Quiz Desktop Application

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Quiz Desktop Application

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Abstract - The main idea of this project is to develop a quiz application for the college that will be interactive and time saving while conducting quiz competition. Currently there is such application used by the college to conduct the quiz competition as a part of co-curricular activities. The quiz application is designed using different methods. The design will enable to conduct quiz at ease without having to take time, encounter unnecessary errors and minimize the use of other additional materials as well as assistance. To develop this project, modern waterfall model was used as methodology because such type of software development model is used when the project is small. It also reviews all the phases as to determine if the project is on the right path and whether to continue or discard the project. The quiz application has a platform where administrator can add and modify the questions, categorize the questions, and add or modify the participants accordingly. Update on the scores will alos be automatically taken care by the application system. It also provides additional features such as generating reports for the participants. This project was developed to facilitate the literary coordinator to conduct the quiz activities in the academic institution.

1. INTRODUCTION

Quiz Desktop Application (QDA) which is named as Quiz-Master is an application that will be used while conducting the quizzes in the college. This project was developed to ensure that the quiz in the college would be conducted effectively considering the required resources such as manpower and the time constraints. Moreover, the system will take care the updates of the quiz questions and score report without error. The Quiz Desktop Application [QDA] process is fast, time saving and user friendly. The QDA was designed and developed to enhance the existing system of conducting quiz activities in the college as a part of co-curricular activities every semester. Current way demands more time, and requires additional resources. This system was developed to support the multiple participants taking the quiz at the same time.

2. RELATED WORK

The idea of using desktop application games is to engage students in the process of active learning which is not a new thing in the world [1]. Over the past several years, educators have been increasingly incorporating various games into their teaching curriculum to create an engaging learning environment for students. Although this can be very challenging and time consuming, but it would provide the learners with an interactive, collaborative and competitive environment that would motivate and encourage student participation in learning process.

Many games application was developed for the entertainment, creative and analytical thinking but at the same time, there were some other application designed to facilitate the learning. In “Game Plan. Technology and Learning”, nearly 70% of students learn through the visual presentation, active and interactive engagement [2]. Considering these, the QDA would be able to facilitate the student’s learning.

The students would not be maximizing the learning potential by just having one method [3]. The same paper also listed the average amount of information that was retained through a learning method. Only 5% of information were learned though the lecture method, 10% through reading, 20% though audiovisual, 30% through demonstration, 75% through practice by doing and 90% though actively engaging the learners in the activities.

The study also found that out of 100 percent only 30% of lecture can be understood by student, but at the same time, 70%, the students tend to forget what they have understood from the lecture. Therefore, the study found that engaging the learners in the activities retained for longer duration.

The quiz games such as 'Its's Quiz time' and Askutron Quiz Show earns about $8.19 and $14.99 for every single download. Therefore, we could see that this kind of application would make user and participants to use such apps for fun, entertainment and learning.

Most of the gaming application such as stated above, and Askutron Quiz Show was developed using C# and the infamous Unity 3D engine. The games such as Red Dead Redemption 2 and Fortnite were developed using c languages generating millions of dollars in revenue each week. Therefore, the programming language such as C++, C#, Java, Python, Lua are used in the developing games and application in the software industries.

3. EXISTING SYSTEM

There is no specific current system used by the college to conduct the quiz, the quiz is designed using different methods whenever it is conducted by the organizer. In the previous year, Microsoft power point was used to design the quiz. When such application is used it consumes lots of time and increases the workload of the administrator. The administrator had to create hyperlinks when framing questions and answers which consumes time. Every time the quiz is conducted, the quiz coordinator must repeatedly design the slides that requires additional assistance such as timekeeper and score marker. Therefore, quiz application is designed to replace the current system as it provides dynamic updating of the scores and sets the time automatically.

4. SYSTEM DESCRIPTION

The application was designed using visual studio with language C# and Microsoft SQL server as database. The application consists of two modules or components, admin and user side. On the admin side, the administrator has the privilege to add, modify and delete the quiz questions and answers. The administrator can also add different categories and participants in the database. The systems support to have the features to add question according to the categories and add or modify the number of participants based on requirements and situation.

5. METHODOLOGY

The Desktop Quiz Application was designed and developed using the Modern Waterfall Model. It is a sequential design process used in software development processes in which progress of the activity in the project would be flowing steadily downwards (like a waterfall). Waterfall model was used for developing the project as it is basically used for the small and medium project where there are no uncertain requirements. It was also reviewed that all the phases had to determine if the project was on the right path and monitor whether it would accomplish the aims and objectives stated in the proposal.

To meet the objectives and simplify the task, the project was carried out phase wise;

Phase I: Requirement Gathering and Analysis

The requirement gathering, and analysis was taken care where we gather required information for the project such as software needed to develop the application and information about previous procedures of quiz conducted in the college. The planning was done simultaneously with the requirement gathering and feasibility study.

