**Kathmandu University**

**Department of Computer Science and Engineering**

**Dhulikhel, Kavre**

# A Project Report

**on**

# "Quiz of Nepal (QoN)"

**[Course Code: ENGG 102]**

**(For partial fulfillment of I Year/ II Semester in Computer Science)**

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## Submission Date

27th July, 2018

# Bonafide Certificate

**This project work on**

**"**Quiz of Nepal (QoN)**"**

**is the bonafide work of**

**"***Usta Adhikari,*

*Anurupa Shree Dhamala,*

*Prabhat Neupane*

and

*Kiran Neupane***"**

**who carried out the project work under my supervision.**

**Project Supervisor**

_____

**Dr. Purusottam Kharel**

# Acknowledgement

The accomplishment of “Quiz of Nepal (QoN)” wouldn’t have been possible without the valuable contribution of “*Department of Computer Science and Engineering (DoCSE)*” and our project coordinator Dr. Purusottam Kharel. We would like to express our heartful thank you to our supervisor Dr. Purusottam Kharel, who gave us ideas as well as the platform to work away from our regular course and gave us their valuable time to work upon and discuss about all the essential aspects of our project. Their help in maintaining a sequential execution of tasks helped us meet all the deadlines put forth during this project.

Sincerely,

Usta Adhikari (02)

Anurupa Shree Dhamala (15)

Kiran Neupane (31)

Prabhat Neupane (32)

# Abstract

This project was assigned to the first-year students for partial fulfillment of the course ENGG 102. We started with the concept of developing something interactive which will help student to know more about our country Nepal by playing Quiz on various topic like tourism, agricultural, natural aspect and history of our country Nepal. This will help student to enhance their knowledge and know more about our country Nepal.

This project will help students to gain lots of information which will be provided in fun and very effective way.

This report describes the overall design, planning, objectives and features of the application to be undertaken by us if given us an opportunity.

# List of Figures

# Abbreviations

| Short Form | Full Form |
|---|---|
| SFML | Simple and Fast Multimedia Library |
| DoCSE | Department of Computer Science and Engineering |
| KU | Kathmandu University |
| PHP | Hypertext preprocessing |
| MySQL | My Sequential Query Language |
| QoN | Quiz of Nepal |
| RAM | Random Access Memory |
| HDD | Hard Disk |
| SSD | Solid State Drive |
| MB | Mega Byte |

# Chapter 1: Introduction

## 1.1. Background

Quiz is a known term for all, it is a way to play and learn various details of different domains in an interactive way. In today's world people becoming more passive to learn things, they are almost overtaken by various electronic devices like mobile, laptops etc. In this context most of the people never know various interesting facts about their own native land so our program QoN is focused to let people know about various aspects of our country by playing interactive Quiz.

## 1.2. Objectives

The basic objectives of QoN are as follows:

- Create a platform where there is many more information about different aspects of our country Nepal.
- Help interested people to learn various aspects of our country in fun way playing interactive Quiz.

## 1.3. Motivation and Significance

Being the students of Computer Science, we our self don't know about our own country, there are still very much hidden secrets and hidden aspects of our own country remained to be known by lots of students like us. This will help us know about various problems of our country and help us think about the solution to those problems. Everybody has lots of busy things in their real life but also, they manage time to use laptops and mobiles, so we targeted such students who will spend their leisure time with our application whenever they get bored so that their time can be utilized in understanding new and interesting findings.

# Chapter 2: Related Works

We researched and collected some data on other application that works on similar principle. But on different aspects are listed below:

## www.quizfactor.com:

It is a web application where users can play various photo-based identification quiz on topic like identifying cities, animals, birds etc.

## eZone e-test:

It is a paid application made by eZone which focus on entrance examination of students providing various question of different subject.

# Chapter 3: Design and Implementation

## 3.1. System Requirement Specification

### 3.1.1. Software Specification

#### 3.1.1.1. Front End Tools:

- **Linux Operating System:**
  Linux Operating System is used up to develop the system. This doesn't mean our system won't work on other operating systems like Windows or MacOS. Our system will work on those platforms also.
- **C++**
  We have built our application using C++ programming language as it was the only programming language taught to us in this semester.
- **SFML:**
  SFML is a C++ library which was made for building games with C++, but we used this library as a designing tool for our user interface. This library was also used for building communication with PHP & MySQL database for our application.

