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Milestones for Quiz Master - V2 Modern Appli... Updated automatically every 5 minutes

Milestones for Quiz Master - V2 Modern Application Development - 2

Project: Quiz Master - V2 (MAD-II)

The milestones are divided into Core Requirements, Recommended **Enhancements**. Students can complete core milestones (1-10) in any order but recommended (milestone 11-12) 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.



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Repository
Setup (
Mandatory)

Expected Time: 1 day

Completion Progress: 5%

- Create a private GitHub repository for version control.
- Add README.md with a basic project description.
- Create a
 .gitignore file to exclude unnecessary files.
- Set up a Flask-VueJS project skeleton and ensure it runs.
- Define an issue tracker for milestone progress in GitHub.
- Refer to the git <u>tracker document</u> to add MADII-cs2006



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Adding Gitnub
Collaborator using
VSCode and WSL

Git Commit

Message: Initialized private GitHub repository with README and .gitignore

Core Milestones (1-9)

These milestones are **mandatory** for project completion.

Milestone 1: Database Schema Design & Implementation

> Define tables for User, Admin, Subject, Chapter, Quiz,



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- 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: Token-Based Authentication & Role-Based Access Control

Expected Time: 5 days
Completion
Progress: 5%

 Implement Tokenbased authentication for Admin and Users.



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and login securely.

- Role-Based Access Control (RBAC):
 - Admin can manage quizzes, users, subjects, and questions.
 - Users can only attempt quizzes and view their scores.

Git Commit Message: Implemented token-based authentication & RBAC

Milestone 3: Admin
Dashboard
Management (Python
API and VueJS UI)

Expected Time: 7-9 days



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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.

- Implement VueJS
 UI for the admin dashboard and CRUD using Flask.
- Admin should see a list of all users and their details in VueJS UI.

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



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Expected Time: 7 days
Completion
Progress: 10%

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

Git Commit

Message: Developed User Dashboard with quiz attempt functionality and timer



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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: Quiz Scheduling & Time Management

Expected Time: 4 days

Completion Progress: 10%

 Admin can set quiz start date and time duration (HH:MM)



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times.

 Implement automatic quiz locking after expiry.

Git Commit
Message: Implemented

quiz scheduling with time duration

Milestone 7: Backend Jobs - Daily Reminders & Monthly Reports

Expected Time: 7 days

Completion Progress: 10%

- Implement Celery tasks for:
 - Daily Quiz
 Reminders (via
 G Chat/SMS/Email).
 - Monthly Performance Reports (sent



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processing.

Git Commit Message: Added Celery-based backend jobs for reminders & reports

Milestone 8: Search Functionality for Admin & Users

Expected Time: 4 days
Completion
Progress: 5%

- Admin
 Search: Find users,
 subjects, quizzes,
 questions.
- User Search: Find quizzes and subjects by keyword.

Git Commit Message: Added search functionality for Admin and Users



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Expected Time: 5 days

Completion Progress: 5%

 User-triggered export: Quiz history in CSV format.

OR

Admin-triggered export: User performance data in CSV.

 Use Celery background tasks to handle async exports.

Git Commit

Message: Implemented async CSV export for quizzes & user data

Milestone 10: API Performance Optimization &



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Progress: 5%

- Optimize API response times.
- Secure endpoints with rate-limiting (use caching decorators).
- Use Redis caching for API optimization.

Git Commit Message: Optimized
API performance
using redis cache

Recommended Enhancements (Milestones 11-12)

These milestones are recommended but **not mandatory**.



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Expected Time: 7 days

Improve **UI styling** using Bootstrap & VueJS.

- Ensure a mobilefriendly and responsive layout.
- Implement frontend validation (JavaScript) and backend validation (Flask).

Git Commit Message: Enhanced UI/UX and added frontend validation

Milestone 12:
Advanced Quiz
Analytics &
Leaderboard

- **Expected Time:** 7 days
 - Display detailed performance analytics for users.



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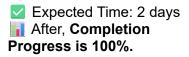
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progress tracking charts.

Git Commit Message: Added advanced analytics and leaderboard feature

Final Project Submission

Milestone 13: Final Project Submission Details



Ensure you submit the final project, including:

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



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- The g-drive link must be included in the report for review. Report pdf should be added to the zip file.
- Ensure all code is documented & structured.

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



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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 & RBAC	5 days	5%	25%
Milestone 3: Admin Dashboard	7-9 days	15%	40%
Milestone 4: User Dashboard & Quiz	7 days	10%	50%
Milestone 5: Score Management	5 days	15%	65%



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Milestone 8: Search Feature	4 days	5%	90%
Milestone 9: CSV Export	5 days	5%	95%
Milestone 10: Redis Cache	4 days	5%	100%

Extra Work Overview

Milestone	Average Time Estimate	
Milestone 11: UI/UX & Responsive Design	7 days	
Milestone 12: Advanced Quiz Analytics	7 days	

Final Submission Overview

Milestone	Average Time



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Details

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.