laravel routing
11	Browser Compatibility	Tested on Chrome and Firefox browsers
12	Basic Security	Tested password hashing and session management
13	Responsive Design	Tested basic layout adaptation on different screen sizes
14	Course Content Display	Tested viewing lessons and materials
15	Basic Error Handling	Verified error messages display properly

	<b>Prepared by (Student)</b>	<b>Approved by (Faculty)</b>
	<b>Project Group No:03</b>	<b>LE THANH NHAN</b>
<b>Signature</b>		
<b>Date</b>		

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## Final checklist

Sr.No	Aspected Tested	Suggestion/ Remarks
1	Are all the users able to view the images and links?	Images and links load properly on main browsers
2	Have all the views, modules and controllers been properly integrated and is the site function as a single page application?	Laravel backend and ReactJS frontend integrated successfully
3	Are the GUI content devoid of spelling mistakes?	Text content reviewed for spelling errors
4	Is the application user-friendly?	Basic navigation and user interface tested
5	Is the Website launching correctly in all popular browsers?	Tested on Chrome, Firefox, Edge
6	Are all the forms validated with proper criteria?	Login, registration, and course forms validated
7	Do all text links lead to the appropriate website?	Internal navigation links working
8	Do all image links lead to the appropriate website?	Image links functional
9	Are all the images and links clearly visible on the page?	Visual elements display correctly
10	Does the Web page work properly in all the tested browsers?	Basic functionality works across browsers
11	Does the Web page take too long to be loaded fully?	Page load times acceptable
12	Is the navigation sequences correct through all the Web pages on the site?	Navigation flow tested

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13	Is the JavaScript code working as expected in all click events?	Basic click events functioning
14	Can users login and access their respective dashboards?	Authentication and role-based access working
15	Is the course enrollment and content access working?	Students can enroll and view course materials

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<b>Design Plan:</b> E-Learning Management System	<b>Document Name:</b> Task Sheet	<b>SWD/Form No.10/TS/Ver1.0</b>
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No	Member	Contents		Table Name	Activity Plan	Date of Preparation of Activity Plan		
					Planned Start Date	Actual Start Date	Actual Days	Status
1	Lê Thị Hạnh Mai	Admin	Course Management (Add/Edit/Delete Courses)	Courses Lessons	20/08/2025	20/08/2025		100
2		User	View & Enroll Course, Access Lessons		20/08/2025	20/08/2025		
1	Cổng Hiển Khoa	Admin	User Management (Add/Edit/Delete Users) Payment management (checking, confirming and processing transactions).	Users Enrollment Payment	20/08/2025	20/08/2025		100
2		User	Register, Login, Update Profile, Personal Account Management Make payments, track history, and manage personal payment information.		20/08/2025	20/08/2025		
1	Đương Minh Mẫn	Admin	Assignment/Exam & Feedback Management (Add/Edit/Delete Assignments/Exam, Manage Feedback)	Submission Feedbacks	20/08/2025	20/08/2025		100
2		User	Submit Assignment/Exam, Give Feedback, Personal Feedback Management		20/08/2025	20/08/2025		

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	<b>Project Group No:03</b>	LE THANH NHAN
<b>Signature</b>		
<b>Date</b>		