



# Quiz Point

Version 1.0

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## Introduction

### Purpose

Often, a contest organizer or teacher or hiring of an employee requires the student or participator's assessment. For this purpose people usually want to organize the quiz based exam through which they can test the knowledge of others so there is a lack of such a platform that gives functionality to everyone to organize the quiz easily with a user-friendly interface for both organizer and participant. So the main purpose is to create such a platform that is open and accessible for all.

### Document Conventions

The Documentation follows specific guidelines which are as follows:

- Indexing of the Documentation has been mentioned on the 1st Page excluding the Cover Page.
- The Headings are written using Bold Font Times of size 18
- The Subheadings are written using Bold Font Times of size 14
- The Content is written using Italic Font Arial of size 11

### Intended Audience and Reading Suggestions

The Documentation is meant for the following categories of People:

- Project Developers
- Project InCharge Faculty
- Project Maintainers
- End Users

## Product Scope

The scope of this project is very broad compared to manually taken exams.

They are:-

- This app can be used in educational institutions as well as incorporate the world.
- Can be used anywhere any time as it is a web-based application (user location doesn't matter).
- No restriction that the examiner has to be present when the candidate takes the test.
- No manual work of preparing and storing the result information.
- Less time consuming, as the result, is calculated immediately after the test and displayed to the student/candidate.
- For students/candidates, it saves time of going too far away centres to give exams.

## References

This web application has been prepared on the basis of discussion with Team members and also taken information from the following website.

## Overall Description

### Product Perspective

There are various MCQ quiz Websites that exist on the internet with different criteria. Each of the existing applications has its own goodness and problems But the main point is that Each of them is mainly focusing on educational quiz and test of students and it's limited only to students and teachers.

But on this QUIZ POINT website, Our focus is not on educational quiz only we are going to provide the platform to companies to organize quizzes for taking survey and feedback, the management who can also organize opinion-based feedback quizzes and it's also helpful for small Organization like startups and NGO's.

QUIZ POINT is a web-based solution.

### Product Functions

The main objective of the project MCQ Quiz Application is to manage the details of every user and quiz. The purpose of the project is to build an application to reduce the manual work for managing the MCQ quiz and it's open for all anyone can create and organize quizzes and we will follow to achieve these objectives in this project.

- To create an appropriate platform for the best management of the MCQ test.
- To overcome the time-consuming issues and taking MCQ tests.
- To release the marks of the test taker as soon as possible.
- To manage the information of different tests.

## User Classes and Characteristics

Many users such as Administrator Organization, Candidate can use the system. Only the administrator of the system able to modify or update the system, but every user, whether an organization or a candidate, with a valid email ID and password, should be able to view his details such as his personal information, marks in previous tests etc.

There are various kinds of users for the product. Usually, web products are visited by various users for different reasons.

The users include :

- Chancellor who will be acting as the controller and will have all the privileges of the administrator.
- Candidates who will be using the above features to enjoy online quizzes.
- Quiz Organizer who will prepare a quiz for other Candidates.

## Operating Environment

This app is internet-based so it will run in any operating system with internet access through a web browser. The only requirement to use this online product would be an internet connection.

## Design and Implementation Constraints

The whole implementation is done in two modules, the first one is Quiz Organizer and the second is examinee.

- This first module tracks the path of quiz organizers. In this module, it shows how quiz Organizer can log in into the system with a valid Id and password and can create a new quiz and they can share it using a unique link and quiz password privately with Candidates or they can put it publicly open for all websites users.

- This second module tracks the path for the examinee, the exam in can log in into the system with a valid id and password. After successfully logging into the system, the examinee can start a quiz. If the quiz is private then using the link and password provided by the Quiz Organizer Examinee can start the test. After clicking the start button the exam starts and the timer also starts. In this manner the examinee can take up the test and click the submit button, he will get the result of the section immediately.

## User Documentation

The product will include a help section to help the user at any moment during a visit to the website. The help section will include a product overview, complete configuration of the required software, technical details and contact information which will include an email address.

