
SOFTWARE REQUIREMENTS SPECIFICATION

for

MCQ Test Simulation

Version 1.0

Prepared by

Reena Yadav(IIT2016089)

Vikash Kumar(IIT2016041)

Austin Kispotta(IIT2016051)

Manvendra Dattatrey(IIT2016504)

Sai Sathy Praful Tondomker(IIT2016082)

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1 Introduction

1.1 Purpose

The software aims at providing a platform to conduct Online MCQ based tests and polls. The software specifications include real time scorecard and rankings.

1.2 Document Conventions

This document satisfy IEEE Std. 830-1998 IEEE Recommended Practice for Software Requirement Specification approved by IEEE Computer Society. See **Appendix A** for all abbreviation used in this document.

1.3 Intended Audience and Reading Suggestions

This SRS documentation is intended for software developers, testers and users. This SRS contains information about how software interacts with different users, it's operating environment and constraints, all the software dependencies, software features, and other specifications.

1.4 Project Scope

The purpose of this software is to create a convenient and easily accessible platform for conducting online polls and tests. This software uses non-relational database to store real time user information. This software can be best used at institutional or similar levels.

1.5 References

- [NodeJS Documentation](#)
- [Bootstrap Documentation](#)
- [MongoDB Manual](#)
- IEEE Std. 830-1998 IEEE Recommended Practice for SRS

2 Overall Description

2.1 Product Perspective

It is a new self-contained product aimed to ease the duty of a teacher of conducting MCQ test among the students. It also provides scorecard, rankcard, time taken etc which gives the teacher better perspective to evaluate student's performance in a better way.

2.2 Product Features

The major functions of the software are

- Scorecard
- Rankcard
- Time taken
- Re-evaluation
- Create contest

2.3 User Classes and Characteristics

There is two user classes who intract with software.Admin and software user (test setter and students).Admin has heigher privilage to database.

2.4 Operating Environment

This software is OS independent software. It performs great in all operating systems. It is browser dependent software in which user needs to make sure that JavaScript is enabled in the browser and it should not have any ads blocker extension or any VPN extensions installed in browser.

2.5 Design and Implementation Constraints

Old and unsupported browsers can constraint the software's design and working as they don't have the latest features installed in them. Limited users access. Poor internet connection can also result in failure.

2.6 User Documentation

List the user documentation components (such as user manuals, on-line help, and tutorials) that will be delivered along with the software. Identify any known user documentation delivery formats or standards. Install all the requirements as mentioned in github readme.md.

Follow all the steps given in the readme.

- [Github Readme](#)

2.7 Assumptions and Dependencies

All the dependencies used are the ones mentioned in the ReadMe.md of Github.

3 External Interface Requirements

3.1 User Interfaces

- UserEnd Specifications
 - LogIn and Authentication
 - Navigation through the browser
 - Detailed Performance Report
- See Fig3.1 for USE Case diagram and its brief.

3.2 Hardware Interfaces

- A browser which supports Javascript and it's latest features.

3.3 Software Interfaces

- Frontend Software :- HTML, CSS, BOOTSTRAP (For designing interactive UI)
- Backend Software :- NodeJS (Act as a middleway between FrontEnd and database)
- Database Used :- MongoDB (To save the user realtime information and records)

3.4 Communications Interfaces

- Express package in NodeJS for connecting to server through HTTP protocol.
- nodemailer package in NodeJS for e-mail communication.