#### 3.1.1.2. Back End Tools:

- **PHP 7.0:**
  PHP is a general-purpose programming language that we used to design the system. We used this tool on to create the login system, call MySQL queries, etc. In this system, we used the 7.0 version of PHP.
- **MySQL:**
  MySQL is an open-source relational database management system. All the database of the system has been handled in MySQL.

### 3.1.2. Hardware Specification

The following specifications are minimum specifications required hardware-wise to run our system:

- **CPU:** Pentium 4, 1.5 GHz or Athlon XP 1500+ processor or higher
- **Memory:** 128 MB RAM
- **Hard Drive:** A HDD or SSD with 500 MB free space
- **Graphics Hardware:** 3D Hardware Accelerator – 64 MB of memory minimum DirectX 9.0b
- **Network:** Local network in a computer is required to make the system communicate with database.

## 3.2. System Design

### 3.2.1. System Architecture Diagram

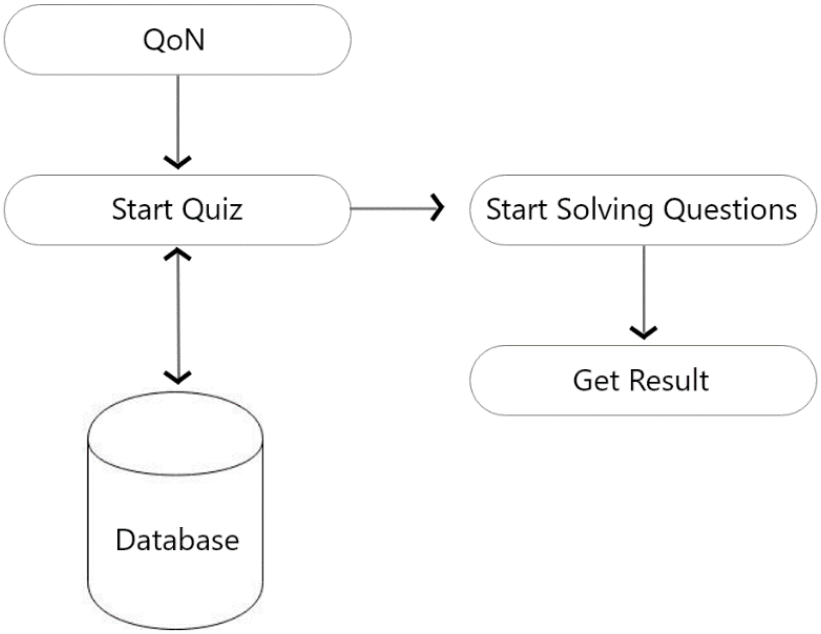


*Figure 1: System Architecture Diagram*

### 3.2.2. Use Case Diagram

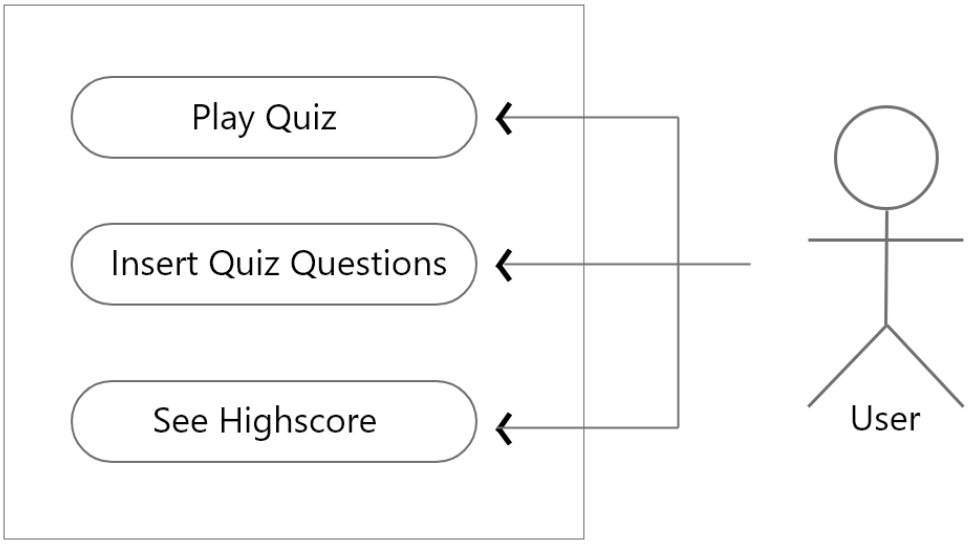


*Figure 2: Use Case Diagram*

# Chapter 4: Discussion on the Achievements

## 4.1. Challenges Faced

There were tons of problems which made hard to accomplish this project. Some of them are as follows:

- Firstly, we were unknown with C++ at beginning and SFML library was huge challenge for us, so we messed out few times, but finally we learned it and proceed forward with this product with us.
- It was painful to collect valid information to keep in this application which was our challenge.
- Main challenge we faced was that we were not used to of team work and doing separate things and assembling that separate items into a project.
- Due to the Global Startup Lab event held by MIT, Ncell and KU time management became challenging for completion of this project.
- Since we choose a basic library SFML where there are not any built-in elements to implement directly in a project it resulted a painful moment making forms for data enter because every element for input field was drawn with the help of images and appending String or Boolean value into it.

## 4.2. Features

The following are the features of the system we built:

- User can play quiz and see how much they were able to give right answer.
- User can add their own questions into the application so that they can share it with other with their own set of questions.

# Chapter 5: Conclusion and Recommendation

## 5.1. Limitations

Since this was the project built when we all the project members are in learning phase, we were just known with the basic of programming and suddenly holding responsibility to do programming project was bit of challenge for us which resulted certain limitation which are as follows:

- We used SFML library which was not meant to be used for this project since there were not enough items required to build this project we have to build it by our own which resulted in bad user interface.
- It was made by the herd of nerd programmers, so the program is not enough efficient.
- It used MySQL as a database, so localhost connection must be initiated for this program to work.

## 5.2. Future Enhancements

This project has some huge future enhancements, we are thinking to make its mobile application version where the application is going to have the features enlisted below:

- Since people are mostly interacting with their mobile so will be available for android as well as iOS users.
- We are planning to make a complete Quizzer application where every user can login into the system and make their own quiz question sets and make it available for other user to play it.
- We are also planning to focus on study of students by making sections inside the application from where they can solve various challenging questions regarding to entrance examinations or competitive coding and algorithm solving questions, etc.

# References


1. Amit Roy, K. R. (2018, 06 10). *YouTube*. Retrieved from Math Savior - Game on SFML: https://www.youtube.com/watch?v=-Vn3WwBsG5A
2. Banas, D. (2018, 06 25). *C++ Programming - YouTube*. Retrieved from YouTube: https://www.youtube.com/watch?v=Rub-JsjMhWY
3. Gomila, L. (2018, 06 28). *SFML Tutorials*. Retrieved from SFML Dev: https://www.sfml-dev.org/tutorials

