

Milestones for Quiz Master Application Development-1

Project: Quiz Master (MAD-1)

The milestones are divided into Core Requirements, Recommended Functionalities, and Optional Enhancements. Students can complete any core milestone(1-7) in any order but recommended and optional (milestone 8-11) need to be done only after the core is completed. Each milestone includes a brief explanation and a Git commit message to track progress. When you finish a milestone, use the exact Git commit message given in every milestone to save your work. Then, push the changes to GitHub to update the online version of your project.

Milestone 0: GitHub Repository Setup (Mandatory)

✅ Expected Time: 1 day

📊 Completion Progress: 5%

- Create a private GitHub repository for the project.
- Add a README.md file with a basic project description.
- Set up a .gitignore file to exclude unnecessary files.
- Commit and push the initial setup to the repository.
- Refer to the [git tracker document](#) to add MADI-cs2003 as your collaborator, so that we can track your project.
- Github Adding Collaborator Video: [Adding Github Collaborator using VSCode and WSL](#)

Git Commit Message: Initialized private GitHub repository with README and .gitignore

Core Requirements (Milestones 1-7)

Milestone 1: Database Models and Schema Setup

✅ Expected Time: 5-7 days

📊 Completion Progress: 15%

- Define tables for User, Admin, Subject, Chapter, Quiz, Question, Score, etc. in SQLite.
- Set up relationships between tables (e.g., Subjects have multiple Chapters, Quizzes belong to Chapters).
- Ensure the database is programmatically created through a python script/file.

Git Commit Message: Created database schema for users, subjects, quizzes, and scores

Milestone 2: Authentication and Role Management

✓ Expected Time: 5 days

📊 Completion Progress: 10%

- Create an Admin login (Admin is predefined, no registration allowed).
- Implement User registration and login with required fields (username (email), password, full name, etc.).
- Users should be redirected to their respective dashboards after login.

Git Commit Message: Implemented user registration and admin login functionality

Milestone 3: Admin Dashboard and Management

✓ Expected Time: 7-9 days

📊 Completion Progress: 20%

- Admin should be able to:
 - Create/Edit/Delete Subjects.
 - Create/Edit/Delete Chapters under a subject.
 - Create/Edit/Delete Quizzes under a chapter.
 - Create/Edit/Delete Questions under a quiz.
- Admin should see a list of all users and their details.

Git Commit Message: Built Admin dashboard with CRUD operations for subjects, chapters, quizzes, and questions

Milestone 4: User Dashboard and Quiz Attempt System

✓ Expected Time: 7 days

📊 Completion Progress: 15%

- Users should see a list of available subjects and quizzes.
- Users should be able to attempt a quiz (MCQ format with one correct option).
- Implement a timer for each quiz.
- Users should get feedback on correct/incorrect answers after the quiz.
- Store quiz scores in the database.

Git Commit Message: Developed User dashboard with quiz attempt functionality and timer

Milestone 5: Score Management and Quiz Result Display

✓ Expected Time: 5 days

📊 Completion Progress: 15%

- Store quiz scores after submission.
- Users should see past quiz attempts and scores.
- Display a quiz summary report with total scores.

Git Commit Message: Implemented score tracking and quiz result display

Milestone 6: Search Functionality for Admin and Users

✓ Expected Time: 4 days

📊 Completion Progress: 10%

- Admin Search:
 - Admin can search for users, subjects, quizzes, and questions.
- User Search:
 - Users can search for subjects and quizzes.

Git Commit Message: Added search functionality for Admin and Users

Milestone 7: Quiz Time and Duration Management

✅ Expected Time: 4 days

📊 Completion Progress: 10%

- Admin should set date and time duration (HH:MM) when creating a quiz.
- Users should only be able to attempt quizzes within the given timeframe.

Git Commit Message: Implemented quiz scheduling with time duration

Recommended Functionalities (Milestones 8-9)

Milestone 8: API Development for Data Access

✅ Expected Time: 7 days

- Develop API endpoints to fetch subjects, chapters, quizzes, and scores.
- Ensure APIs return JSON responses.

Git Commit Message: Created API endpoints for subjects, quizzes, and scores

Milestone 9: Summary Charts and Data Visualization

✅ Expected Time: 5 days

- Display quiz performance charts for users.
- Admin should see summary statistics of quizzes and users.

Git Commit Message: Added summary charts for quiz statistics and user performance

Optional Enhancements (Milestones 10-11) → Extra Work

Milestone 10: Frontend Enhancements and UI Improvements

✓ Expected Time: 7-9 days

- Improve UI with Bootstrap and CSS.
- Implement frontend validation for forms.
- Ensure the app is mobile-responsive.

Git Commit Message: Enhanced UI with Bootstrap styling and form validation

Milestone 11: Security Enhancements and Final Testing

✓ Expected Time: 7 days

- Implement backend validation for form inputs.
- Perform final testing to fix any bugs or security loopholes.
- Ensure all routes are protected based on user roles.

Git Commit Message: Enhanced security with backend validation and finalized testing

Final Project Submission

Milestone 12: Final Project Submission Details

✓ Expected Time: 2 days

📊 After, Completion Progress is 100%.

Ensure you submit the final project, including:

- Code ZIP file.
- 3-5 page report.
- 3-10 min video presentation.

- The video should be uploaded to your g-drive with access granted to anyone with the link.
- The link must be included in the report for review. Report pdf should be added to the zip file.

Git Commit Message: Finalized project submission with report and presentation link

Tracking Progress

To track progress, you should:

1. Use Git commits for each milestone.
 2. Test functionality after completing each milestone.
 3. Log issues encountered and their resolutions in a README.md or GitHub Issues section.
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Timeline Overview

Project Completion Overview

Milestone	Average Time Estimate	Split (%)	Progress (%)
Milestone 0: GitHub Setup	1 day	5%	5%
Milestone 1: Database Setup	5-7 days	15%	20%
Milestone 2: Authentication	5 days	10%	30%
Milestone 3: Admin Dashboard	7-9 days	20%	50%
Milestone 4: User Dashboard & Quiz	7 days	15%	65%
Milestone 5: Score Management	5 days	15%	80%
Milestone 6: Search Feature	4 days	10%	90%
Milestone 7: Quiz Time & Duration	4 days	10%	100%

Extra Work Overview

Milestone	Average Time Estimate
Milestone 8: API Development	7 days

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Milestone 8: API Development	7 days
Milestone 9: Summary Charts	5 days
Milestone 10: UI Enhancements	7-9 days
Milestone 11: Security & Final Testing	7 days

Final Submission Overview

Milestone	Average Time Estimate
Milestone 12: Final Project Submission Details	2 days

Note: The average time estimate is not a strict deadline. Each student has a different level of understanding, so you can take the time you need. The provided time estimates indicate the average duration students typically take to complete each milestone if they dedicate 2-3 hours (approx.) per day.