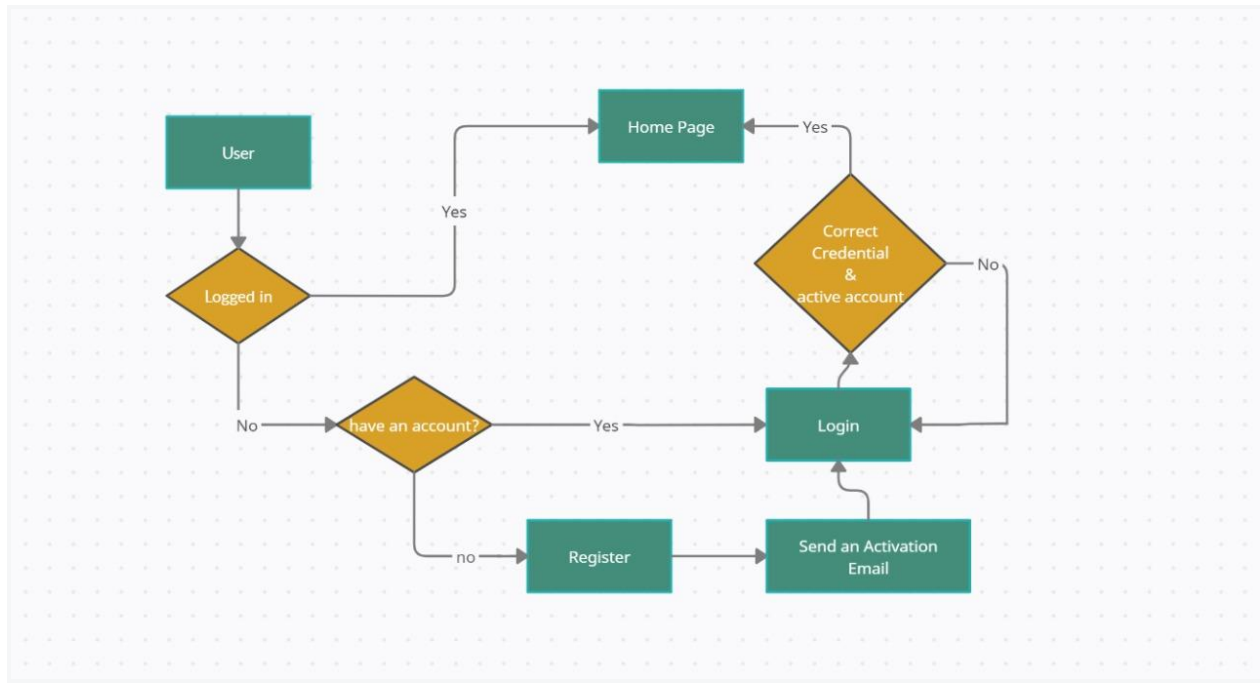
## Assumptions and Dependencies

- It is assumed that the user has basic knowledge of the system as any action by the user is considered valid during an examination.
- It is assumed that the data entered by the user while registering is true except for the Email ID.
- It is assumed that the candidate does not cheat during the exam as there are no supervisors around to monitor.
- Proper working of this app is mainly dependent on the internet connectivity of the users' computer.

## User Interfaces

It incorporates effective GUI concepts and focuses on user-friendly systems. It has good, appealing, attractive, and aesthetic web pages with an optimum hyperlink to select the required process.


For designing and implementing the Quiz Point application we have used HTML, CSS, JavaScript. The following pages have been designed using HTML, CSS and JavaScript to handle the defined objective of this project.



**Home page:** This is the first page that users observe after running the project. On our Home page, the Header contains different reference links like Logo, About Us, Team, Past Quiz, Contact Us, Create Quiz, login, Logout, Profile etc.

**Logo:** every time when users click our logo they will redirect to our Official Home Page.

**Logout Modal:** when users click the Logout Button, A Logout Modal will pop up. From That, users can log out from their account.



**Registration page:** By filling in some details users can register to QUIZPOINT. After that users will get one email from QUIZPOINT. By clicking that URL they can log in to our website.

**Login page:** by username and password users can log in to our website.

**Create Quiz:** by clicking create a quiz, users will redirect to our create quiz page, from which users can create a quiz as they like. There are three types of questions. MCQ type, Multiple answers.