# Appendices


*Figure 3: Home page of QoN*


*Figure 4 : Topic Selection For Quiz*

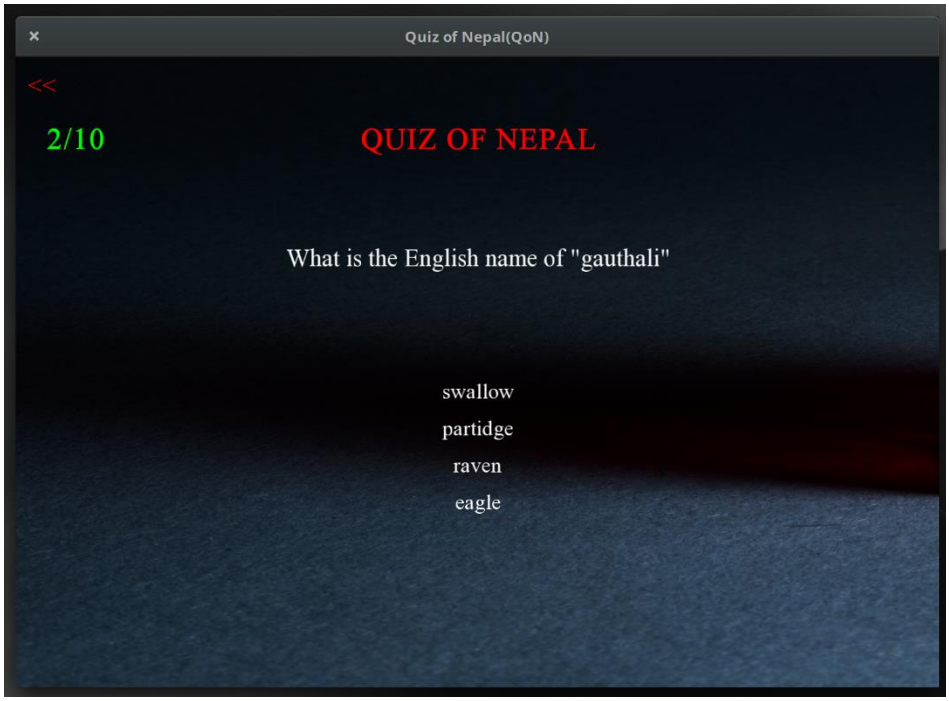


*Figure 5 : Quiz playing panel*

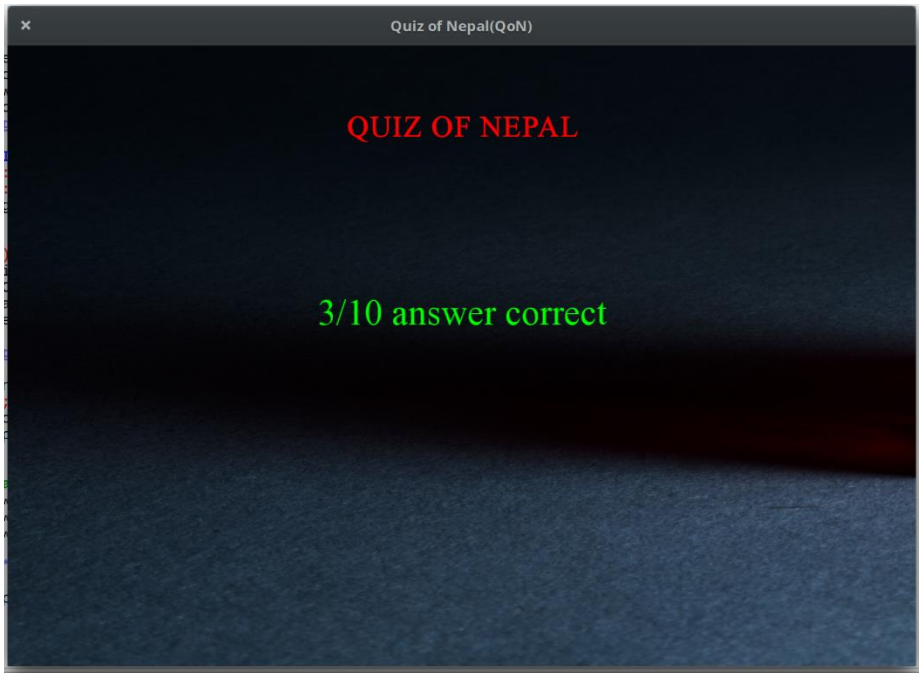


*Figure 6 : Quiz completion panel*

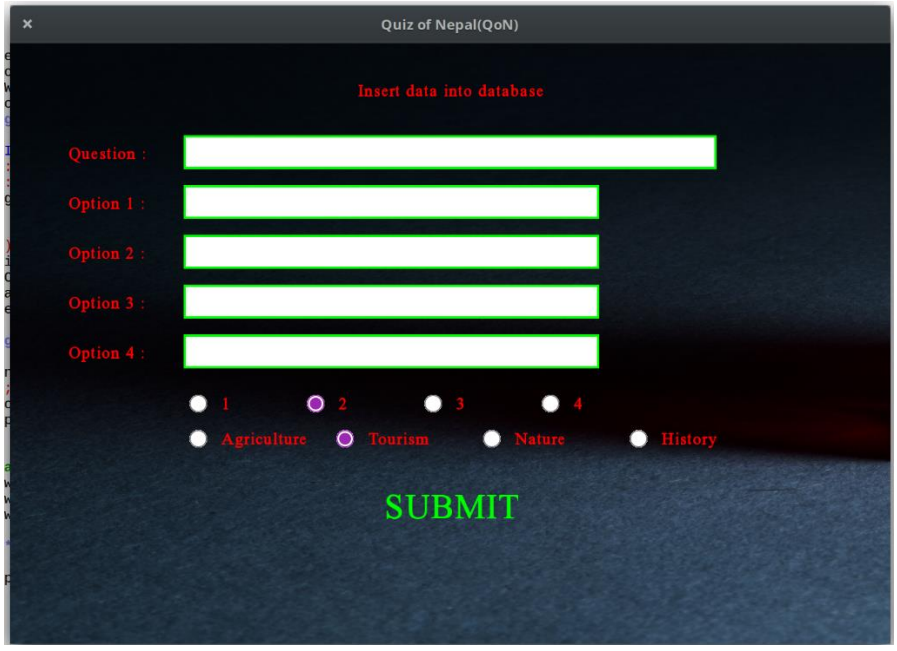


*Figure 7 : Data input panel*

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