



Green University of Bangladesh

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Quiz & Earn: A Dual-Mode Quiz App with Real-Time Rewards and Competitive Leaderboard

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Chapter 1

Project Proposal

1 Overview

The Quiz Application supports both online and offline modes. The application is designed to address the challenges of inconsistent internet connectivity while providing a seamless experience for quiz creation, participation, and evaluation. The system integrates a user-friendly interface, secure data management, and real-time synchronization for online functionality, while ensuring offline usability through local storage. The app aims to benefit educational institutions, students, and quiz organizers by offering an efficient and reliable solution.

2 Problem Definition

The current landscape Many existing quiz applications focus primarily on entertainment, lacking meaningful reward systems and a strong educational foundation. These apps often limit users to online quizzes without providing a comprehensive, competitive, and rewarding experience. Additionally, most fail to create a platform that effectively combines education, competition, and tangible rewards, leaving users with an experience that is enjoyable but ultimately financially unrewarding.

The Quiz & Earn, addresses these issues by:

1. Making learning fun and engaging.
2. Offering tough questions in a competitive tournament to get rewards.
3. Providing users with opportunities to win real money, incentivizing continued engagement.

This way, users will get more than just a game, they will get a chance to learn, compete, earn and to engage with each other.

3 Motivation

In today's world, people are constantly overwhelmed with vast amounts of information, making it essential to find ways to make learning both fun and engaging. **Quiz & Earn: A Dual-Mode Quiz App** seeks to address this need by creating an interactive platform that combines entertainment with education. The app allows quiz enthusiasts to select topics of their choice and participate in quizzes, providing them with not only a fun learning experience but also the opportunity to win real money as a reward for their efforts.

By offering a competitive tournament mode, the app encourages users to enhance their knowledge through more challenging questions, fostering a deeper level of engagement and intellectual growth. The combination of entertainment and real-time rewards adds an exciting dimension to the app, making learning an enjoyable and financially rewarding experience. Ultimately, Quiz & Earn aims to create a platform where users are motivated to learn, compete, and succeed while having fun.

4 Objectives

- To create an easy-to-use quiz app that covers a wide range of topics, making learning fun and accessible for all users.
- To introduce a tournament mode where users can compete for real money rewards, enhancing excitement and engagement.
- To offer premium, challenging quizzes for subscribers, providing a deeper, more rewarding learning experience.
- To implement a smooth and user-friendly payment and withdrawal system for seamless transactions.
- To encourage continuous learning and personal growth by offering competitive gameplay with challenging questions.

Chapter 2

Literature Review

Quiz applications have gained popularity for their ability to combine entertainment with learning. However, most existing quiz apps like Trivia Crack and QuizUp primarily focus on entertainment without offering significant rewards or incentives for long-term engagement. Users often lose interest when there is no tangible benefit beyond the game itself [1].

Research shows that incorporating elements like leaderboards and real-time rewards increases user engagement and motivation, particularly in competitive settings [2]. Most quiz apps do not offer opportunities for users to win real money, which could be a strong incentive for sustained interaction. Additionally, the lack of a dual-mode system (casual and competitive) in existing apps leaves a gap for users who want both casual fun and challenging experiences [3].

Furthermore, many quiz apps lack offline functionality or do not offer premium content for advanced users. This limits the potential for users to engage in more challenging quizzes or tournament-style gameplay, which can improve knowledge retention and offer a more dynamic experience [4].

The Quiz & Earn app addresses these gaps by providing real-time rewards, competitive tournaments, and a dual-mode system, allowing users to engage in both casual and competitive learning environments, while also offering them the chance to earn real money.

Chapter 3

Methodology

The methodology for the Quiz & Earn project follows a structured sequence to ensure efficient development and implementation. Each step is visually represented in a block diagram with clearly labeled blocks and directional arrows to illustrate the workflow. The key steps are outlined below:

1 Requirements Analysis

- Identify user requirements, including key features such as quiz modes, reward systems, and user-friendly interfaces.
- Analyze technical requirements for frontend development, backend integration, and database management.

