

**SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION**

**Higher National Diploma in Information Technology**



**Project Proposal**

**Creating A Web Application for Online Quiz System  
(QuizzA Web Application)**

Individual Project

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## DECLARATION

I hereby declare that this project proposal is based on my original work and has not been submitted previously for any other Diploma in any institution. To the best of my knowledge, it does not contain any material written by another person.

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Signature

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Date

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## CHAPTER 1: INTRODUCTION

This project proposal is submitted” to meet the web application development requirements of the individual project module conducted by the Advanced Technological Institute, Anuradhapura.

This document gives a simple introduction to this web application development project.

This web application is titled “**Creating a web application for online quiz system**”. This web application is created to increase some general knowledge in peoples’ minds. There are two actors in this application. There are Admin and User. Admin is the owner of this system, who has full control of the system. The User is the person who is enrolling in the system from the outside environment. Every person can log in to this system as a user without any age limit.

On the admin side, while managing the system, the admin can create questions in a variety of categories with answers. After login to the system (web application), the user can give answers to the questions which are in the quiz categories he or she has chosen. The user has 30 seconds for each question. There are 3 main categories in the web application which are Information Technology, Geography, and Sports. Each main category has subcategories and each subcategory has 3 quiz levels which are named Basic Level, Middle Level, and Hard Level. After completing a level or not user can see his or her scores and after completing a level admin can level up the user and give a badge for completing quizzes in each level. I planned to use HTML, CSS, and JavaScript, as front-end development languages and PHP, and MySQL as back-end development languages to develop this web application.

Here is a brief introduction to this web application development project.

## **CHAPTER 2:           BACKGROUND AND MOTIVATION**

In the background, there are some existing quiz applications I found for this online quiz application.

### **ETEST**

This quiz web application I founded from the internet named “etest.lk” which is developed in Sri Lanka. In this existing system, there are three (3) actors. They are Admin, Instructor, and Student. ETEST online exam platform provides the best quiz maker tool for both teachers and businesses. This platform is used for schools, universities, distance learning, online courses, online certification, practice test, and more, in addition, it provides past papers and model papers for students to practice for O/L and A/L examinations.

Also, this web application appearance has a simple and user-friendly interface. Admin is managing this system while the instructor can create questions based on certain subjects and topics. In the system, questions can also be randomized from the available pool of question bank. Students can log in to the web application and can face these questions, which are created by their instructor. The Instructor can track students answering performance. And can share quiz links with students. After completing a course in a subject, the system issues an online valid certificate to students.

### **VISUAL DNA**

The Visual DNA is a personality test and a free online assessment quiz for gaining more insight into what drives in user’s mind. It helps the user to explore different areas of the user’s personality, user’s mindset, attitudes towards money, relationships and so much more. After answering questions user can see how those elements combine to gain deeper insight into the user’s personality as the last output. This web application has a simple structure so every person can use it easily. In this existing system, there are two (2) actors. They are Admin and User.

### **NATIONAL GEOGRAPHIC KIDS**

This web application is a kids-based application. Here, users (kids) can play games, watch videos, know information about animals, and explore more like magazines, etc. In this existing system, there are two (2) actors. They are Admin and User. In the games section, there are five (5) types of games. Those Quizzes are Personality Quizzes, Puzzles, Action, and Funny Fill-In. And they (admin) get those quizzes from their “NAT GEO KIDS MAGAZINE”. In the Quizzes section, there are quizzes about U.S. Presidents, U.S. States, Royalty, Anatomy, Animals, Space Exploration, Sports, etc.

### **CHAPTER 3:           PRELIMINARY INVESTIGATION**

In the “Background and Motivation” topic in this project proposal, I have explained the existing quiz web applications used at the present time. From that web applications, I found a few problems, and to solve that problems I developed my web application and also with adding some upgrades to my web application from the existing systems.

#### **ETEST**

In the problem view, this quiz web application is developed for especially university students and school students in grade 1 to grade 13, with specializing in ordinary level and advanced level examinations. So, on the user side, students and instructors can log in to this system. Then how can other people, like school leavers, job applicants, etc. get a login to this system? Then I planned to develop my “QuizzA” web application to every person can log in to my system and can follow quizzes without any age limit.

And the user has to pay some fee of a charge to use this ETEST web application after the one-month free offer. But as a solution, I developed my web application that can use by every person free of charge.

In upgrading view, I planned to develop my quiz web application with a user-friendly interface and users do not want any software installation required to use this “QuizzA” web application.

#### **VISUAL DNA**

In this web application, when seen in the upgrading view, in the system user after answering questions, user can see deeper insight into his or her personality result. For example, how is the user’s character, sociability, attitude, and self-control likewise, I used that feature for my system to develop user’s quiz answering scores and earned level completing badges to display in the user’s dashboard of my web application.

