Web-Based Quiz Platform

(As a part of ACTS Management System)

Functional Requirement Specification Document

Functional Requirements Document:

Name of Document	Functional Requirement Specification of Web based quiz platform
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Description of Content	Functional, Technical and Operational Requirements
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Abbreviations:

UI	User Interface
API	Application Programming Interface
DBMS	Database Management System
CSV	Comma-Separated Values
HTTP	Hypertext Transfer Protocol
HTTPS	Secure HTTP
OAuth2	Open Authorization version 2

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1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed overview of the functional requirements for the Web-Based Quiz Platform. It describes the functionalities, system constraints, and external interfaces to help stakeholders understand the platform and assist in its development.

1.2 Background

The Web-Based Quiz Platform is designed to facilitate educators in managing quizzes effectively while providing students with an engaging quiz-taking experience. The system allows educators to create question banks, generate random quizzes, and analyze performance through reports. The platform aims to enhance teaching efficiency and improve learning outcomes.

1.3 Scope

- **Features for Educators**:
    - Create, edit, and manage question banks.
    - Configure quiz settings (e.g., duration, difficulty).
    - View performance analytics and reports.
- **Features for Students**:
    - Attempt quizzes with a timer and receive immediate feedback.
    - Access a user-friendly interface for better engagement.
- The platform supports secure authentication, random quiz generation, and data storage in MySQL.

1.4 References

- Spring Boot Documentation: https://spring.io/projects/spring-boot
- MySQL Documentation: https://dev.mysql.com/doc/

1.5 Document Overview

This document outlines the functional and technical specifications of the Web-Based Quiz Platform. It describes the target audience, system interactions, and requirements for developers and stakeholders.

2. Functional Requirements

2.1 User Management

2.1.1 Description

The platform provides secure user management features for educators and students.

2.1.2 Functional Requirements

SN.	Functionality	Process	Remarks
FR 1.1	Check Progress	Both User and Admin gets their own versions of Progress results in their dashboards	
FR1.2	Edit account	Users and Admins can edit their account details in dashboards.	

2.1.3 Fields Validations

This table lists the various fields that will be there in the form for the requirement

SN	Field Name	Field Description	Validations	Remarks
1	Name	Name of User/Admin	Must be Unique, must not be empty	
2	Email Id	Email id of User/Admin	Must be Unique, must not be empty	
3	Phone Number	Phone number of User/Admin	Must be Unique, must not be empty	
4	Password	Password for the account	Must be Unique, must not be empty, must pass validation check	

2.2 Quiz Management

2.2.1 Description

Educators can create, edit, and delete quizzes, tag questions by difficulty or category, and generate quizzes.

2.2.2 Functional Requirements

SN	Functionality	Process	Remarks
1	Create and Edit Quizzes	Educators can set quiz parameters.	
2	Question Tagging	Questions can be tagged for filtering.	
3	Quiz Generation	Generate quizzes based on selected category.	

2.2.3 Field Validations

SN	Field Name	Description	Validations	Remarks
1	Quiz Title	Title of the quiz	Cannot be empty	Mandatory
2	Time Duration	Duration of the quiz (mins)	Must be a positive number	Mandatory

2.3 Quiz Attempt and Scoring

2.3.1 Description

Students can attempt quizzes, which are auto-submitted on timer expiration. Feedback and scores are provided immediately.

2.3.2 Functional Requirements

SN	Functionality	Process	Remarks
1	Timer	Quizzes are timed and auto-submitted.	
2	Immediate Feedback	Feedback provided for objective questions.	

2.3.3 Field Validations

SN	Field Name	Description	Validations	Remarks
1	Answer Options	Possible answers for MCQs	Must include one correct answer	Mandatory

2.4 Reports and Analytics

2.4.1 Description

The system provides reports on student performance by quiz, category, or individual.

2.4.2 Functional Requirements

SN	Functionality	Process	Remarks
1	Generate Reports	Reports can be filtered by multiple criteria.	Export as PDF or CSV

3. External Interfaces

- **Database API**: MySQL for storing user and quiz data.

- **Reporting API**: Generate and export reports in multiple formats.

4. Pre-Requisites, Assumptions, and Dependencies

- Users must have access to a modern web browser.

- MySQL database must be operational.

- HTTPS must be implemented for secure communication.