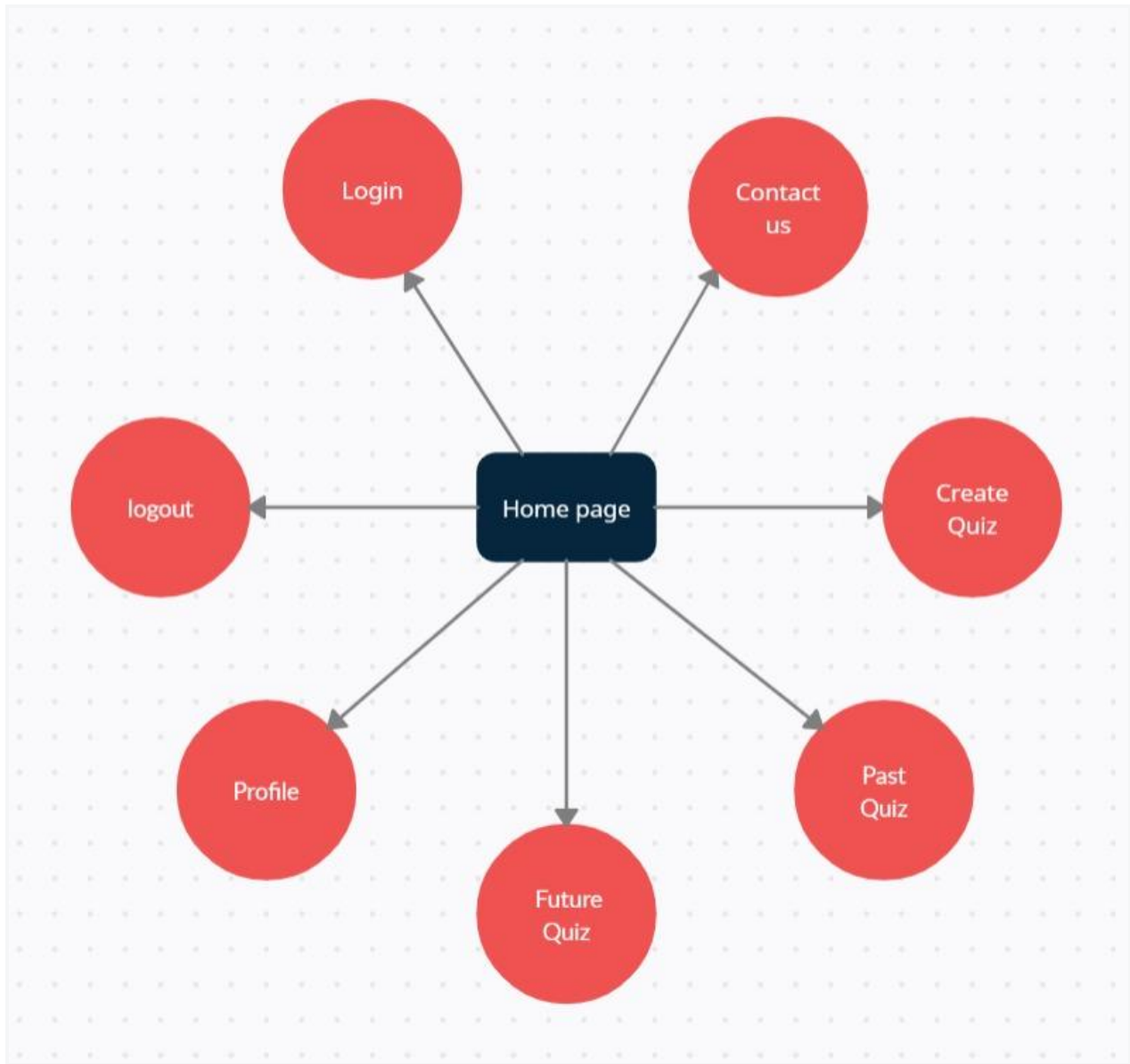
**Mcq-Type Section:** In MCQ type questions users can add as many options they want, by clicking the add option button. When users click the add option button one input field will automatically add where users can write options. When users add a question one button will automatically add at the right side. If the quiz creator has set an answer to that question then the colour of that button will be blue otherwise red. If the creator has set all the questions they can click stop adding the question button. They can set marks/points for each question too.