Phase II: System Design

Similarly, in second phase, the system design activities such as logical design, physical design along with database design are taken care.

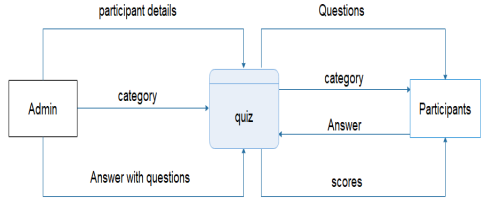


Figure 1: Context Diagram

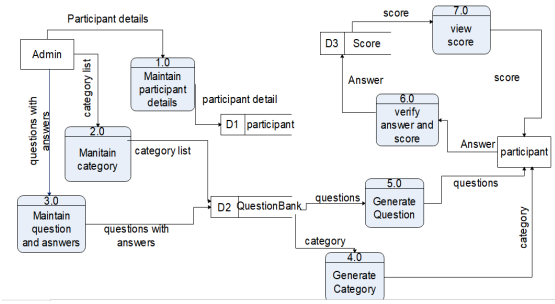


Figure 2: Data Flow Diagram

Phase III: Implementation

In this phase, the source code for the quiz application was written to meet the scope of the project. The physical design specifications for this application was converted in to the working code.

Phase IV: Integration and Testing

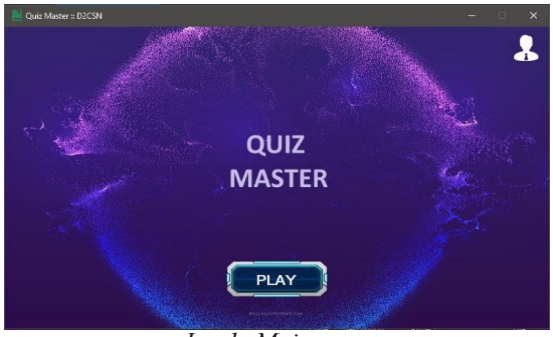
The system was tested several times before finalizing the final output. The errors encountered during the testing phase were rectified.

Phase V: Maintenance

The systems worked as expected at the moment and there may need minor maintenance if there are any issues with the compatibility in near future especially when the users migrate the QDA from one system to other.

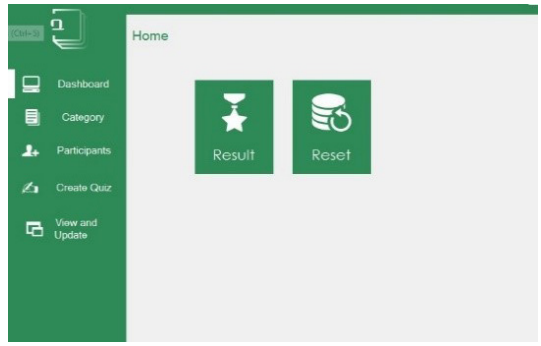
6. OUTCOME/RESULT

The image below is the main Graphical Interface of the QDA. The page has the play button where the user can start the quiz and at the same time, Administrator button take users to the administrator page.



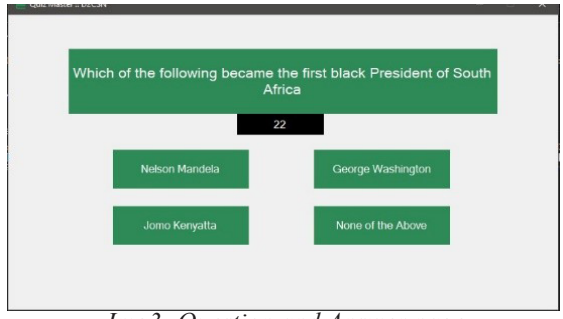
Img1: Main page

The image below is the Administrator page where it has the functionality such as adding, modify and deleting the quiz questions and answers, adding categories and participants, generating the quiz result report, and resetting of the quiz.



Img2 – Administrator page

The image below is the question and answer page where the participants can answer the questions within the given time frame. This page will also display the message to the users on their quiz attempts.



Img3- Question and Answer page

7. CONCLUSION

Quiz Desktop Application is user friendly and it can be implemented in schools and academic institution while conducting literary activities such as quiz. It can also be used as the question banks for testing the knowledge on various categories. This QDA would enhance the existing system of conducting the quiz activity in JNEC. This application system is portable, easy to manage and time saving beside interactive environment.

8. FUTURE SCOPE

In this application the questions cannot pass from one group to another if the questions is unanswered. In future, features like passing questions can be

added to the application.

The application does not have any platform where audience can have interactive session. In future, such features can be added to the application.

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