**Database Overall Model**

The information that must be stored\update in the data base is listed below. This reflects the requirements that have gathered so far and it is believed to be the least expected from the database.

Profile:

* Login credentials and password.
* Name
* Privilege level : scorer\marker\judge\admin

List of teams in the competition.

* Name of the school
* Abbreviation
* Student’s name
* Any supervisor

Answer for each question for all teams.

* Correct
* Pass
* Total pass on each question
* Record timestamps

Total score for each team.

* Sum of the points gained by each correct answered question

Number of passes for each team.

* Sum of all passes for a team

**Database**

The database to be used is a relational database. Only data will be stored in the database, any other file such as pictures, sounds, videos will be stored in the application server.

A relational database design has been constructed to illustrate the minimum needs of the application. This design contains 8 tables each will store information about the competition, competition organizers, school, school participants, all question and answers, and all teams’ records.

**Which database?**

The current proposed databases are MySQL or PostgreeSQL. The system of choice must run in a linux operation system as per client’s requirement.

Although we have highlighted in the project proposal that we would be using MySQL database it may not be the case. The use of postgreeSQL is more likely as it is SQL compliant and ACID compliant which preserves the integrity of the data, in the case of our project concurrency must be handled carefully in the database.

**Database overall Model Walk Through**

The database design must satisfy a series of requirements as listed above. Those are extended in details as follow.

**Login\profile –**  Requires a user name and a password (password may want to be hashed for safety). Also, the name of the user and their privilege level ( such as judge, marker, scorer). No further details is required at the moment.

**List of teams in the competition** – each team represent a school. Each school may have one or more teams and must also be referred by their initials. Each team may have a supervisor or a supervisor may represent a school. A team contains 4 to 5 students. A team may or not have a name or id.

Note: the need of a supervisor is not clear but because it is a group of children they must have somebody to look after them.

**Question and answers –** All questions and the corresponding answers must be stored for each section.

**Team performance track** - all teams of one session will answer the same questions of that session. The result of their performance must be recorded. A team must either answered a question correctly or pass, the time must be recorded too. The total number of passes and correctly answered questions must be stored such that they can be used to compute the total score if necessary.

**Further needs:**

A Boolean to determine if a team has been assigned or not

Time stamp for when competition start for the countdown