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# **Software Requirements Specification**

**for**

## **Online Examination Portal**

**Version 1.0 approved**

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**September 15 , 2015**

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# **1. Introduction**

## **1.1 Purpose**

There are many colleges and companies in India that till date do not support or possess a digital Examination Portal for the sake of conducting quick examinations, most of them normally conduct a written examination which is tedious to check, rank and analyze. Our Examination Portal provides a solution for these problems.

## **1.2 Intended Audience and Reading Suggestions**

This Document is intended for the respective faculty of SICSIR as a part of the dissertation project for the final year to Masters in Computer Application 2014-2016 Batch done by the said authors

## **1.3 Product Scope**

This Software would help digitize many Schools, Colleges, Universities and Companies that need to conduct Exams and evaluate the results in order to make better decisions regarding recruitment or course curriculum etc.

## **1.4 References**

This particular Software has been inspired and is greatly composed of the new Material Design Concept put forth by Google.

Material UI : <https://www.google.co.in/design/spec/material-design/introduction.html>

# **2. Overall Description**

## **2.1 Product Perspective**

This Product is currently stand-alone. Future Prospective do include addition of another user type namely the invigilator who will have limited functionality as compared to the supervisor, also there is a need for report card generation of Applicants based on their registered scores, support for more question types in question papers and more analysis of data generated than currently present.

## 2.2 Product Functions

The Major Product Functions are :

- User Registration - Users registration process
- Role Assignment – Assignment of a Role which would depict whether the user is an application, supervisor or admin
- Creating/Modifying/Deleting Groups – Groups consist of one or more students
- Creating/Modifying/Deleting Exam Papers – Exam Paper Consists of Questions and the answer key
- Creating/Modifying/Deleting Schedules - Schedules are Exam Papers allocated to Groups at a particular time for a particular duration
- Giving the Examination – Applicants answer the question paper in a secure manner
- Viewing Reviews – After Applicants attempt a paper, he may view his performance
- Viewing Overall Records of Data – Data containing total marks scored and percentage acquired.

## 2.3 User Classes and Characteristics

There are Mainly three User Classes present Namely

### 1)Admin

- Assigning Roles to Registered Users
- Changing the Roles of Registered Users
- Viewing the Suggestions of the Users

### 2)Supervisor

- Creating/Modifying/Deleting Groups
- Creating/Modifying/Deleting Exams
- Creating/Modifying/Deleting Schedules
- Viewing and Analysing the Reviews and Results Respectively
- Providing Sugesions to the Admin

### 3)Applicant

- Profile Page
- Starting and Participating in an Examination
- Reviewing his attempt

### 4)Undefined

## 2.4 Operating Environment

Our Application will work on any of the newer versions of browsers such as Safari , Mozilla Firefox , Google Chrome ,Microsoft Edge etc. It is essential that these browsers support and have enabled the functionality of JavaScript

## 2.5 User Documentation

Help is available online on the portal, easily accessible under the Help Section of the Start Page View, moreover there is a mechanism via which users can send requests for certain features or documents to the admin who will provide the same to the user.

