**Web-Based Quiz Platform**

(As a part of ACTS Management System)

Functional Requirement Specification Document

**Functional Requirements Document:**

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| **Name of Document** | Functional Requirement Specification of Web based quiz platform |
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| **Description of Content** | Functional, Technical and Operational Requirements |
| **Reference** |  |
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**List of Requirements Elicitation Discussions:**

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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.