**QUIZZIK – aN ONLINE QUIZ PLATFORM**

**Project Abstract**

The **Quizzik – An Online Quiz Platform** is a web-based application designed to create, manage, and participate in quizzes. The platform provides administrators with tools to create quizzes comprising various question types. Participants can attempt quizzes with automatic scoring and real-time timers. Additionally, a leaderboard and performance analytics offer insights into user achievements and quiz trends. This project aims to modernize the traditional assessment methods by integrating technology for a seamless and efficient quiz experience.

**Version 1.0**



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# Purpose of this document

The purpose of this document is to provide a comprehensive overview of the Online Quiz Platform project. It serves as a guiding framework for understanding the project's objectives, system architecture, and key functionalities.

**Features**

* Quiz Management (Admin): Create, edit, and delete quizzes with multiple question types (MCQ, True/False).
* Difficulty-Based Timers: Automatically set time limits based on question difficulty.
* Quiz Attempt (Student): Users can attempt quizzes within the specified time.
* Automatic Scoring & Feedback: Real-time score calculation and result display.
* Leaderboard & Performance Analytics: Displays ranking and insights such as "Top 2% of the attempters".

**Technologies Used**

The **Online Quiz Platform** leverages modern technologies to ensure scalability, performance, and a user-friendly experience. The following technologies will be used in the development of the platform:

**Frontend Technologies** : HTML , CSS, Bootstrap , Angular

**Backend Technologies :** [ASP.NET](http://asp.net/) Core , C#

**Database :** SQL Server

By integrating these technologies, the Online Quiz Platform will ensure a scalable, efficient, and user-friendly system suitable for a variety of educational and assessment needs.

# Business Case

1. **Executive Summary**

"Quizzik" is a comprehensive quiz management system designed to streamline the creation, management, and participation in quizzes. The system aims to enhance the learning experience by providing a user-friendly platform for both administrators and students. Built using ASP.NET Core and Entity Framework Core, "Quizzik" ensures modularity, scalability, and testability.

1. **Problem Statement**

Educational institutions and training organizations often face challenges in managing quizzes efficiently. Traditional methods of quiz management are time-consuming, prone to errors, and lack the flexibility needed to adapt to different learning environments. There is a need for a robust, automated system that can handle user management, quiz creation, question management, quiz attempts, and leaderboards seamlessly.

1. **Objectives**

* **Efficiency**: Automate the quiz management process to save time and reduce errors.
* **User Experience**: Provide an intuitive and engaging platform for users to create, manage, and attempt quizzes.
* **Scalability**: Ensure the system can handle a large number of users and quizzes without performance degradation.
* **Security**: Implement robust security measures, including JWT token generation, to protect user data and ensure secure access.

1. **Benefits**

* **For Administrators**: Simplified quiz creation and management, real-time leaderboard updates, and detailed analytics on quiz performance.
* **For Students**: Easy access to quizzes, immediate feedback on quiz attempts, and a competitive environment through leaderboards.
* **For Institutions**: Improved efficiency in managing quizzes, better tracking of student performance, and enhanced overall learning outcomes.

1. **Scope**

The scope of "Quizzik" includes:

* User registration and authentication
* Quiz creation and management
* Question and option management
* Quiz attempt submission and scoring
* Leaderboard management

1. **Stakeholders**

* **Administrators**: Responsible for creating and managing quizzes.
* **Students**: End-users who will attempt quizzes and view leaderboards.
* **Educational Institutions**: Beneficiaries of the system's improved efficiency and effectiveness.

1. **Cost-Benefit Analysis**

* **Costs**: Development costs, maintenance costs, and potential training costs for administrators.
* **Benefits**: Time savings, reduced errors, improved user satisfaction, and better learning outcomes.

1. **Risks and Mitigation**
   * **Risk**: Data security breaches.

**Mitigation**: Implement robust security measures, including encryption and secure authentication.

* + **Risk**: System downtime.

**Mitigation**: Ensure high availability through cloud hosting and regular backups.

1. **Conclusion**

"Quizzik" addresses the critical need for an efficient and user-friendly quiz management system. By automating and streamlining the quiz process, it offers significant benefits to administrators, students, and educational institutions, ultimately enhancing the learning experience.

# Appendices

## Glossary

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| **Acronyms** | **Definitions** |
|  |  |

## Other

# Terms & Conditions

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# Change Log

*Please note that this table needs to be maintained even if a Configuration Management tool is used.*

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| --- | --- | --- | --- | --- |
| Version Number | Changes made | | | |
| V<n.n> | *<If the change details are not explicitly documented in the table below, reference should be provided here>* | | | |
| Page no | Changed by | Effective date | Changes effected |
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