

AcademiaQuest

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Course Code: CSE 3102 **Course Title:** Software Engineering Sessional

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Project Overview

We want to make learning fun and easy for both students and teachers. AcademiaQuest is a web-based application where we're creating to help everyone in universities. It will be a friendly place for quizzes, studying old questions, ranking, and other cool learning stuff.

We planned that we will develop it using the ASP.NET framework, following the Model-View-Controller (MVC) pattern. The platform is designed to offer a seamless and user-friendly experience for students, educators, and administrators, facilitating efficient quiz participation, study of previous questions, and access to various educational features.

Objectives

- Construct a user-friendly educational hub
- Make learning fun with simple quizzes, study previous questions, and ranking system
- Boost efficiency in education by simplifying quiz creation and study access.

Project Stakeholders

Development Team	Developers implement proposed features: user authentication, quiz creation, taking, progress tracking, categories, filtering, ratings, deployment.
Students	End users who will use AcademiaQuest for quizzes, studying old questions, and accessing educational features.
Teachers/Instructors/Admins/	Admins who will create quizzes and manage educational content. Instructors will use AcademiaQuest for creating quizzes, managing questions, tracking student progress, and accessing features tailored for educators.

Key Features

1. User Authentication:

Multi-Factor Authentication (MFA): Consider implementing MFA for an additional layer of security especially for administrator accounts.

Account Recovery: Include a secure account recovery process for users who forget their passwords.

Role-Based Access Control (RBAC): Implement RBAC to define different roles for administrators, instructors, and students with varying levels of access.

2. Quiz Creation for Admin (Teachers):

- Create quizzes with titles, descriptions, and categories, has_time_limit and others necessary fields.
- Add questions to quizzes with question type of multiple-choice.
- There should be at least 5 and at most 50 questions in a quiz with each question having at least 2 and utmost 10 multiple-choice fields
- Specify correct answers and point values for each question.
- Set time limits for quizzes (optional).

Rich Media Support: Support the inclusion of images, videos, and other multimedia in questions to enhance quiz content.

3. Quiz Taking:

- Display questions one at a time with options for multiple-choice questions.
- Allow users to browse and select quizzes to take.
- Implement a timer if the quiz has a time limit.
- Provide immediate feedback on correct/incorrect answers.
- Calculate and display the final score at the end of the quiz.

4. User Progress:

- Track and display a user's quiz history (completed quizzes, scores).
- Show progress indicators for ongoing quizzes (either with progress bar or with numbers).
- Display leaderboards for top scores in quizzes

Notifications: Send notifications to users about upcoming quizzes, completed quizzes, and other relevant information.

5. Quiz Categories and Filtering:

Search Functionality: Include a search feature to allow users to quickly find quizzes based on keywords or topics.

Find and study questions from past exams: Students can search for previous years question according to their desired course. We make it easy by sorting them into years and including level-term.

6. Quiz Ratings:

Moderation: Implement a moderation system to review and filter inappropriate or irrelevant ratings.

7. Deployment and Submission:

Continuous Integration/Continuous Deployment (CI/CD): Implement CI/CD pipelines for automated testing and deployment.

Backup and Recovery: Regularly backup the database and implement a disaster recovery plan.

To sum up

AcademiaQuest serves as an enjoyable learning companion, catering to both students and teachers aiming to enhance the learning experience. We're excited about our idea and hope you join us in bringing it to life.