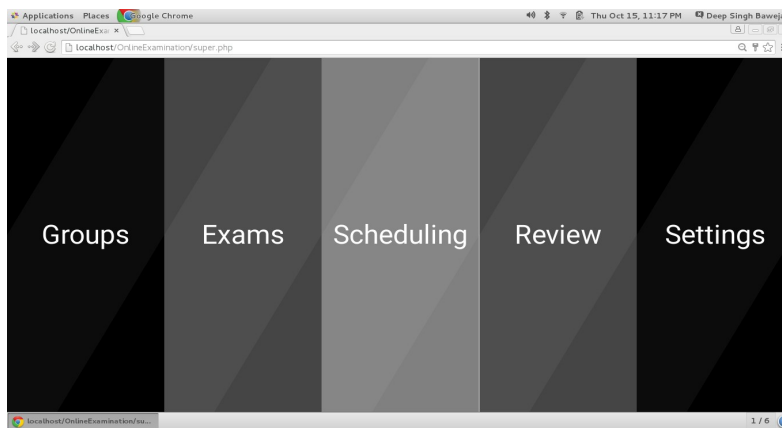
## 3. External Interface Requirements

### 3.1 User Interfaces

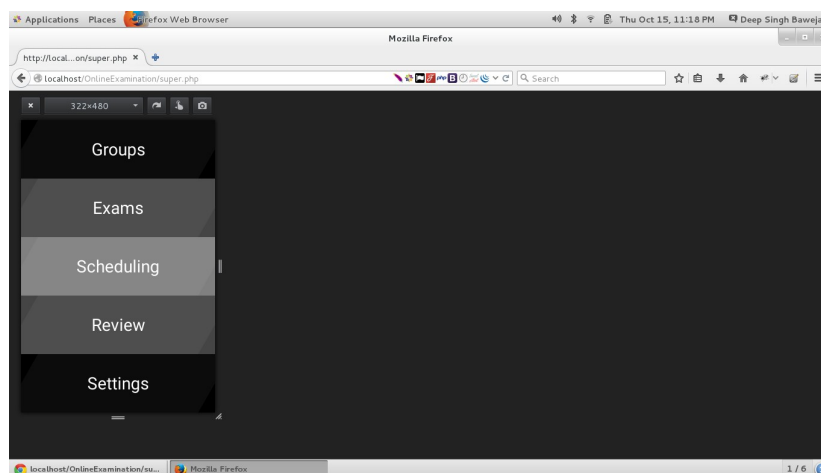
We have followed a Material UI Interface, along with the fact that the portal is completely mobile friendly (responsive). Please find following the screen shots for all the available views

- Home Page (supervisor)

*This is the base page which literally allows access to all functionalities present for the Supervisor type user*

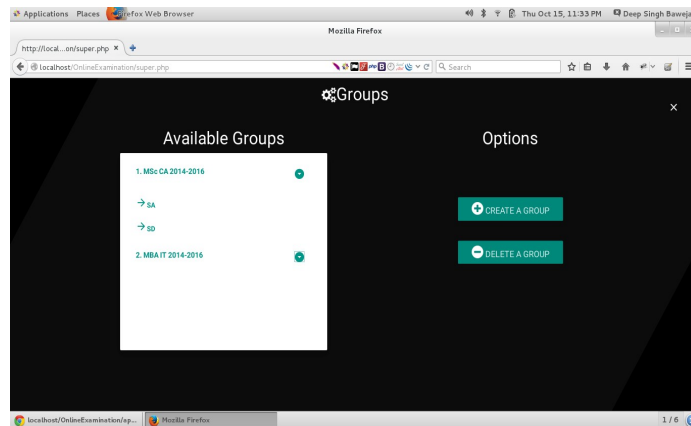


- Home Page on Mobile (Example of Responsiveness)



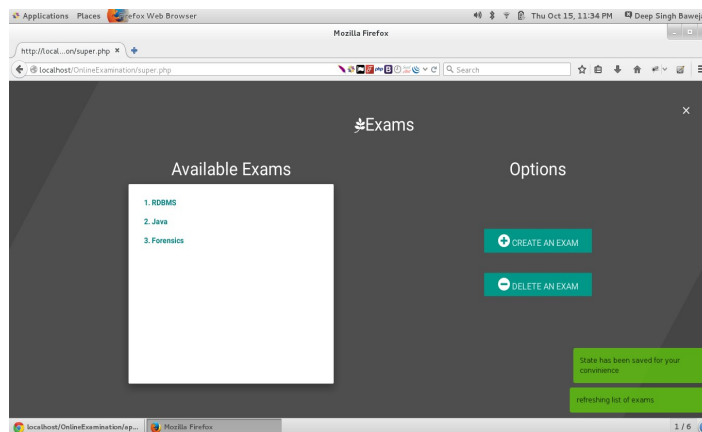
- Groups (supervisor)