2 System Design

- Develop wireframes and prototypes to provide a clear visualization of the app's layout and user flow.
- Create a class diagram and system architecture to define relationships and interactions between app components.

3 Frontend and Backend Development

- Design and implement the user interface using Java and XML, incorporating interactive features like CardView and Lottie animations for an engaging experience.
- Develop the backend using PHP to handle user authentication, quiz data storage, subscription management, and secure payment processing.

4 Testing and Debugging

- Conduct unit testing to ensure the proper functionality of individual components.
- Perform system testing to verify app compatibility across devices and ensure a smooth user experience.
- Test the payment and reward systems to confirm secure and reliable transactions.

5 Deployment

- Launch the app on platforms such as the Google Play Store and BDApps Store, ensuring all platform requirements are met for approval.

6 Feedback and Optimization

- Collect user feedback after the app launch to identify potential improvements.
- Regularly update the app with new features and enhancements to maintain user engagement and satisfaction.

Chapter 4

Feasibility Study

0.1 Technical Feasibility

- **Current State:** Many quiz apps use basic technology that limits real-time interaction and secure transactions.
- **Proposed Solution:** The app will leverage cloud computing, secure payment gateways, and robust backend frameworks, ensuring compatibility with both Android platforms.
- **Evaluation:** Implementing these features is technically viable with the right resources and expertise, ensuring a secure and responsive user experience.

0.2 Operational Feasibility

- **Current State:** Existing quiz apps primarily offer offline or online play without real-time rewards or competitive features.
- **Proposed Solution:** The Quiz & Earn app will offer a dual-mode feature, enabling offline and online quizzes, with the latter providing real monetary rewards.
- **Evaluation:** This model is highly feasible, addressing user demand for flexibility and engagement, particularly in online gaming markets.

0.3 Financial Feasibility

- **Current State:** Existing apps typically generate revenue through advertising and in-app purchases, limiting user rewards.
- **Proposed Solution:** The Quiz & Earn app will utilize a monetization strategy that combines advertising with real-time user rewards, fostering a competitive environment.
- **Evaluation:** A cost-benefit analysis indicates that potential user engagement and revenue generation outweigh development and operational costs, provided there is a solid user acquisition strategy.

0.4 Project Management

The development of the **Quiz & Earn** app follows a streamlined process to ensure timely and efficient delivery:

Project Initiation

Define objectives, scope, and deliverables; assemble the team; and assess feasibility.

Project Planning

Create a Gantt chart for key tasks:

- **Weeks 1–3:** Requirements gathering.
- **Weeks 4–7:** System design.
- **Weeks 8–11:** Development.
- **Weeks 12–15:** Testing.
- **Week 17:** Deployment and launch.

Budget: 28,000 BDT for design, development, testing, and prizes.

Execution

- **Frontend:** Build UI using Java, XML, CardView, and Lottie animations.
- **Backend:** Use PHP for data handling, quizzes, and payment systems.
- **Testing:** Ensure reliability, security, and smooth functionality.

Monitoring

Track progress, resolve risks, and adjust based on testing feedback.

Closure

Launch on app stores, promote through marketing, and collect feedback for future updates.

Chapter 5

Social Impact and Benefit

- **Offline Accessibility:** Ensures students in villages or low-internet areas can learn without connectivity limitations.
- **Educational Alternative:** Offers an engaging and educational experience as an alternative to addictive games like PUBG and Free Fire.

Chapter 6

Conclusion

The Quiz & Earn app transforms learning by combining education, entertainment, and financial rewards. With offline access, dual-mode functionality, real-time rewards, and competitive leaderboards, it ensures inclusivity and engagement for users in all areas. By offering an educational alternative to addictive gaming, the app fosters intellectual growth and continuous learning, making a lasting impact on education and entertainment.

References

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