# Final Project Proposal – Learnix (E-Learning Platform)

## Project Description

Learnix is an interactive e-learning platform built using ASP.NET MVC that enables instructors to create and manage online courses, while students can browse, enroll, and learn through structured lessons. The platform provides user roles (Admin, Instructor, Student), course creation and enrollment features, payment integration, notifications, and progress tracking. Learnix aims to offer a modern and efficient way for instructors to share knowledge and for students to learn at their own pace.

## Group Members & Roles

| Name | Role | Responsibilities |
| --- | --- | --- |
| Abdelrahman Amr Abdelnaby Melhy | Team Leader / Full-Stack Developer | Oversees overall system architecture, manages project structure, and ensures integration between front-end and back-end. Responsible for core backend logic , and database design. |
| Mohamed Yaser Salah Elnagar | Front-End Developer | Designs and implements the user interface using Razor views, HTML, CSS, and Bootstrap. Ensures responsive design and smooth user experience. |
| Ahmed Moustafa Gaber Elbhery | Back-End Developer | Develops controllers, models, and core business logic using C#, LINQ, and Entity Framework. Works on database integration and data handling. |
| Mohamed Atef Mohamed Abu-Yousef | Back-End Developer | Implements backend functionality with Entity Framework and LINQ, and assists in system debugging and optimization. |
| Abdelaziz Ahmed Saad Aresha | Back-End Developer | Focuses on backend module development, data validation, and maintaining consistent code structure using MVC pattern. |
| Omar Mahmoud Maamoun Masoud | Quality Assurance (QA) & Front-End Developer | Conducts software testing, reports bugs, verifies system stability, and prepares project documentation and reports and Designs and implements the others user interface using Razor views, HTML, CSS and Bootstrap |

## Team Leader

Abdelrahman Amr Abdelnaby Meslhy

## Objectives

• Build a scalable and easy-to-use MVC-based e-learning platform.

• Allow instructors to create, edit, and manage courses with lessons

• Enable students to register, browse, and enroll in courses with payment confirmation.

• Integrate notifications for key user actions.

• Provide an AI-powered chatbot to assist users with FAQs or course help.

• Ensure responsive, modern, and user-friendly UI using HTML, CSS, and Bootstrap.

## Tools & Technologies

• Framework: ASP.NET MVC 5 / .NET 8 MVC

• Language: C#

• Database: SQL Server (using Entity Framework Core and LINQ)

• Frontend: HTML5, CSS3, Bootstrap, JavaScript

• AI Integration: Chatbot API (e.g., Dialogflow or ChatGPT API)

• Version Control: Git & GitHub

• IDE Tools: Visual Studio 2022, SSMS, Postman (for API testing if needed)

## Milestones & Deadlines

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| Milestone | Description | Deadline |
| 1. Requirements & Design | Define project modules, architecture, and DB schema | Week 1 (Starting From 12/10/2025) |
| 2. Backend (Models & Controllers) | Implement course management, user system, and business logic | Week 3 |
| 3. Frontend (Views) | Build responsive pages for all modules using Razor Views | Week 5 |
| 4. Testing & Debugging | Test all use cases and fix errors | Week 6 |
| 5. Final Submission | Complete documentation, prepare demo, and submit | Week 7 |

## Key Performance Indicators (KPIs)

• System Functionality Completion Rate: At least 95% of the planned features fully implemented.

• Code Quality & Architecture Compliance: MVC pattern followed, clean code conventions, and reusable components.

• Testing & Reliability: Minimum 90% of test cases pass during testing.

• Performance & Efficiency: Pages and queries load within 2 seconds on average.

• Error or Defect Rate: Less than 5% major functional issues after testing.