



National University
Of Computer and Emerging Sciences

Project Management Planning

An Assignment presented to

Sir Basharat Hussain

**In partial fulfillment
of the requirement for the course of**

Software Engineering

By

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**BS(CS)
SECTION-E**

Work Breakdown Structure (WBS)- CodeFast Web Application

1. Project Management

1.1 Develop Plans

- Project charter & scope
- Sprint planning
- Risk management matrix

1.2 Monitor Progress

- Daily stand-ups
- GitHub commit tracking
- Sprint retrospectives

2. System Design

2.1 System Arch. Design

- High-level architecture diagrams
- Database ERD

2.2 S/W Req. Analysis

- Software Requirements Specification (SRS)

2.3 S/W Detailed Design

- UI/UX wireframes Security protocols

3. Implementation

3.1 Authentication & User Mgmt (Sprint 1)

- User Registration
- User Login
- Password Reset
- Profile Management
- Store Credentials Securely

3.2 Course & Quiz System (Sprint 2)

- Course Enrollment
- View Course Content
- Quiz Participation
- Add Quiz to Course
- View Quiz Results

3.3 Industry & Admin Features (Sprint 3)

- Offer Internship
- Manage Internship/Job Students
- Send Interview Invitation
- Manage Users.
- Approve Course Enrollment

3.4 Premium & Analytics (Sprint 3)

- Premium Membership Access
- View CodeFast Analytics
- Analyze Student Performance
- Enable Dark Mode

4. Testing

4.1 Unit Testing

- Jest for authentication, quizzes, and APIs

4.2 Integration Testing

- User flows

4.3 UAT & Security Testing

- User Acceptance Testing
- Penetration testing

5. Delivery & Deployment

5.1 Deployment Package

- Cloud hosting (AWS) with CI/CD pipeline.

5.2 Client Handover

- Final demo, documentation, and training.