### *Creating Deleting and Updating a Group*



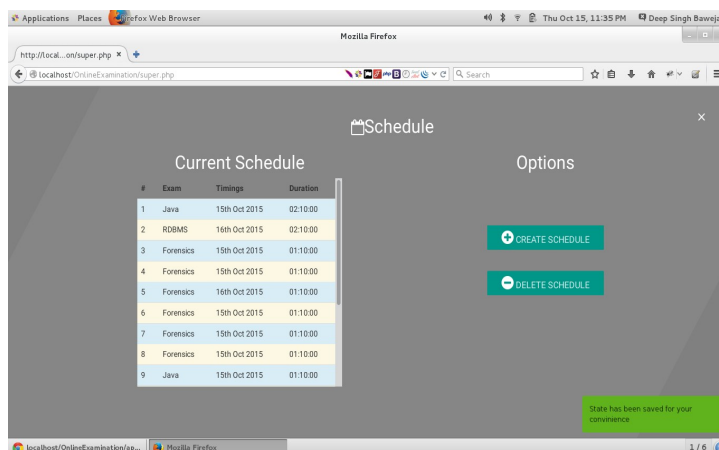
- Exams (supervisor)

### *Creating Deleting and Updating an Exam*



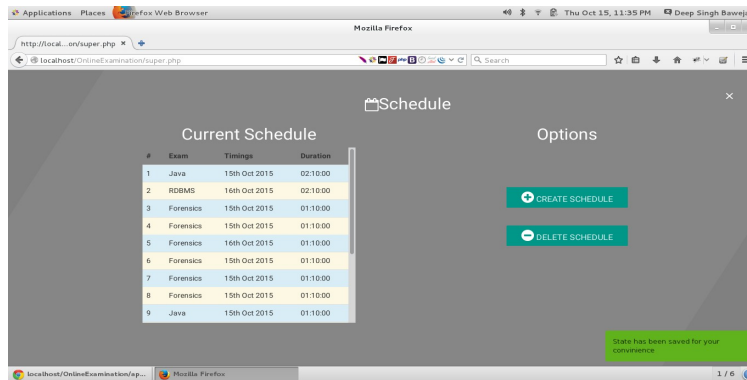
- Schedules (supervisor)

### *Creating Deleting and Updating a Schedule*



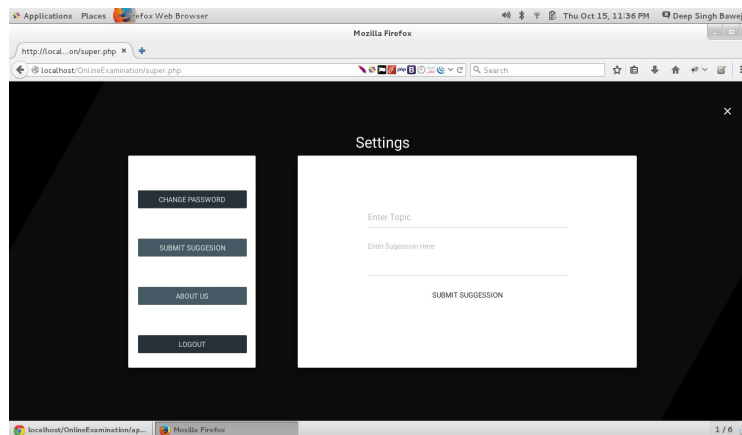
- Reviews (supervisor)

*Viewing Scores Attained By Students, Reviewing individual Papers*



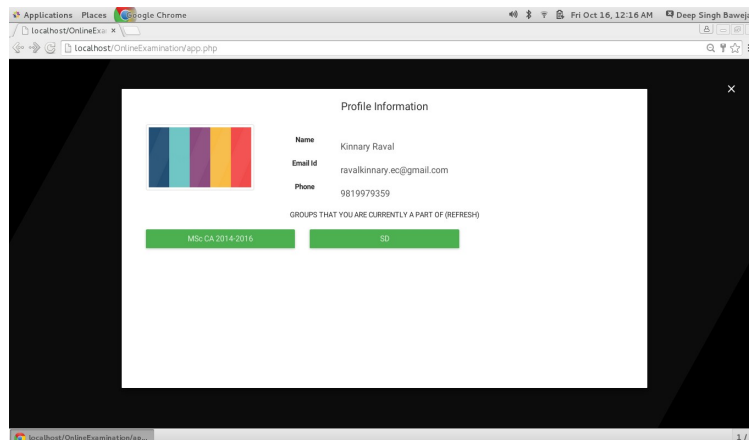
- Settings (supervisor)