**Past Quiz:** On this page users can past quizzes which they have attended.

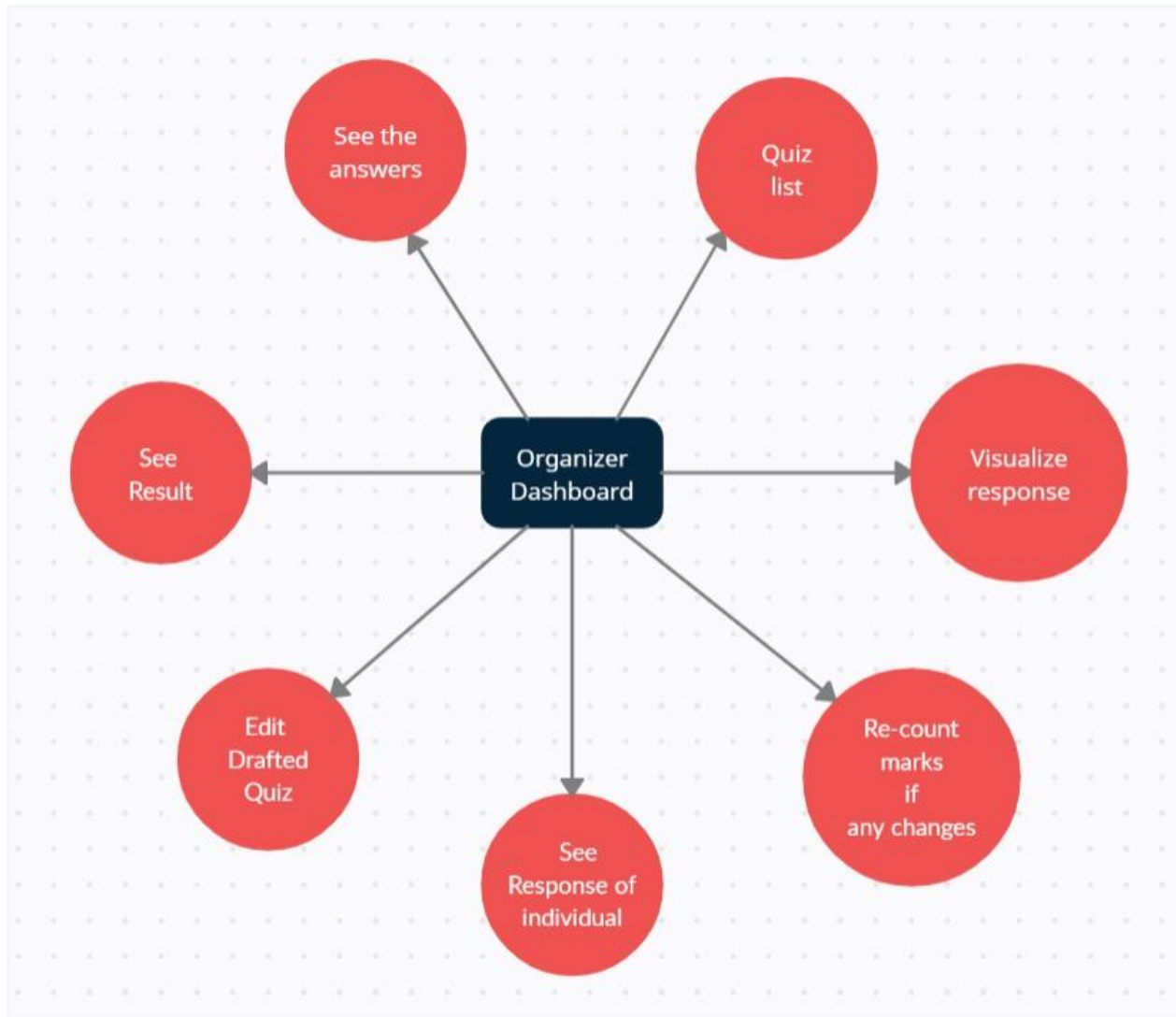
**Quiz Page:** On this page, users can attend the quiz. There is a timer in which some time is set. Till that time users have to submit their quiz otherwise their quiz will be auto-submitted. Creators can update the Questions of the quiz Too.