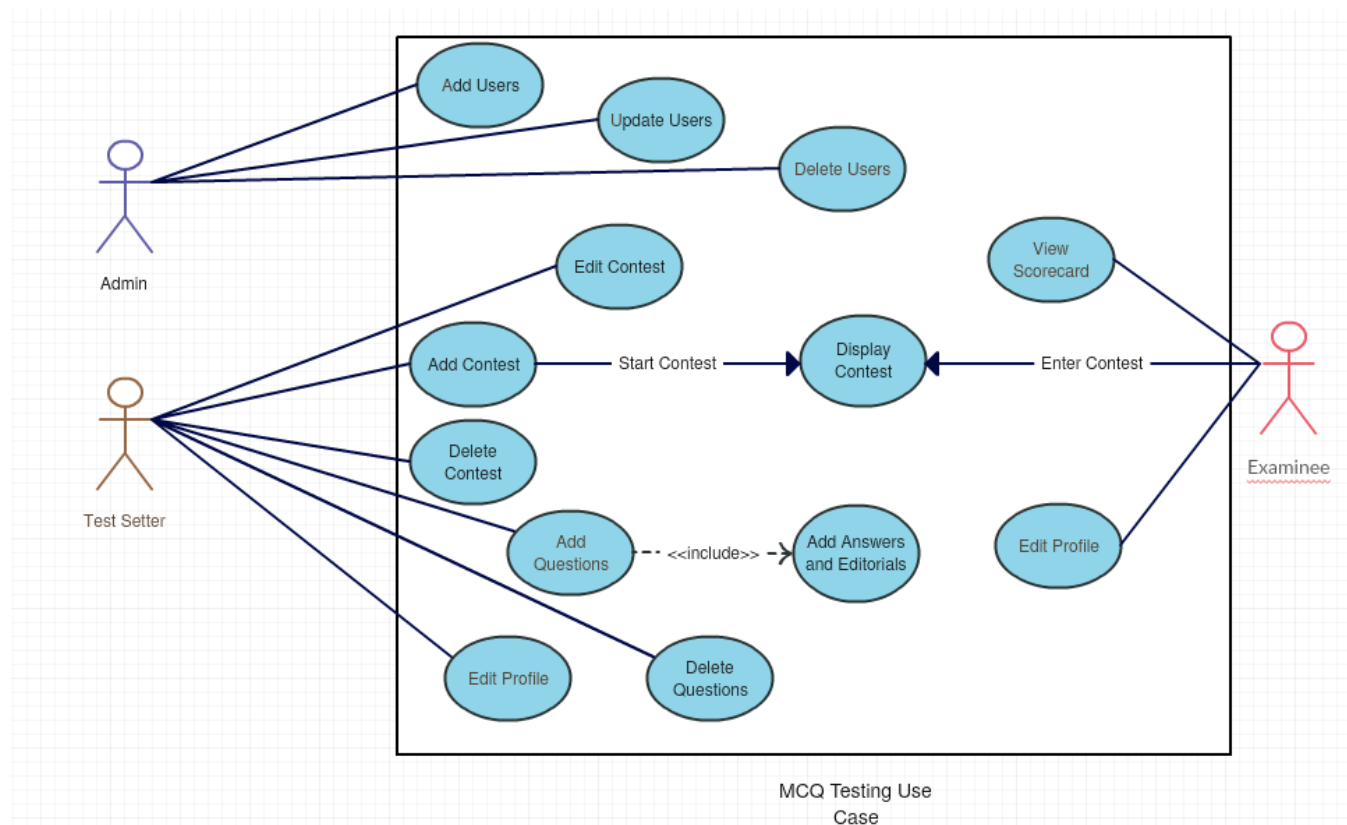


Figure 3.1: Use Case Diagram

4 System Features

Following are the major services provided by this software -

4.1 Sign-In/Login Page

4.1.1 Description and Priority

The web software will have a authentication login page through which users login for the test. Every user will also have their own unique login credentials for better security. As this is the initial step before the main test portal, this is the highest priority feature. Refer Figure 4.1.

4.2 MCQ test

4.2.1 Description and Priority

This is the main feature of the software. This page will contain questions and users will be required to select the best possible answer. Refer Figure 4.2.

4.3 Creating contest

4.3.1 Description and Priority

The other important feature of the software is for the test setter to have the ability to create a contest with required number of questions and specify the time limit. Refer Figure 4.3.