*Basic settings like sending suggestions and changing password*



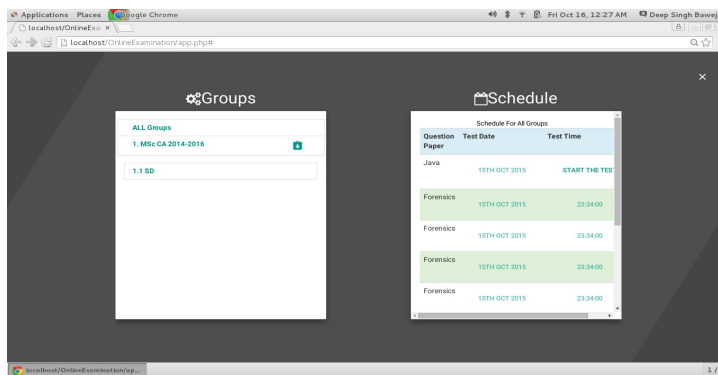
- Profile (applicant)

*Applicant Type User can view his picture and groups that he belongs to*



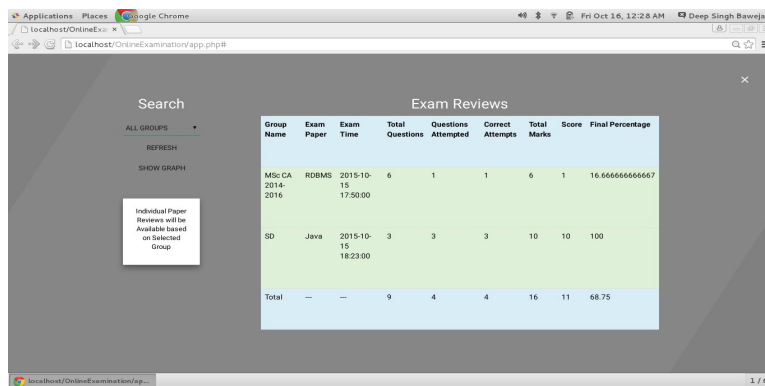
- Exams (applicant)

*Portal through which the applicants can start their exam*



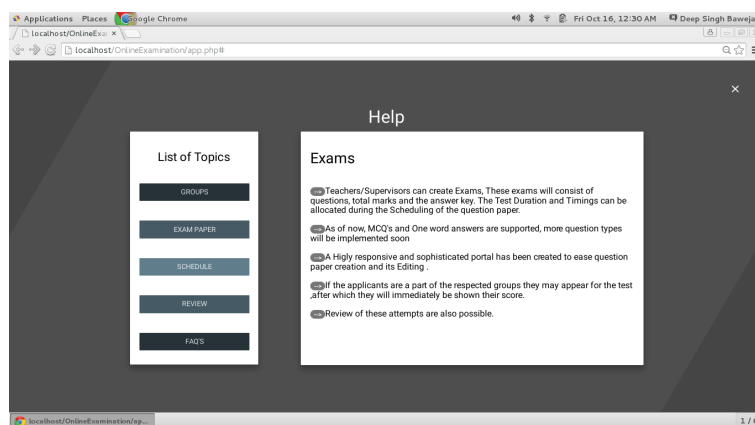
- Review (applicant)

*Portal through which applicants can review their attempts*



- Help (applicant)

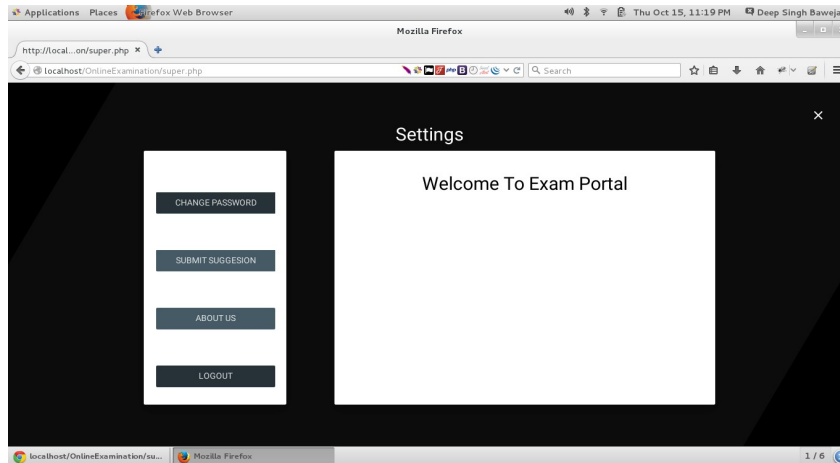
*Help for the applicants that explains basic functionalities*





- Settings Page

*portal to change the password and send suggestions to the admin*



## 4. System Core Functionality

### 4.1 Groups

Groups refer to a collection of students that can be subjected to exams or mails as the case may be.