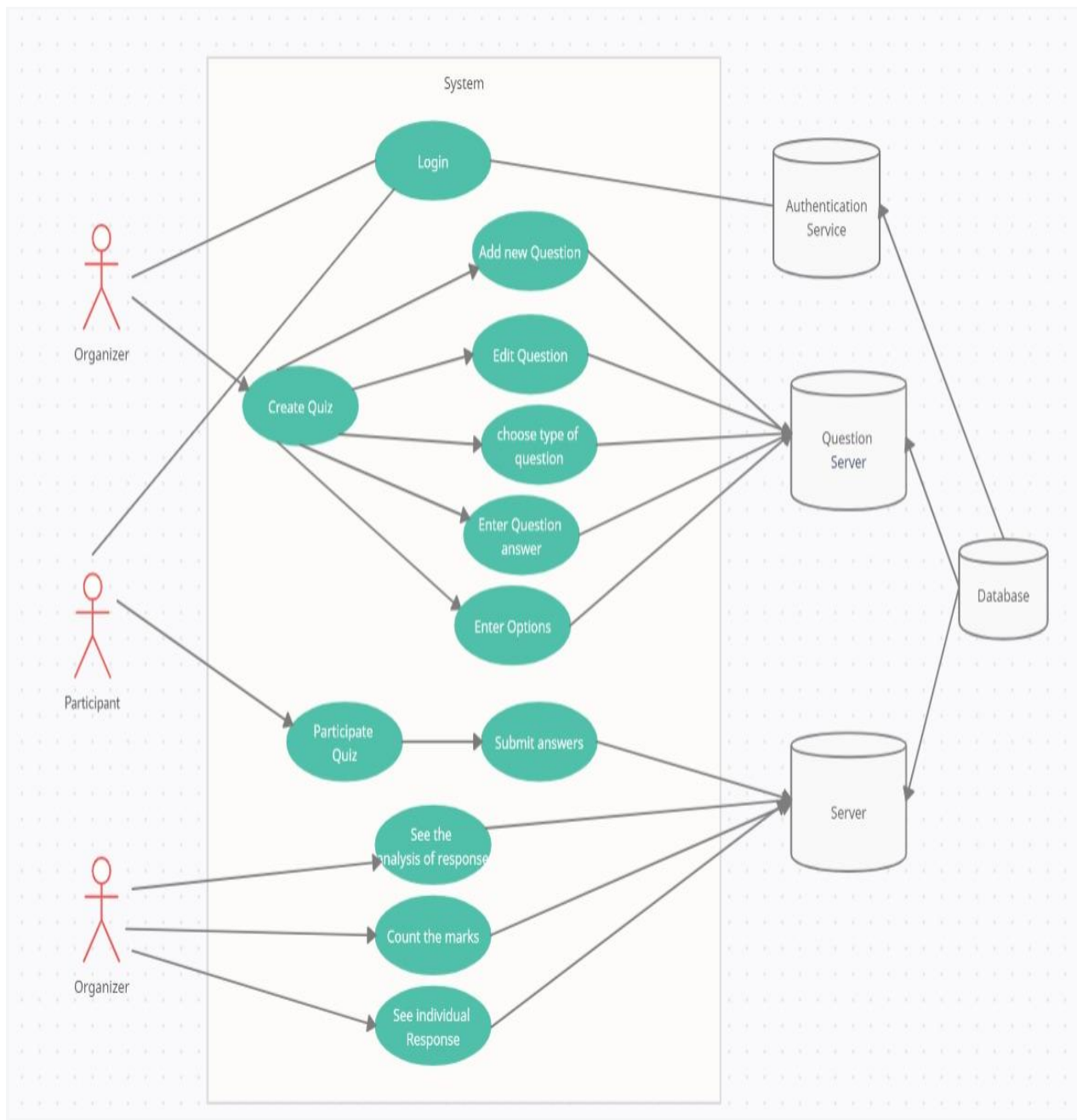
## Home Page Concept Map



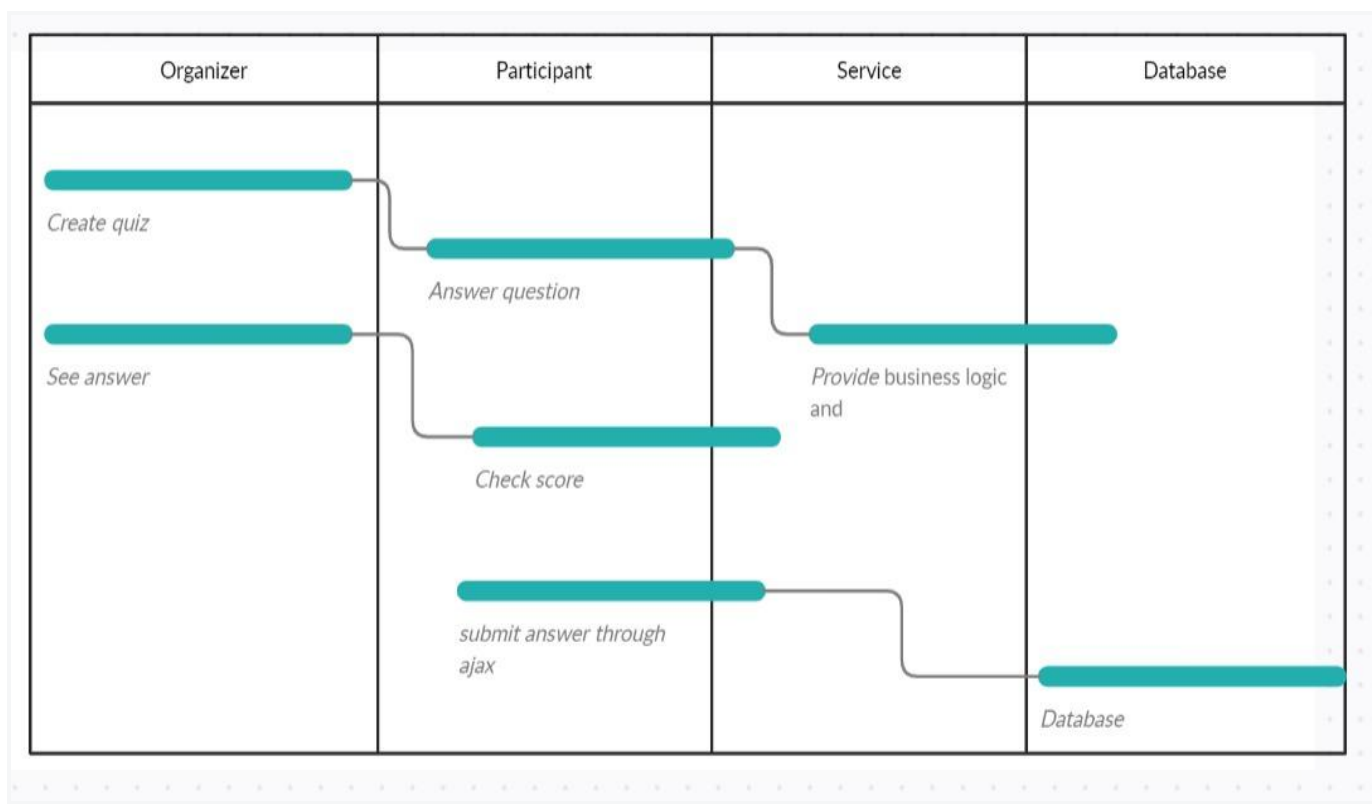
## Organizer Dashboard Concept