#### **NATIONAL GEOGRAPHIC KIDS**

This kids-based quiz web application, in problem viewing mode, this web application is developed for aged 6 to 13 kids. Because there are quizzes also add for only the kid level. Then, I develop my web application to everybody can use it and with adding general knowledge questions in three (3) level types. There are Basic Level, Middle Level, and Hard Level. And developing quizzes into category view and with subcategories.

I found above few problems and upgrading methods in those existing systems that I found on the Internet. Then using those solutions and upgrades, I am trying to develop my web application.

## **CHAPTER 4:        AIMS AND OBJECTIVES**

### **4.1 AIM**

My web development project aims to develop a system for online quiz system for everybody can use without any age limit to increase users' general knowledge in more.

### **4.2 OBJECTIVES**

Under the objectives of this web development:

- Every person can log in to this system as a user without any age limit.
- After login, the user can select any main quiz category and in their subcategory.
- But in a subcategory, users have to answer the questions in sequence.
- Every question has 30 seconds and three attempts.
- After completing a level in a subcategory, the user can earn a badge that is issued by the system.

## **CHAPTER 5:           PROPOSED SOLUTION**

### **5.1       FEATURES OF THE SYSTEM**

This web application is developed by solving existing systems problems and using their feature upgrades.

In the “QuizzA” system, the main purpose is to develop a quiz web application that can everybody use without any age limit and to increase users’ general knowledge. I planned to use HTML, CSS, and JavaScript, as front-end development languages and PHP, and MySQL as back-end development languages to develop this web application. There are three (3) main quiz categories and in the main categories, their subcategories with three (3) quiz levels.

In this web application, there are two actors. There are Admin and User. Admin is the owner of this system, who has full control of the system. The user is the person who is enrolling in the system from the outside environment. Every person can be a user of this system. Admin can control the system, add quizzes, remove quizzes, update quizzes, add users, remove users, update users, and manage users’ results of answering the questions. Also, manage correct answers to the questions.

Users can select any main category and any subcategory to answer the questions. But, in a subcategory, their user has to answer the questions in sequence (after passing one question, after another question). For a question, the system has given 30 seconds for the user to answer each and every question with three attempts. Because in each subcategory, there are three (3) levels which are named Basic Level, Middle Level, and Hard Level. In that three attempts, if the user gives the correct answer to the question, he or she will pass to the next question or level. After three attempts, the system will show the correct answer.

After completing each level in each subcategory, the system will be issued a level-completing badge for the user with his or her scores. In there, the user can see his or her scores for each subcategory and each sub-category without completing the level. But the level-completing badge is only issued after completing the level.

As a result of researching existing systems, I found some features to add to my system. After know about the “ETEST” quiz web application, I decided who are the users of my web application and develop it for everybody. And then reading after “VISUAL DNA”, I add another feature to my system. That is analytics for users’ answering for quizzes. In “NATIONAL GEOGRAPHIC KIDS”, has a categorized quiz and with user-friendly interface. Using this feature, a system can get user attraction towards the system. So I decided to develop this web application also with a user-friendly interface.