#### 4.1.1 Creating a Group

Only the Supervisor type user can create a group, he may add members to the group, he/she may also create the group as a sub group of a parent group, only one level of sub-grouping is available as of now

#### 4.1.2 Deleting a Group

Only the Supervisor type user can delete a group, although this group cannot be deleted in case of a schedule being assigned to it, as this would cause an impact on any of the existing exams for that group.

Both these functionalities or rather groups form the base of almost all other functionalities, to the extent that most of the analysis is also done on the basis of these groups

### **4.1.3 Add/Remove Members to/from a Group**

Only the Supervisor type user can add/remove members to a Group, for a child group only members of the parent group can be allocated, a very responsive and easy to understand UI has been provided to do so.

## **4.2 Exams**

Groups refer to a collection of students that can be subjected to exams or mails as the case may be.

### **4.1.1 Creating an Exam**

A very interactive portal to create an Exam paper is available, Supervisor may create an Exam and edit it later on at any point of time.

### **4.1.2 Deleting an Exam**

Only those exams are removable which are not associated to any schedule so as to maintain records of all the students who have appeared for the exams

### **4.1.3 Modifying an Exam**

All the Exams can be modified at any point of time, including details like the weightage of the marks, the question name, its type or the options associated with it

### **4.1.4 Giving an Exam**

All the Applicants are eligible to give the exam under the condition that the schedule has been created in which the group assigned to respective exam contains that applicant as a member

## **4.3 Schedule**

### **4.1.1 Creating a Schedule**

A schedule can be created by simply associating a question paper (exam) to a particular group. Also one will have to mention the start time and the end time of the exam along with the duration of the test, the start time and end time signifies the time period during which the students can attempt a test.

#### **4.1.2 Deleting an Schedule**

Schedules can be deleted only under the condition that no Applicant has appeared for that particular schedule, if one or more applicant has appeared for a particular schedule, then that schedule cannot be deleted for the sake of maintaining records and preventing junk data.

#### **4.1.3 Mail Sending Feature**

This Mail sending Feature is basically the fact that the second a schedule is created all the applicants of the associated groups are sent a mail to their respective email ids with specifics of the detail of the test to save time and maintain an open interface.

### **4.4 Reviews**

#### **4.4.1 Checking Reviews as an Applicant**

When an applicant checks the review portal, he may see all his paper attempts, it will be easy for him to search for the paper he is looking for due to the available search features, once he clicks on his attempt an interactive portal will open through which he may go through the exam he has attempted which will load the correct answers in case he got a few questions wrong. An Entire Question List will also appear, the red ones indicating the questions he got wrong and the green one indicating the questions that he got right.

#### **4.4.2 Checking Reviews as an Supervisors**

The supervisor can do everything that the Applicant can, only he can view every applicants paper along with see a graphical representation of the marks and other such details obtained while the applicants are performing the test. Also as an added practical feature the supervisor may download all this information in Excel format for his/her reference.

## **5. Other Nonfunctional Requirements**

### **5.1 Look and Feel**

The look and feel of this entire project is completely based on material UI, which is essentially a Layered approach of showing data or views to the viewers in a very beautiful and attractive manner, following this approach also reduces the load on the server as instead of sending a request for the entire page, only parts of the pages are loaded on a need or request basis.

## **5.2 Self Updating /Synchronous**

As Most of the core functionality has been implemented in mainly two pages, namely super.php and app.php, these two pages literally are the entry point and exit point for all the functionalities mentioned. Hence on updating a particular field in on the views care has to be taken to update the related fields in another view, handling this task and making sure everything is in synchronous is easier said than done

