

Requirement Document

Project Name – Quarantine Quizzes

Project Phase 1

Team Name -Parse

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Introduction

Description of Mini-world

During the quarantine, evaluation needs to be held using online quizzes. This involves solving a set of problems under a given time limit. Evaluation is mostly based upon number of problems solved and the marking scheme of the quiz.

A User can use the database for:

- Learning from his past performances
- Improving problem solving skills
- Keep track of problems they may have solved

Purpose

Purpose is to make students learn from their past performances in online quizzes.

Intended audience /user

The intended audiences are the institutes where there is a need for an online platform.

There are two types of users:

- Admin users or teachers who can create questions and form quizzes to evaluate the students.
- Normal users or students who can attempt the quizzes created and learn from the questions.

Database Requirements

Entities

- **User**

1. User id - Primary Key
2. Name - composite key
 - ☐ First Name
 - ☐ Middle Name
 - ☐ Last Name
3. Date of Birth
4. Primary Email ID
5. Secondary Email IDs - multivalued attribute
6. CurGrade
7. Institute
8. Join Date(datetime)
9. Age - Derived Attribute

- **Question**

1. Question ID - Primary Key
2. Title
3. Question text
4. Score
5. Options
 - ☐ Option 1
 - ☐ Option 2
 - ☐ Option 3
 - ☐ Option 4
 - ☐ Option 5
6. Type (single correct, multi-correct)
7. Marking Scheme
 - ☐ Correct answer
 - ☐ Wrong answer
 - ☐ Question left
 - ☐ Not all correct
8. Correct answer/s : multivalued attribute

- **Quiz**

1. Quiz ID - Primary Key
2. Quiz Name

3. Creation Date
4. Starts at Time
5. Ends at Time

- **Submission**

1. Answer ID - Primary Key
2. Options - multivalued attribute

- **Result**

1. result value
2. evaluation date

- **Admin User**

1. Category

Weak Entities

- Submission - Depends on User and Question. Cannot exist until both exist
- Results - Depends on question and its submission. Cannot exist until both exist

Relationships

- Admin User - Quiz (Creates) (1,n)
- User - Quiz (Participates in) (1,n)
- Admin User - Question (Forms) (1,n)
- User - Question - Submission (Solves) (1,1,1)
- Quiz - Question (Has) (1,n)
- Submission - Question - Result (Results in) (1,1,1)

n>3 Relationship

- **Solves** Relationship is a Tertiary Relation
- **Results** In Relationship is a Tertiary Relation

Subclass

- Entity Administrator User is a Subclass of entity User.

Functional Requirements

- Signup/Login for User and Admin
- Users and admin can see available quizzes
- Admin User can add a question
- Admin User can delete a question from his quiz
- Admin User can add a quiz
- Admin User can delete a quiz created by himself
- User review
- Score of a user may increase or decrease based upon performance
- User can update his user information like name, D.O.B., institute
- User can submit answer for evaluation
- User can see their score over time
- Admin user can see the complete data of students belonging to an institute
- User can see the statistics of a quiz(minimum marks, maximum marks, average)