Weekly Report

Week – 04

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Winter 2026

Submission Date: 1st March 2026

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1. Introduction:

This report summarizes the activities and learning outcomes from the fourth week of my internship at CODELOUNGE Pvt. Ltd. During this phase, I initiated work on a new project titled **E-Learn**.

This week involved understanding the real-world problem addressed by the application and translating it into a structured development plan. The primary focus of this week was on pre-development planning, idea validation, conceptual modeling, and defining the structural foundation of the application before starting implementation.

2. Duration:

Week Duration:

5 February 2026 – 11 February 2026

3. Overview:

The fourth week was dedicated to the conceptual and architectural planning of the E-Learn application. The idea originated from the need to create a structured and centralized learning ecosystem that supports both educators and students through two dedicated portals.

The application was planned with the following structure:

Educator Portal:

- Create Courses
- Add Chapters within Courses
- Add Lectures and Quizzes inside Chapters
- Edit and Delete Courses, Chapters, Lectures, and Quizzes
- Track total enrolled students per course
- View graded quiz results
- Monitor pass/fail statistics for each course

Student Portal:

- Browse courses created by different educators

- View detailed course information
- Enroll in courses
- Watch lectures
- Attempt quizzes
- Track progress within each course
- Monitor overall learning progress and completed courses

During this week, I refined the application concept, created an initial prototype layout, and gathered technical and design resources required for development.

4. Task Performed:

- Identified and finalized the project idea (E-Learn)
- Defined system objectives and target users
- Designed initial workflow for both Educator and Student portals
- Created low-level prototype and UI flow sketches
- Planned feature breakdown for phased development
- Defined database requirements for courses, chapters, lectures, quizzes, and user records
- Selected Firebase as the backend solution
- Structured high-level application architecture.

5. Learning Outcomes:

- Understanding the importance of pre-development planning
- Learning how to transform an idea into a structured project roadmap
- Designing dual-portal systems within a single application
- Conceptualizing database relationships for educational platforms
- Developing structured feature documentation before coding.

6. Challenges and Solutions:

Challenges:

- Structuring a dual-role application model
- Designing relationships between courses, chapters, lectures, quizzes, and users
- Planning scalable database architecture

Solutions:

- Divided the system into two clearly defined portals
- Designed hierarchical data structure (Course → Chapter → Lecture/Quiz)
- Mapped out role-based access logic before implementation

7. Conclusion:

The fourth week established the conceptual and structural backbone of the E-Learn project. By focusing on ideation, prototyping, and architecture planning, I ensured that the upcoming development stages would proceed in a structured and scalable manner.