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| **Requirements and Design Specification Document**  **Online Test Management System**  Project Team:  Hamza Zulfiqar (201370105)  Akasha Farrukh (201370031)  Anzah Nadeem (201370005)  Musa Nabeel (201370012)  Submission Date: 31 January 2023 |

**Document Information**

| **Category** | **Information** |
| --- | --- |
| Customer |  |
| Project | Online Test Management System |
| Document | Requirement Specifications |
| Document Version | 1.0 |
| Identifier |  |
| Status | Draft |
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| Approver(s) |  |
| Issue Date |  |
| Document Location |  |
| Distribution |  |

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## **Business Requirements**

1. Business requirements encompass providing an online test management platform where students can attempt objective questions.

2. The student should be able to register to appear in the exam.

3. There should be an admin panel to manage the exam (load questions, check if correctly attempted, add/drop subjects, add/drop questions, and more).

4. Questions shall be segregated based on different subjects.

5. The math section shall carry 50% marks, with 25 questions, and a 25-minute time slot.

6. The IQ section shall carry 30% marks, with 15 questions and a 15-minute time slot.

7. The English section shall carry 20% marks, with 10 questions and a 10-minute time slot.

8. In total, the students should be given 55 minutes — 50 minutes for the exam and 5 minutes for an introductory questions session from each section.

## **User Requirements**

**<Student>**

1. Students should be able to register to appear in the exam.

2. The student should receive login information (and a password) after a successful registration.

3. The student should be able to attempt objective questions.

4. The student should be able to quit the session(s) at any time.

5. The student should be awarded a grade immediately upon test completion.

**<Admin>**

6. The admin panel should be able to load questions.

7. The admin panel should be able to check questions and see if they are correctly attempted.

8. The admin should be able to add or drop subjects.

9. The admin should be able to add or subtract questions.

10. The admin panel should be able to save data.

11. The admin shall be allowed to provide a login/password to the student.

12. The admin panel should be able to communicate with DB via web service or API.

## **Functional Requirements**

1. Students will register themselves to appear in the exam.

2. The admin will provide the student with login information (and password) after a successful registration.

3. The admin panel will act as the backend and load the questions.

4. Questions will be divided into categories based on various subjects. The math section shall carry 50% marks (25 questions, 25min), IQ 30% (15 questions, 15min), and English 20% (10 questions, 10min).

5. The admin will have the option to add or remove subjects and questions.

6. Students would be allowed to attempt the questions. For this purpose, they shall be given a total time of 55 minutes: 50 minutes for the exam and 5 minutes for a session of introduction questions from each section.

7. The admin panel will save the data and communicate with DB via web service or API.

8. The answers to all the questions will be published right away, along with the results.

9. Grades will be provided as per the number of questions answered.

10. The option to quit the session(s) at any time will be given to the student.

## **Non-Functional Requirements**

1. There will be a time limit check for finishing the exam, after which students won't be able to attempt any questions in their particular section.

2. Only 50 students at a time are allowed to take the exam concurrently.

3. Stakeholders will only be permitted a maximum of two navigations to access any information. This means the interface should be easy to use.