Map



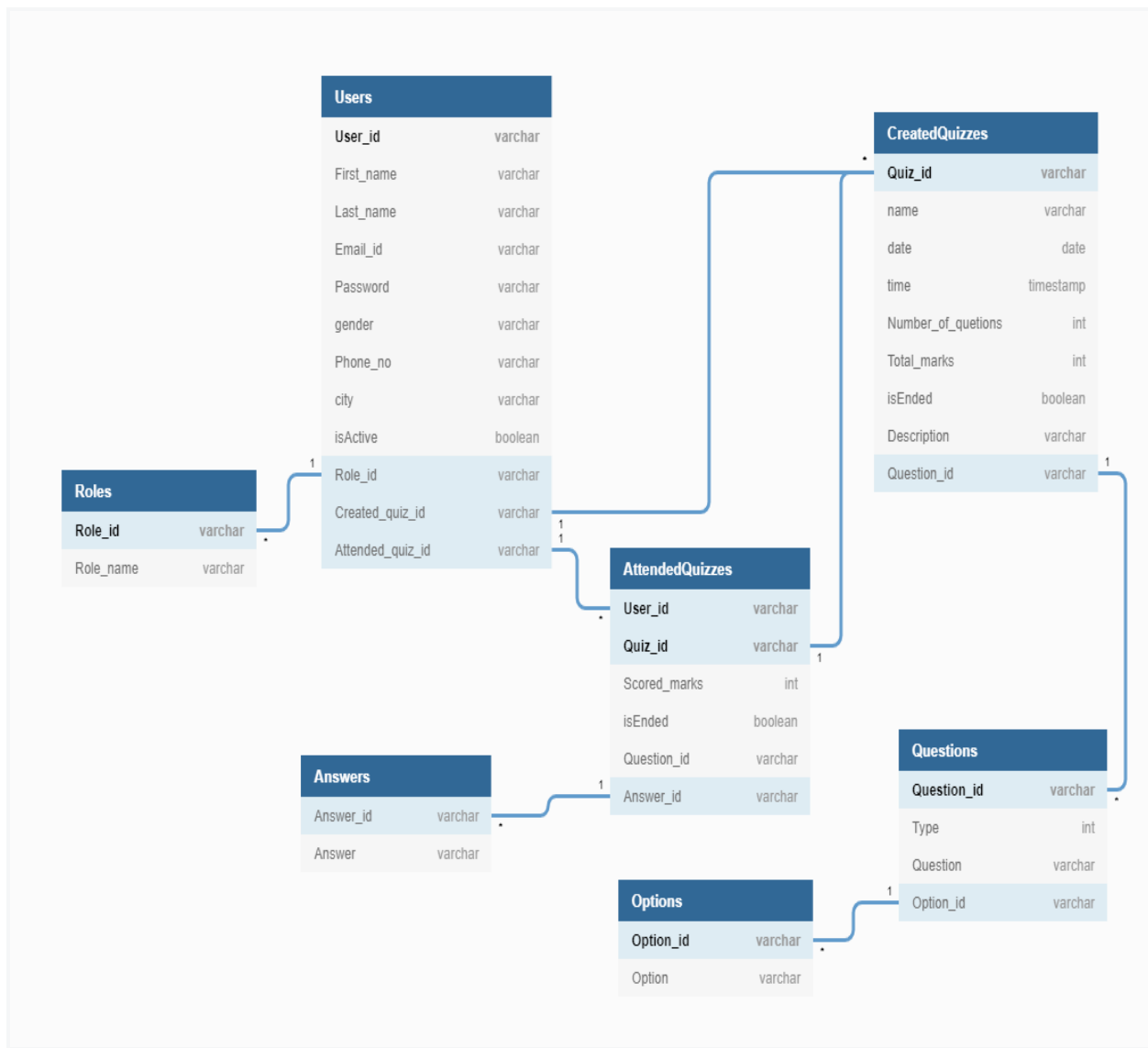
## Use Case Diagram



## Sequence Diagram



## Database Schema



## Hardware Interfaces

Screen resolution of at least 800 x 600 is required for proper and complete viewing of screens. A higher resolution will be accepted.