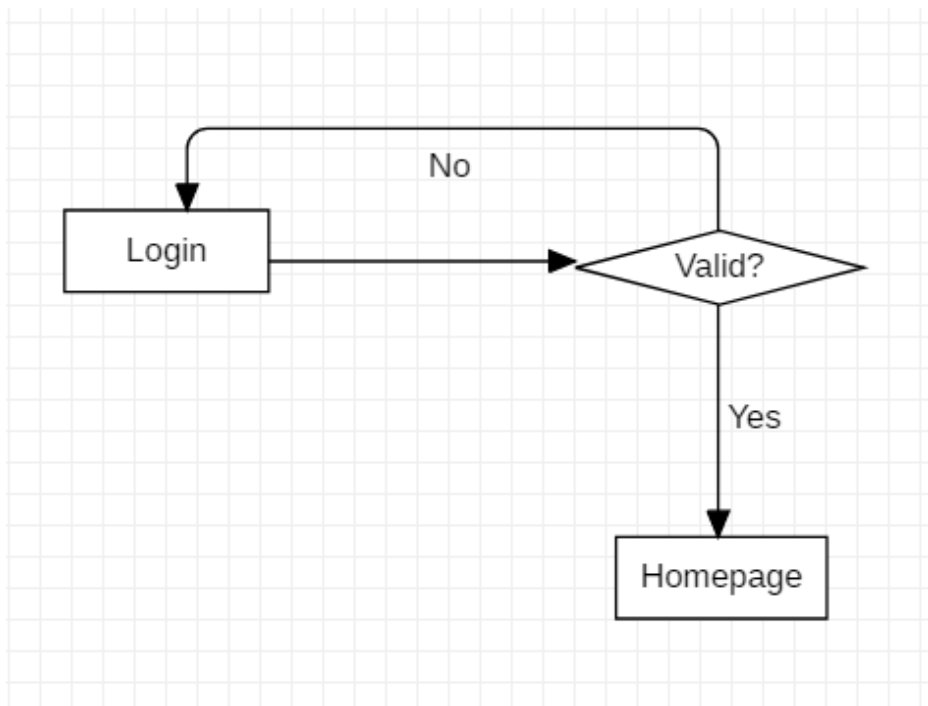


Figure 4.1: Login Flowchart

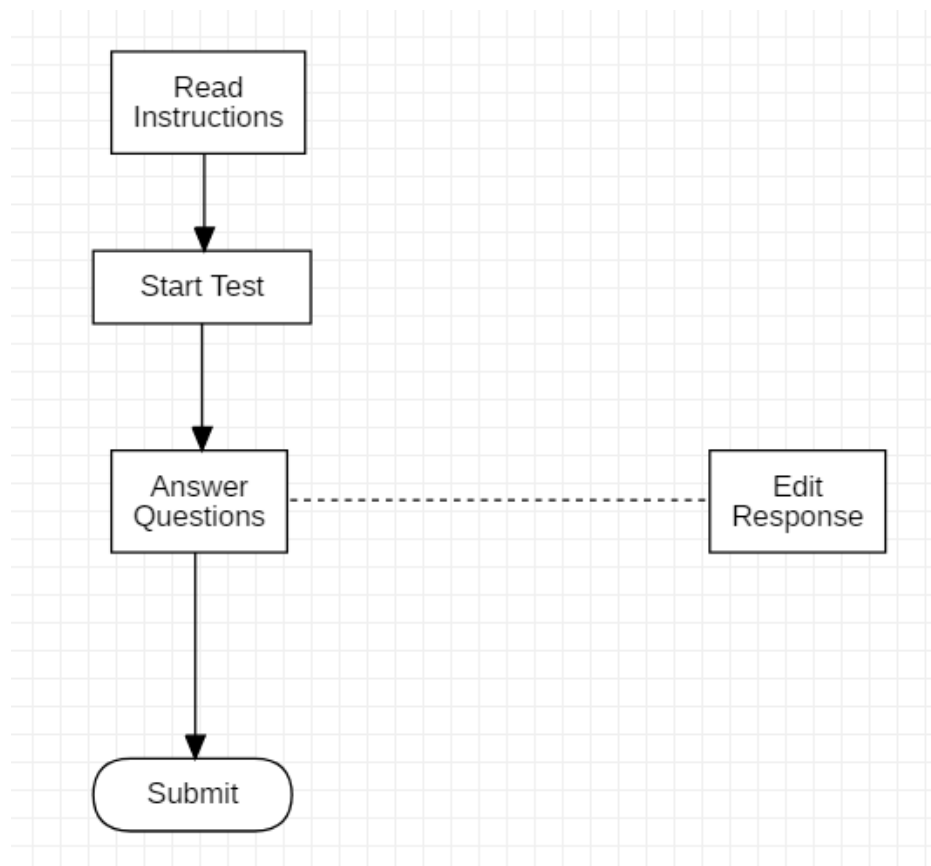


Figure 4.2: MCQ Test Flowchart

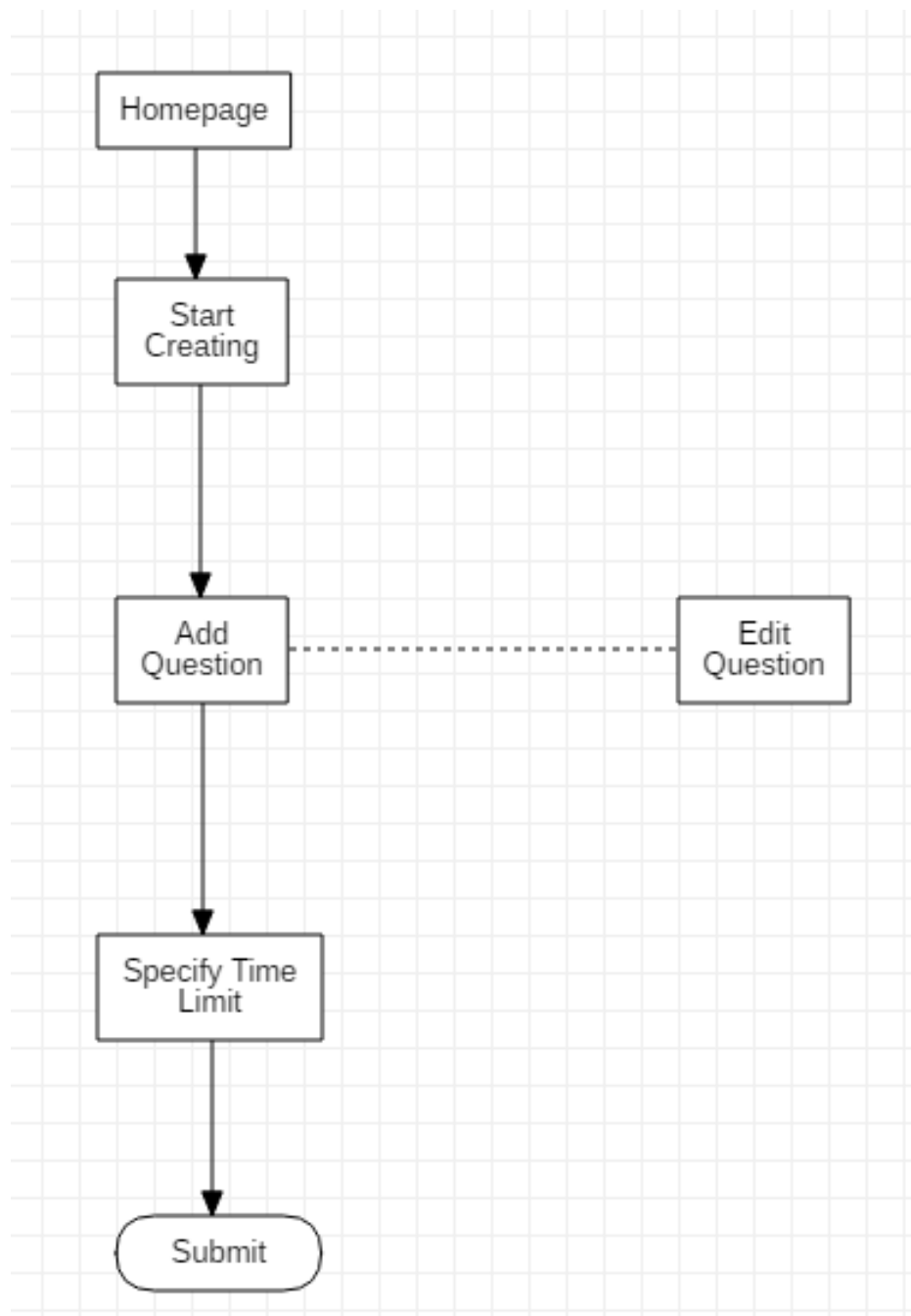


Figure 4.3: Create Contest Flowchart

5 Other Nonfunctional Requirements

5.1 Safety Requirements

The web software is meant to be used only in HTTPS server.

5.2 Security Requirements

The full database access is available only to the admin therefore guaranteeing safety of users.

6 Other Requirements

6.1 Appendix A: Glossary

- JS :- JavaScript
- SRS :- Software Requirement Specification
- MCQ :- Multiple Choice Question
- HTTP(S) :- Hypertext Transfer Protocol(Secure)

6.2 Appendix B: To Be Determined List

For update please visit

- [Github Readme](#)