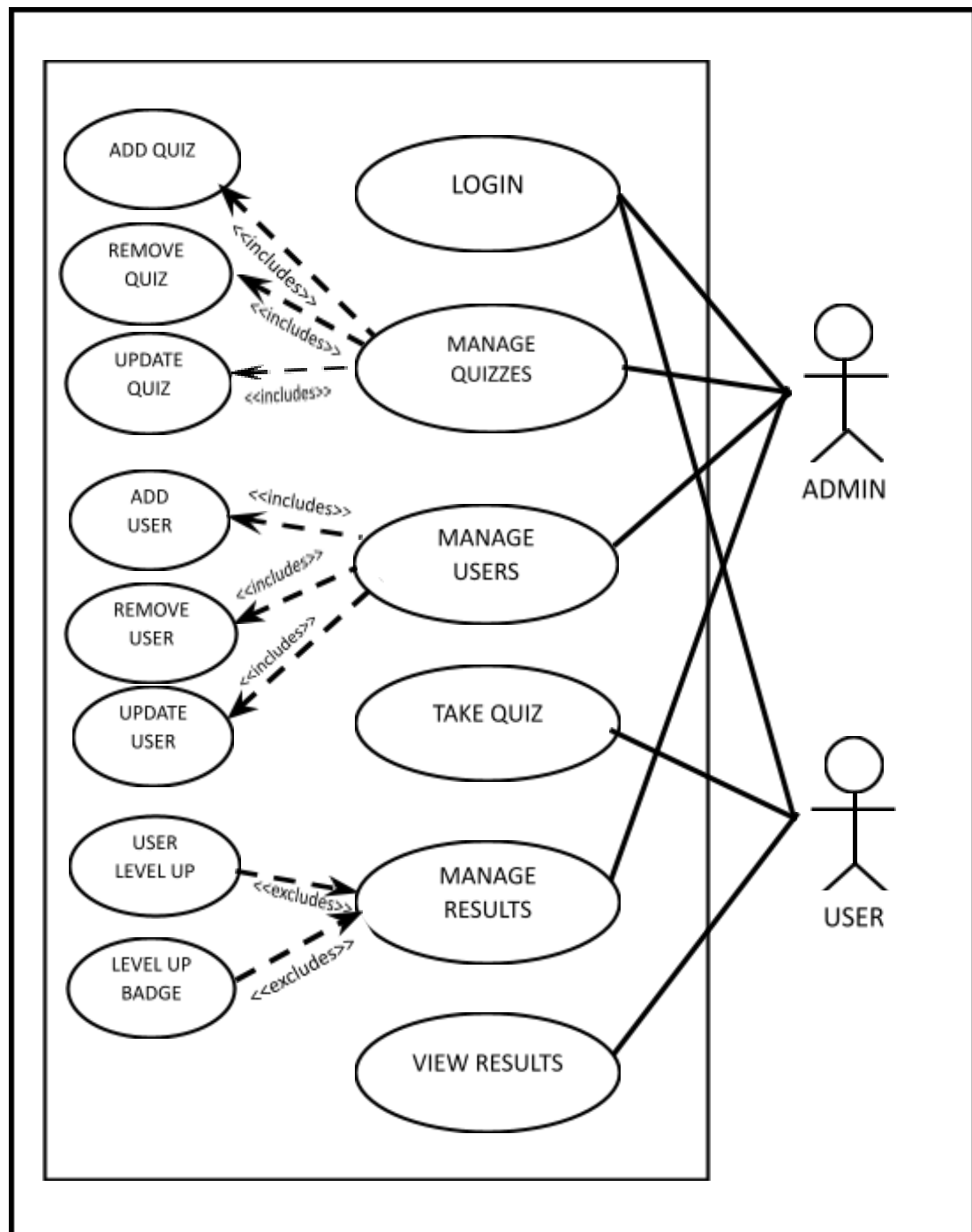


Using this web application, users can get the following advantages.

- User can get motivated because it's quizzing like a gaming option
- User can keep himself/herself updated
- User can gain more knowledge
- User can get good marks in competitive exams etc.

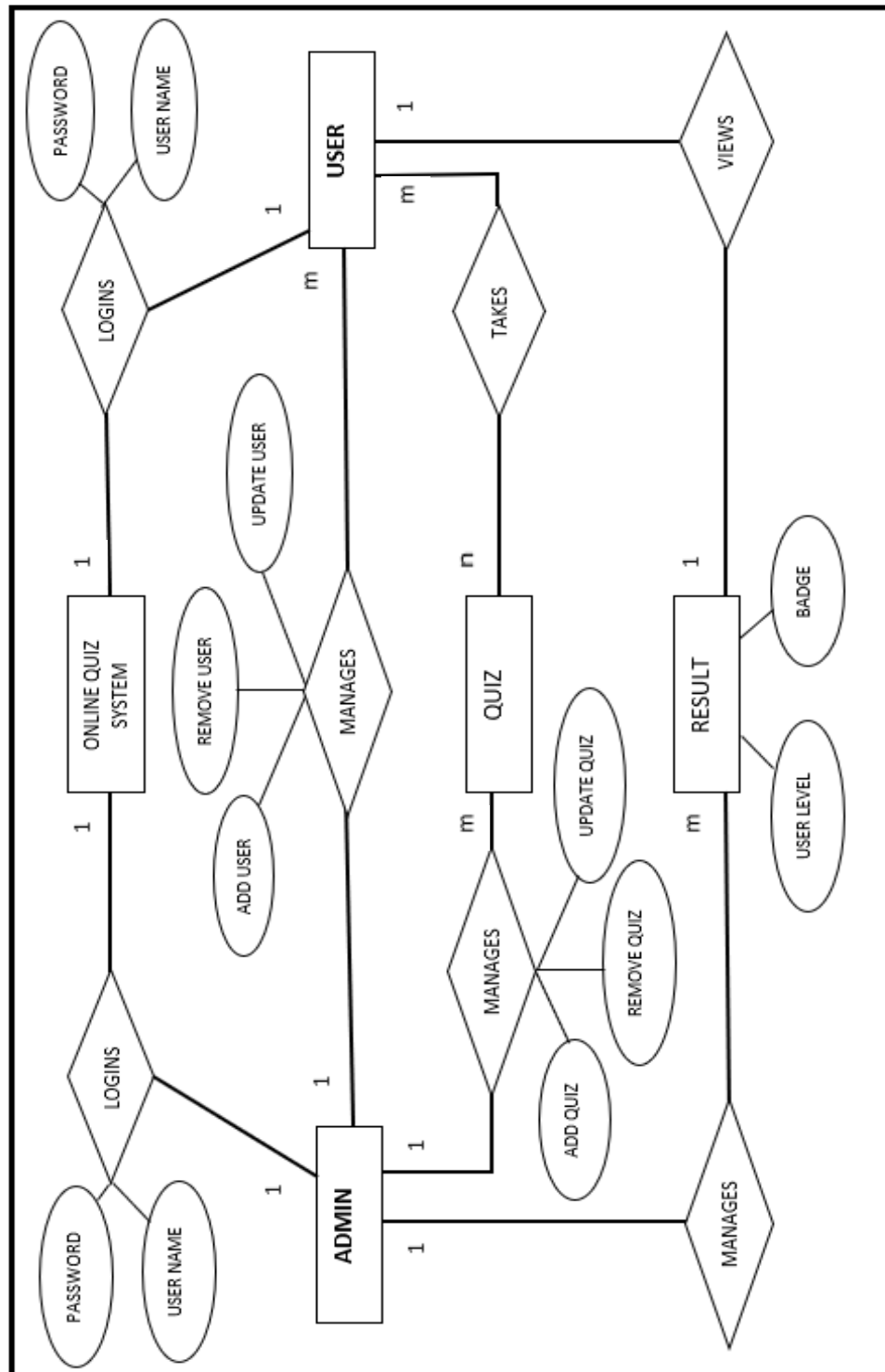
The diagrams which represent the “QuizzA” web application, are in the following. After studying these diagrams, can get an idea about this web development project about “how it is work?”.

