

# CC2101 Software Engineering

## Assignment 2

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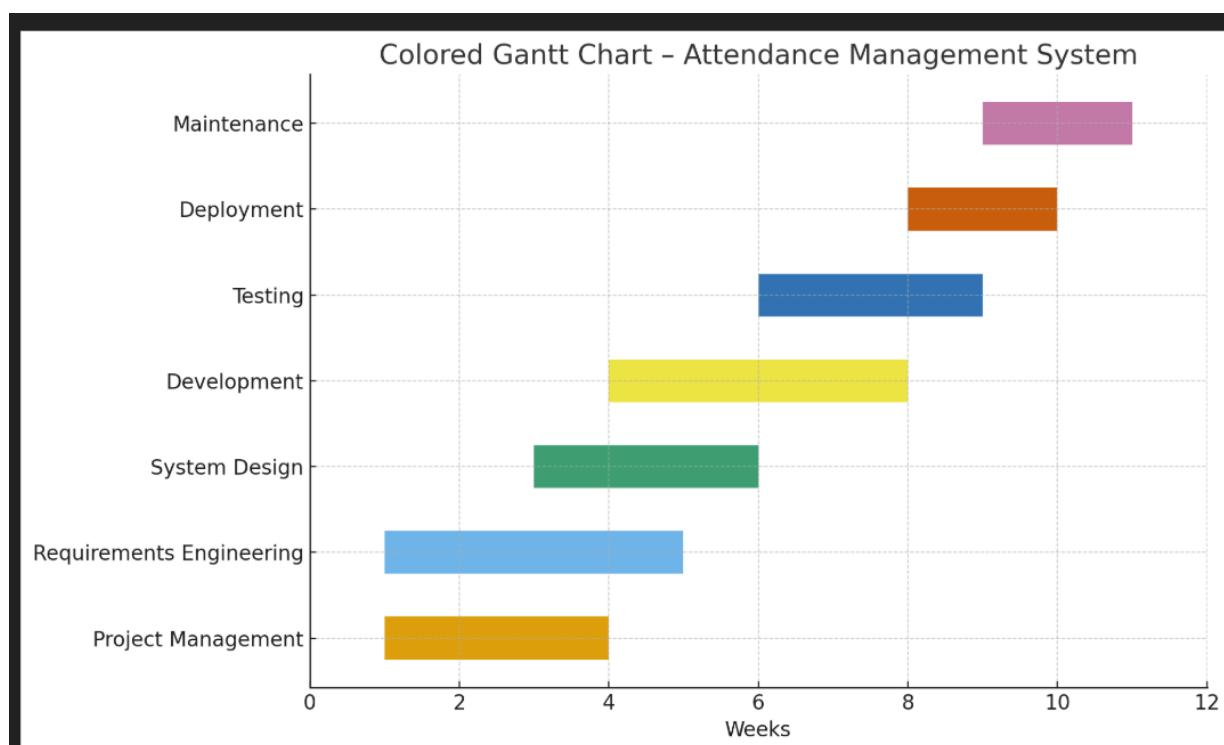
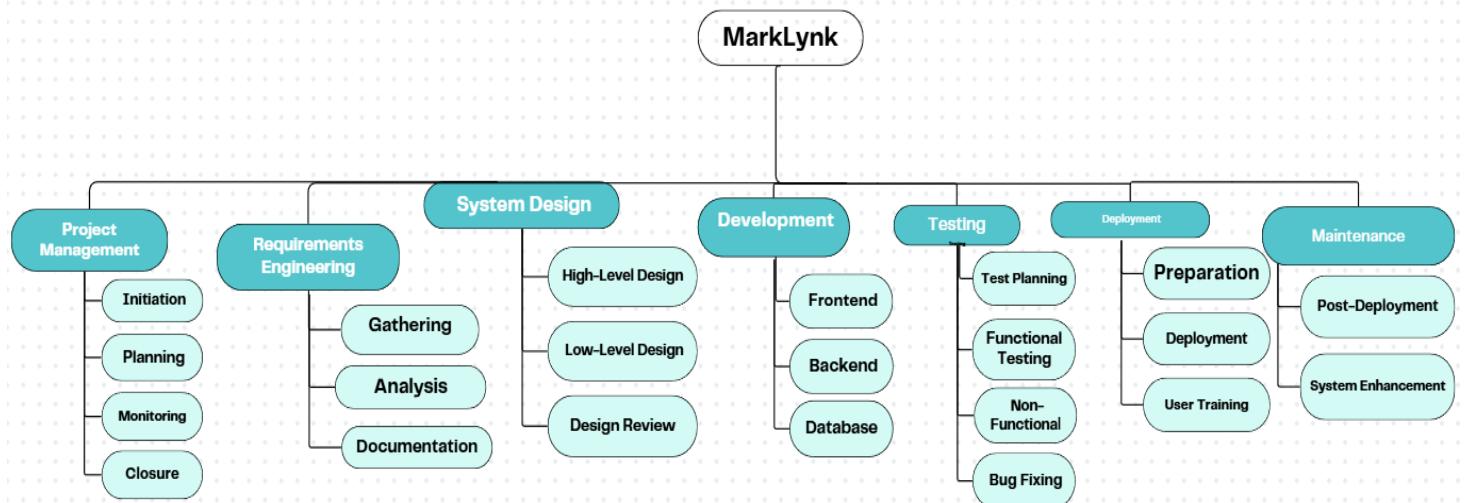
Section: W8

