**E-learning Platform with Auto evaluation**

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**Functional Requirements:**

1. **Assignment Handling**
   * Students can upload assignments.
   * System validates submission deadline.
   * Data to be stored and linked to student
2. **Auto Evaluation**
   * Assignments are evaluated automatically using test cases.
   * Provides pass/fail status.
3. **Score Management**
   * Evaluation scores are stored in a database. (MySQL)
   * Scores can be retrieved by student or assignment.
   * Fast in-memory lookup for quick access.
4. **Log Management**
   * Stores evaluation logs (compiler errors, runtime logs, console output).
   * Logs to be accessed for debugging or audit.
5. **Integration & Deployment**
   * Supports automated build, test, and deployment pipelines.
   * Provides a demo environment for showcasing features.

**Non-Functional Requirements:**

1. **Scalability**
   * Supports scaling for large numbers of students and assignments.
2. **Reliability**
   * High availability during assignment deadlines.
   * Failed evaluations are retried automatically.
3. **Security**
   * Secure storage of submissions and logs.
   * Scores in MySQL and evaluation engine must match.
4. **Usability**
   * Simple upload process for students.
5. **Maintainability**
   * Clean, modular architecture for easy updates.
   * Automated testing in pipelines.