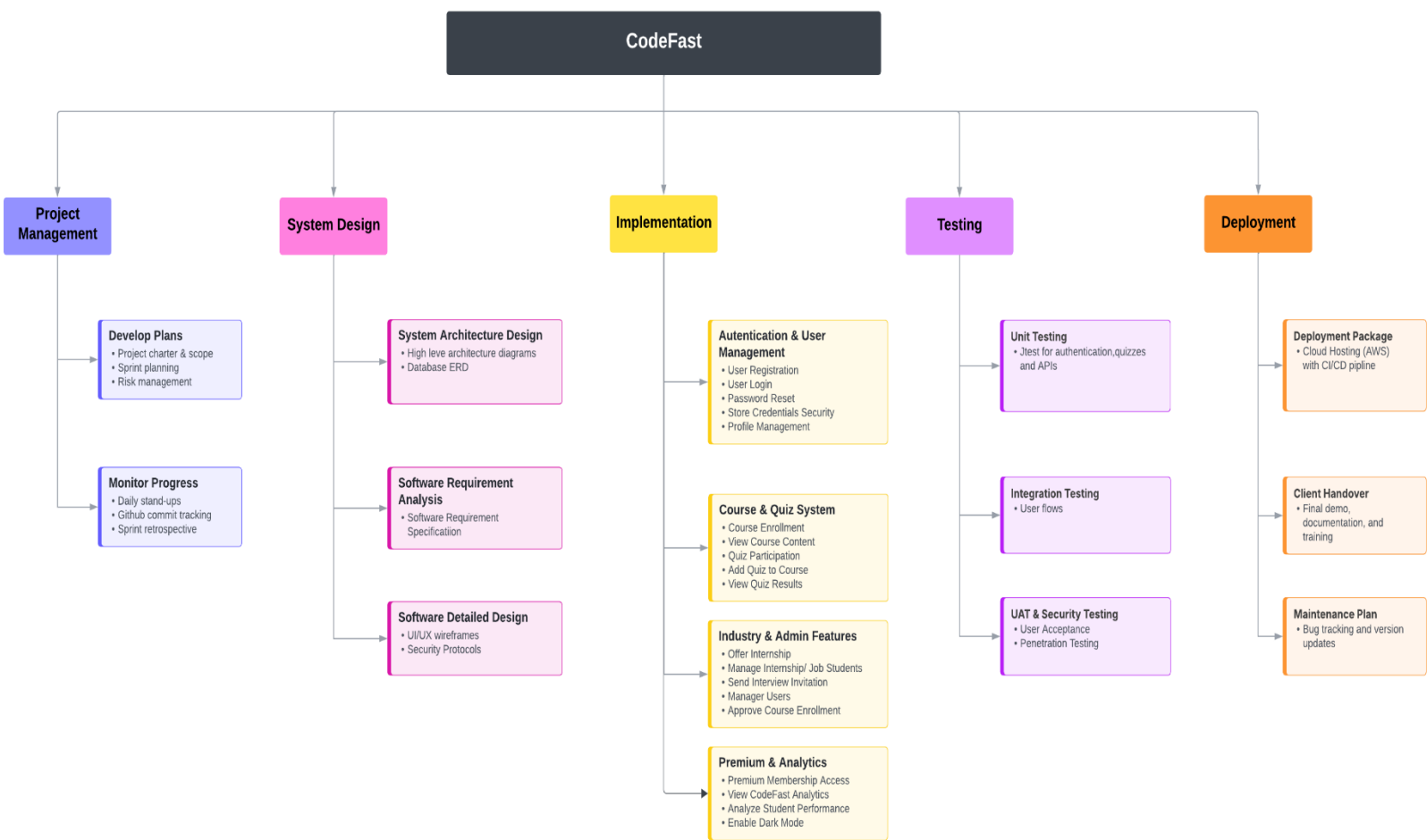
5.3 Maintenance Plan

- Bug tracking and version updates (GitHub).

Work Breakdown Structure Table:

Phase	Sub-Tasks	User Stories/Components	Sprint	Owner
Project Management	Develop Plans	Trello backlog, SRS, risk matrix	Pre-Sprint	Scrum Master (Arban)
	Monitor Progress	GitHub logs, stand-up notes	Ongoing	Team Lead (Zakariya)
System Design	S/W Req. Analysis	SRS document (functional/non-functional)	Pre-Sprint	Analyst (Zakariya)
	S/W Arch. Design	Class diagrams, UI wireframes	Pre-Sprint	UI Designer (Arban)
Implementation	Authentication Module	Stories 1-4, 18	Sprint 1	Developer (Messam)
	Quiz & Course Mgmt	Stories 5, 7, 15, Sprint 2 backlog items	Sprint 2	Developer (Messam)
	Industry/Admin Features	Stories 11-12, 20-21, 24	Sprint 3	Developer (Messam)
	Premium & Analytics	Stories 10, 14, 17, 19	Sprint 3	Developer (Messam)
Testing	Unit/Integration Tests	Jest/Pytest, Postman APIs	Sprints 1-3	Tester (Messam)
	UAT	All 25 user stories	Sprint 3	Team Collaboration
Delivery	Deployment	AWS/Heroku setup, CI/CD	Post-Sprint	Team Lead (Zakariya)
	Client Handover	Demo, docs, training	Post-Sprint	

Work Breakdown Structure Diagram





Gantt Chart- CodeFast Web Application

CodeFast



Key

-  = Active work.
-  = Overlap/transition.
- Testing is included in each sprint (last 30-40% of duration).

Critical Dates

1. **Requirement Analysis:** Feb 1-14, 2025
2. **Sprint 1:**
 - Dev: Feb 12-25 | Test: Feb 22-28
3. **Sprint 2:**
 - Dev: Mar 6-19 | Test: Mar 16-23
4. **Sprint 3:**
 - Dev: Apr 21-26 | Test: Apr 25-28