## **5.3 High Level Abstraction**

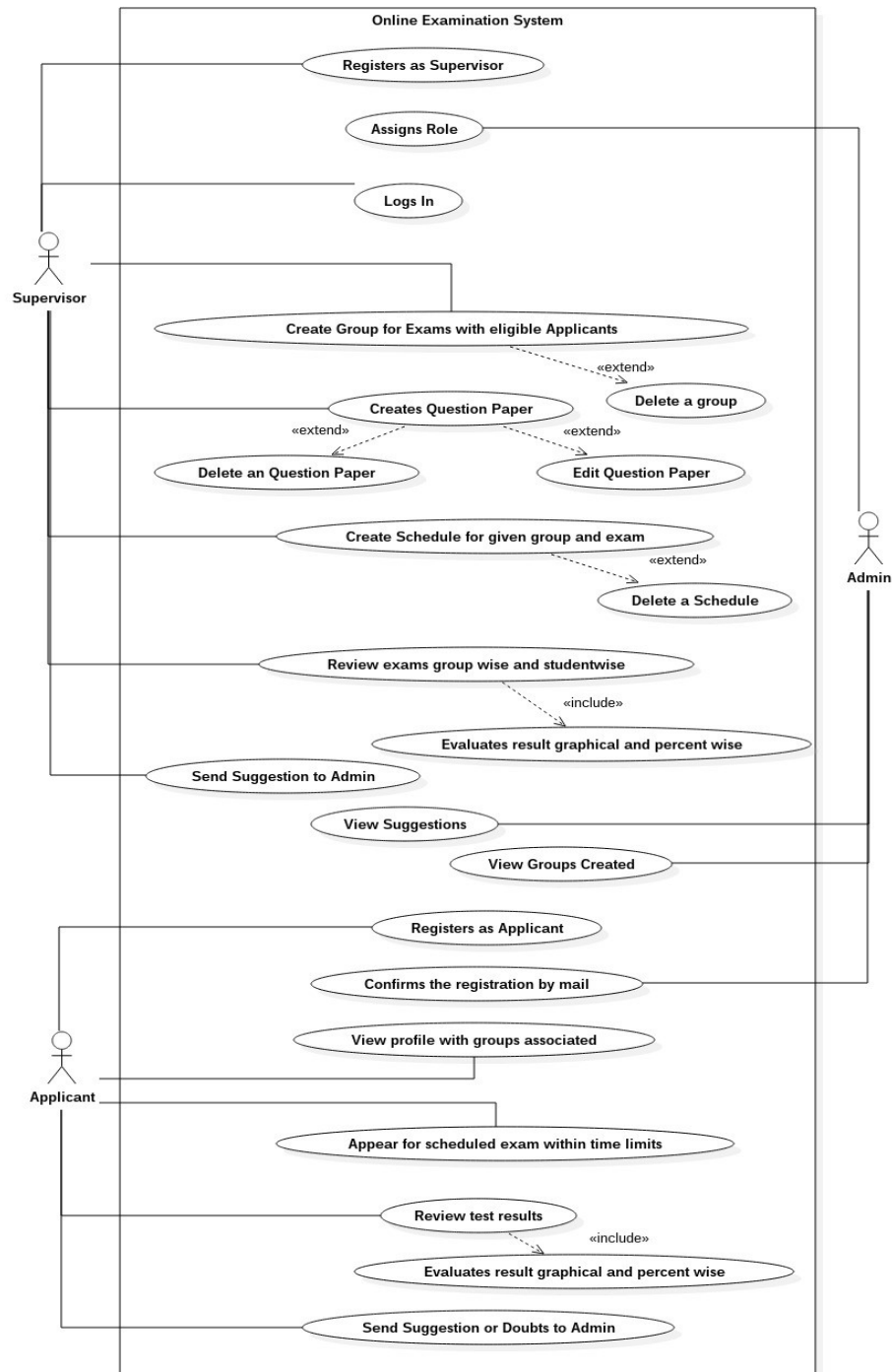
As the name suggests almost all the back end complications are hidden from the user and all the users see is a pretty picture which does all its work for them. Moreove the learnability of this is extremely steep and easy to remeber.

## **5.4 Extremely User Friendly**

The UI is easy, on the face and completely open, all the functionality are easily accessible, there is no functionality which is hard to find, or is located at a place where it does not make sense. The Color Combinations used are not to bright , but rather set a perfect serious ambiance along with an extremely interactive UI to perform all the tasks required to have a proper Online Examination System.

## 6. Model Diagrams

### 6.1 Use Case Diagram



## 6.2 Entity Relation Diagram