## 5.2 USE CASE DIAGRAM



5.2: FIGURE 1: USE CASE Diagram for Online Quiz System

### 5.3 ER DIAGRAM (ENTITY-RELATIONSHIP MODEL DIAGRAM)



5.3: FIGURE 2: ER Diagram for Online Quiz System

## CHAPTER 6: FEASIBILITY STUDY

In the feasibility study, there are technical feasibility and economic feasibility.

### 6.1 TECHNICAL FEASIBILITY

To develop this project, software and hardware tools are essential. The system cannot be developed successfully without these software and hardware requirements. These are details of the requirements for this online quiz system.

#### 6.1.1 SOFTWARE REQUIREMENTS

Software	Description
<u>Operating System:</u> Windows 10 Pro (64-bit)	Manage all the software and hardware on the laptop.
<u>Microsoft Office Professional Plus 2016:</u> Microsoft Word Microsoft PowerPoint	Tool for editing, viewing, and creating documents, and presentations.
<u>Content Management System (CMS):</u> WordPress	To create and manage web applications.
XAMPP Server	Create a connection between Apache and MySQL in the local host server.
<u>Web Browser:</u> Microsoft Edge (Official build – 64-bit)	Find source articles on literature review, and coding, and find questions and answers for the web application.
<u>Front-End Development Languages:</u> HTML, CSS, JAVASCRIPT	To see the structure, design, behavior, and content of the web application. (client-side)
<u>Back-End Development Languages:</u> PHP, and MYSQL	For storing and organizing data. This is the portion of the web application user can't see. (server-side)

Table 6.1.1: The software used for Online Quiz System

### 6.1.2 HARDWARE REQUIREMENTS

Hardware	Description
<u>Laptop:</u> DELL Inspiron 3543 <u>Processor:</u> Intel Core i5 – 5200U CPU@ 2.20GHz  RAM – 4GB Storage – 1TB HDD	To develop the system, edit, and view documents.
4G/LTE Wireless Router	To access the Internet.
Canon PIXMA iP2800	Print documents.
Pen Drive 32 GB	Backup data.

**Table 6.1.2: The hardware used for Online Quiz System**

### 6.2 ECONOMIC FEASIBILITY

In the development of this project, economic feasibility is also very important and essential. Here can calculate all man hours which are taken to develop this system and find economical value from that.

The total man hours per project –

The total number of workers	=	01	
Total number of hours worked in a day	=	05	(hours)
Total number of days worked over a specific period	=	<u>120</u>	X (days)
<b>Total man hours</b>	=	<u>600</u>	(man hours)

## CHAPTER 7: GANTT CHART

Task / Week	1	2	3	4	5	6	7	8	9	10
Discussion about all application types and CURD operations.										
Project title discussion.										
Research about similar existing projects and find their problems.										
Project title registration.										
Discussion about project proposal writing.										
Start project proposal writing.										
Presenting proposal Progress to Supervisor.										
Discussion and correction of the draft of proposal.										
Complete writing and typing project proposal.										
Submit project proposal to Supervisor.										
Starting to develop the system from the beginning level										

**Table 7: Time frame for Online Quiz System Web Development Project**

## CHAPTER 8: REFERENCES

Here are the references I used to create this document.

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