**Software Requirements Specification (SRS)**

## Case Study: Online Quiz Application

# Introduction

This document specifies the software requirements for an online quiz application. The application will allow users to create, take, and share quizzes on a variety of topics. The application will be web-based and accessible on any device with a web browser. Online quiz application typically has a user interface that allows users to browse through a list of quizzes, select a quiz to take, and answer the questions. The application may also provide feedback to the user on their answers and calculate their score

### Purpose

The online quiz application is created with the purpose of:

* Enhance Learning: Online quizzes can be used to reinforce and assess learning in educational settings, helping students review and retain information.
* Skill Development: Quiz apps can be designed to help users acquire and develop specific skills, such as language proficiency, math, or problem-solving abilities.
* Self-Assessment: Users can assess their knowledge or progress in a particular subject or field through quizzes.
* Employee Training: Organizations can create the quizzes and acquire new skills

### Intended Users

The application can be used in any school or college for taking and creating quizzes. The intended users of the application can be:

* ADMINISTRATORS
  + The administrator can register teachers of the organization so that they can add quizzes
  + The administrator can also register new courses to the application
* TEACHERS
  + The teachers can add students so that they can take quizzes
  + They can create quizzes
* STUDENTS
  + Can take various quizzes
  + Can analyze their progress

### References

There has been a growing body of research on the effectiveness of online quiz applications for learning. This research has found that online quiz applications can be an effective way to improve student learning, especially when they are used in conjunction with other teaching methods.

The various existing application used as the reference for creating the application is as follows:

* **Quizizz** is a free online quiz platform that offers a wide variety of quizzes on a variety of topics. Quizizz quizzes can be taken individually or as a class.
* **Kahoot!** is another free online quiz platform that is popular among students and teachers. Kahoot! quizzes are typically interactive and competitive, and they can be taken on a variety of devices.
* **Socrative** is a paid online quiz platform that offers a variety of features, including quizzes, polls, and exit tickets. Socrative is popular among teachers who want to create engaging and interactive lessons.
* **Edmodo** is a free online learning platform that includes a quiz feature. Edmodo quizzes can be used to assess student understanding of course material, or to provide students with practice on a particular topic.

## Description

The online quiz application is a web-based platform designed to provide users with an engaging and educational experience through a variety of quizzes on different topics. This project aims to create a user friendly, responsive and feature rich application that allows users to participate in quizzes, test their knowledge and track their progress.

The application will have the following features:

* **Admins:** Users will be able to create an account in order add the teachers and student accounts
* **Quiz Creation:** Teacher panel will be able to create the own quizzes This includes the addition of questions, choosing the type of questions and set the time limit and environment of the quiz
* **Quiz Taking:** The students will be able to take quizzes that have been created by the teachers. Students would be able to review their answers and submit it when it is finished
* **Scoring:** The application will automatically score quizzes and provide students and teachers with the progress report of the students
* **Quiz categories:** The application can allow the teachers and the students to add and take various quizzes in different domains
* **Timer and Difficulty levels:** The teachers will be able to set the timer and difficulty level of the quizzes

The application is easy to use and a valuable tool for education. It has a wide range of features, including the ability to create and take quizzes on wide range of subjects

**Here is a simple overview of how an online quiz application might work:**

1. The user logs into the application either as admin, teacher or student
2. If an admin, then either adds a course or registers a teacher
3. If a teacher then either adds a student or adds a category or adds questions
4. If a student then takes a quiz and analyses the performance

**Here are some of the benefits of using an IMS:**

* **Convenience:** Online quiz applications can be taken from anywhere, at any time, with an internet connection. This makes them ideal for students, employees, and anyone else who wants to learn or test their knowledge.
* **Flexibility:** Online quiz applications can be tailored to meet the needs of individual users. For example, users can choose the topic of the quiz, the difficulty level, and the type of questions. This makes them ideal for a variety of different learning styles.
* **Engagement:** Online quiz applications can be more engaging than traditional paper-and-pencil quizzes. This is because they can incorporate multimedia elements, such as images, videos, and audio.
* **Feedback:** Online quiz applications can provide users with immediate feedback on their answers. This can help users to identify their strengths and weaknesses and improve their learning.
* **Assessment:** Online quiz applications can be used to assess the learning of students or employees. This can help teachers and businesses to track progress and identify areas where additional support is needed.

# System Requirements

### Functional Requirements

* **User accounts:** Users should be able to create and manage their own accounts. This should include the ability to set a username and password, as well as update their profile information.
* **Quiz creation:** Users should be able to create their own quizzes. This should include the ability to add questions, choose the type of questions (e.g., multiple choice, true/false, fill-in-the-blank), and set the time limit for the quiz.
* **Quiz taking:** Users should be able to take quizzes that have been created by themselves or other users. This should include the ability to see the time remaining on the quiz, review their answers, and submit the quiz when they are finished.
* **Scoring:** The application should automatically score quizzes and provide users with their results. This should include the ability to see the correct answers to the questions and their score for each question.
* **Quiz categories:** The application can allow the teachers and the students to add and take various quizzes in different domains
* **Timer and Difficulty levels:** The teachers will be able to set the timer and difficulty level of the quizzes.

### Non-Functional Requirements

The system shall meet the following non-functional requirements:

* **Performance**: The application should be able to handle a large number of users and quizzes without any performance issues.
* **Scalability:** The application should be able to scale to accommodate a growing number of users and quizzes.
* **Security:** The application should be secure and protect user data from unauthorized access.
* **Reliability:** The application should be reliable and available to users when they need it.
* **Usability:** The application should be easy to use and navigate.

**Use Cases**

The following are the main use cases for the online quiz application:

* Create a quiz: A user can create a quiz by adding questions, choosing the type of questions, and setting the time limit.
* Take a quiz: A user can take a quiz by selecting a quiz from the list of quizzes available.
* View results: A user can view their results for a quiz after they have submitted it.
* View leaderboards: A user can view the leaderboards to see the top users based on their quiz scores.

**Conclusion**

This SRS document has specified the requirements for an online quiz application. The application will allow users to create, take, and share quizzes on a variety of topics. The application will be web-based and accessible on any device with a web browser. The online quiz application will be developed and tested in accordance with the requirements specified in this SRS document. The application will then be deployed to a web server and made available to users. The online quiz application is a valuable tool that can be used for a variety of different purposes. It is convenient, flexible, engaging, and provides feedback and assessment