School of Systems and Technology

UMT Lahore Pakistan

# Work Breakdown Structure (WBS)

## Attendance Portal Diagram



- 1. Project Management
  - 1.1 Project Initiation
    - 1.1.1 Define project scope
    - 1.1.2 Identify stakeholders

- └── 1.1.3 Approve project charter
- └── 1.2 Project Planning
  - └── 1.2.1 Create Gantt chart
  - └── 1.2.2 Resource allocation
  - └── 1.2.3 Risk identification and mitigation
- └── 1.3 Project Monitoring & Control
  - └── 1.3.1 Progress tracking
  - └── 1.3.2 Weekly review meetings
  - └── 1.3.3 Risk monitoring and updates
- └── 1.4 Project Closure
  - └── 1.4.1 Final report submission
  - └── 1.4.2 Project presentation
  - └── 1.4.3 Documentation handover
- └── 2. Requirements Engineering
  - └── 2.1 Requirements Gathering
    - └── 2.1.1 Conduct interviews
    - └── 2.1.2 Identify functional requirements
    - └── 2.1.3 Identify non-functional requirements
  - └── 2.2 Requirements Analysis
    - └── 2.2.1 Feasibility analysis
    - └── 2.2.2 Prioritize requirements
  - └── 2.3 Requirements Documentation
    - └── 2.3.1 Prepare SRS document
    - └── 2.3.2 Review & approve SRS
- └── 3. System Design
  - └── 3.1 High-Level Design
    - └── 3.1.1 System architecture design
    - └── 3.1.2 Module identification
    - └── 3.1.3 Technology selection
  - └── 3.2 Low-Level Design
    - └── 3.2.1 Database schema design
    - └── 3.2.2 UI/UX wireframes
    - └── 3.2.3 Class diagrams
    - └── 3.2.4 ERD creation
  - └── 3.3 Design Review
    - └── 3.3.1 Validate design with team
    - └── 3.3.2 Optimize system flow
- └── 4. Development
  - └── 4.1 Frontend Development
    - └── 4.1.1 Login interface
    - └── 4.1.2 Dashboard UI
    - └── 4.1.3 Student management UI
    - └── 4.1.4 Attendance marking interface
    - └── 4.1.5 Attendance report UI
  - └── 4.2 Backend Development
    - └── 4.2.1 User authentication module
    - └── 4.2.2 Student management module
    - └── 4.2.3 Attendance recording module
    - └── 4.2.4 Reporting module
  - └── 4.3 Database Development
    - └── 4.3.1 Create database tables

- 4.3.2 Set relationships
  - 4.3.3 Query optimization
- 5. Testing
  - 5.1 Test Planning
    - 5.1.1 Define test cases
    - 5.1.2 Prepare test plan document
  - 5.2 Functional Testing
    - 5.2.1 Test login functionality
    - 5.2.2 Test student management
    - 5.2.3 Test attendance marking
    - 5.2.4 Test reporting features
  - 5.3 Non-Functional Testing
    - 5.3.1 Performance testing
    - 5.3.2 Usability testing
    - 5.3.3 Security testing
  - 5.4 Bug Fixing
    - 5.4.1 Identify bugs
    - 5.4.2 Apply fixes
    - 5.4.3 Re-test modules
- 6. Deployment
  - 6.1 Deployment Preparation
    - 6.1.1 Server setup
    - 6.1.2 Database configuration
    - 6.1.3 Code migration
  - 6.2 Deployment
    - 6.2.1 System installation
    - 6.2.2 Final testing in live environment
  - 6.3 User Training
    - 6.3.1 Conduct training session
    - 6.3.2 Provide user manual
- 7. Maintenance
  - 7.1 Post-Deployment Support
    - 7.1.1 Fix reported issues
    - 7.1.2 System updates
  - 7.2 System Enhancement
    - 7.2.1 Add new features
    - 7.2.2 Improve performance