## Software Interfaces

- Any Operating System
- MongoDB NoSQL databases
- Java Spring boot
- Thymeleaf
- Javascript
- Html
- CSS
- AJAX, JSON
- JQuery

## Common features of online examination software

Educational institutions across the globe have now come to the realization that conducting exams online is the future of exams management. They believe that an online examination software could help in conducting assessments irrespective of whatever situations they encounter. Institutions are forced to peep into the various features of online examination software before they take a pick.

### features of online examination software

- Your Quiz, your way
- Efficiency to create a Quiz
- Different Question, Different type, Different marks
- Keep Quiz Data Secure
- Verified registration process
- Customization of test-taking options
- Navigation bar for attendee
- The remainder of the Quiz(if possible)
- Navigation bar for organizer
- Instant score
- Multiple Choices for Multiple Channels
- No Time Wasted

### Quiz management

The exam software should ultimately allow its users to manage and create different question paper templates and set up question banks that are reusable anytime. The inclusion of rich multimedia options, text editors, and images could make the question paper presentation more appealing.

## Customization of test-taking options

Look for this feature which gives the option to customize tests the way their users prefer it the most. Customization in terms of including the questions per page, use of back and forth button, question skipping.

## Multi-language support

Institutions look for this feature the most. An online test platform is expected to support the facility to conduct exams in any language and to define question banks in their preferred language.

## No Time Wasted

Our quiz features include a built-in timer to keep participants on task and give everyone the same amount of time to respond.

## Multiple Choices for Multiple Channel

Our quiz tool features offer multiple options for connecting with your audience - send us an email, a public link or a password-protected link.

## Your Quiz, your way

Start from scratch or from one of your drafts. Brand your quiz using different options (MCQ, multiple answers) and you can add as many questions you wish and can give marks to all questions.

## One Quiz, All devices

Your quiz is automatically optimized for any delivery platform smartphone, tablet, laptop, or desktop. Design once and distribute everywhere.

## Keep Quiz Data secure

Your Data security is essential in all online interactions involving personal data. Our quiz tool features include top-tier, end-to-end security to guarantee peace of mind.



### Verified Registration process

During the registration process, the user will be notified by email about this process.

### Instant Score

Our quiz tool automatically provides scores to participate in real-time and send to each quiz taker and segment reports for specific insights.

### Reminder Of Quiz

Our quiz tool automatically provides reminders of the Quiz before 1 hour through the mail.

### Navigation bar for attendee

Our quiz tool automatically provides a navigation bar for Question so the attendee can easily attempt the quiz. It also includes some functionality for doubtful questions, marked questions and not attempted and attempted questions.

### Navigation bar for organizer

Our quiz tool automatically provides a navigation bar for Question so the organizer can easily create the quiz. It also includes some functionality for doubtful questions, marked questions and not attempted and attempted questions.

### Different Question, Different type, Different marks

Our quiz tool provides a set of the question of different types. The organizer can set different marks of Different Questions.

## Nonfunctional Requirements

### Performance Requirements

As we are using MongoDB NoSQL database it provides high availability. removing single points of failure in the system. MongoDB uses multiple database instances in a replica set and automatic elections to provide this high availability. A replica set allows a server to be brought down to perform maintenance on it, while the rest of the cluster maintains the availability of the service.

### Safety Requirements

MongoDB maintains the ACID (Atomic, Consistency, Isolation, Durability) property at the document level as well as for the many to many relations we can use Transaction query to maintain the consistency of the database.

So there is no inconsistent data in the database due to the error

## Business Rules

- Three types of user role
  - a. Quiz organizer
  - b. Quiz attendee
- Authentication of all type of user
- Any user can create the quiz
- When the organizer set a quiz it will be stored in the database so it can be used as a draft for further updating the quiz and set
- A quiz organizer can set 3 types of question
  - c. Mcqs
  - d. Checkbox
- Organizer can invite the people or share the unique link for the quiz and password for the attending the quiz
- As user answer the each question answer also saved in the database asynchronously so the user can retain the answer after any type of technical intervention
- The user interface is shown to the quiz attendee how many questions answered or not
- Quiz organizer able to see graphs how the user has answered
- Admin also can see overall analytics about users
- Timer will be shown to the user about the quiz
- Once after completion of the quiz user can only change the correct answer neither question nor options.