E-Learning Platform with Auto Evaluation

**Day 1 – Requirements**

Assignment upload, evaluation.

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## Project Overview & Unique Features:

### Core Vision:

An intelligent e-learning platform that automatically evaluates student submissions using advanced test case execution, real-time feedback, and comprehensive analytics.

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### Unique Differentiators:

* **AI-Powered Code Quality Analysis** - Beyond basic test cases
* **Real-time Collaboration Dashboard** - Live student progress tracking
* **Adaptive Learning Paths** - Difficulty adjustment based on performance
* **Multi-language Support** - Java, Python, JavaScript evaluation
* **Plagiarism Detection** - Code similarity analysis
* **Interactive Code Playground** - In-browser coding environment

Day 1: Requirements Engineering & System Architecture

Theme: Foundation & Vision

#### Requirements Gathering

* **Functional Requirements:**
  + Student registration/authentication with role-based access
  + Assignment creation with multiple file types (code, documents, multimedia)
  + Real-time auto-evaluation with instant feedback
  + Progressive difficulty scaling
  + Comprehensive analytics dashboard
  + Plagiarism detection system
* **Non-Functional Requirements:**
  + 99.9% uptime with load balancing
  + Support for 10,000+ concurrent users
  + Response time < 2 seconds for evaluation
  + GDPR compliant data handling
  + Mobile-responsive design

#### Unique Features to Implement:

* **Smart Assignment Categorization** - ML-based difficulty assessment
* **Peer Review Integration** - Student-to-student code reviews
* **Live Coding Sessions** - Real-time collaborative coding
* **Gamification Elements** - Badges, leaderboards, achievements

#### Deliverables:

* System Requirements Document (SRD)
* Use Case Diagrams
* User Stories with acceptance criteria
* System Architecture Blueprint
* Technology Stack Decision Matrix

**UML Diagram:**



