# **Requirements & User Stories**

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| **Functional requirements:** |  |
|  | **Overall System:** |
| 1.1 | The system backend must run on a Linux operating system. |
| 1.2 | The system must be accessible to users through most mobile devices. |
| 1.3 | The system software must be released on GPL or another open-source license. |
| 1.4 | The system must be able to handle requests from at least 500 users at one time. |
| 1.5 | The system must have a database capable of performing many actions concurrently. |
| 1.6 | The system must have higher user privileges for markers. |
| 1.7 | The system must have secure login credentials for markers. |
| 1.8 | The system must have default view only privileges for audience members. |
| 1.9 | The system must run in real-time. |
| 1.10 | The system must be able to be setup in 3 hours. |
| 1.11 | The system must support 120 teams for each competition. |
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|  | **Database Functionality:** |
| 2.1 | The system must store a list of teams in the competition. |
| 2.2 | The system must be able to store input from a marker. |
| 2.3 | The system must be able to update correct answer scores for each team. |
| 2.4 | The system must be able to update incorrect answer scores for each team. |
| 2.5 | The system must be able to update number of passes for each team. |
| 2.6 | The system must be able to record timestamps for correctly answered questions. |
| 2.7 | The system must organise teams alphabetically by name. |
| 2.8 | The system must be able to search for a specified team and display the correct scores for that team. |
| 2.9 | The system must be able to access all teams and their scores simultaneously. |
| 2.10 | The system must store login credentials for markers. |
| 2.11 | The system must give edit privileges to judges when they input the correct login ID and password combination. |
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|  | **Interface Functionality:** |
| 3.1 | The system must intake input for: |
| 3.1.1 | Marker login credentials. |
| 3.1.2 | Searching for a team. |
| 3.2 | The system must return a searched team when the team name is entered correctly. |
| 3.2.1 | The system must be able to search without case-sensitivity. |
| 3.2.2 | The system must display an error message when the input returns no results. |
| 3.3 | The system must display the following upon returning a team: |
| 3.3.1 | The team name. |
| 3.3.2 | The team’s numerical position on the leaderboard (i.e. 1st, 2nd etc). |
| 3.3.3 | The team’s scores. |
| 3.4 | The system must have input buttons for judges as follows: |
| 3.4.1 | A ‘correct’ button. |
| 3.4.2 | An ‘incorrect’ button. |
| 3.4.3 | A ‘pass’ button. |
| 3.4.4 | Buttons must be time-delayed so the judge must hold the button down for at least 2 seconds before input is sent to the database. |
| 3.4.5 | Buttons must display a confirmation when data is sent to the database. |
| 3.4.6 | Buttons must deactivate when data is sent. |
| 3.4.7 | Buttons must reactivate when the user lifts their finger/cursor off the button. |
| 3.5 | The system must display all of the teams’ scores on a leaderboard. |
| 3.5.1 | The system must show the scores in a graphical format (bars). |
| 3.5.2 | The system must organise teams by their correct answer scores, minus incorrect answer scores, numerically. |
|  | **Non-functional requirements:** |
| 1. | The system must be robust and maintainable. |
| 2. | The system must be well documented, to allow another team to continue working on it if necessary. |
| 3. | The system must be easy to use for all users. |
| 4. | The system must be scalable. |
| 5. | The system must display the AUT logo on the interface at all times where possible. |

# Marker User Stories:

* As a marker, I want to enter a correctly answered question so that the system can proceed to the next question.
* As a marker, I want to enter an incorrectly answered question so that the database is updated with number of attempts.
* As a marker, I want to enter a passed question so that the database is updated with number of passes remaining and the system can proceed to the next question.
* As a marker, I want to be able to undo my previously input so that I can reverse any unwanted actions.
* As a marker, I want to enter login credentials to login so that access to my account is secured.
* As a marker, I want to be able to select the team to marker when I login to my account so I can choose between the teams assigned to me.

# Spectator User Stories:

* As a spectator, I want to see the scoreboard in a graphical format so that the scores are easier to interpret.
* As a spectator, I want to constantly update the scoreboard so that the system functions in real time.
* As a spectator, I want to select a particular team so that I can view their stats specifically.
* As a spectator, I want to be able to search for a team so I can find and focus on that particular team.
* As a spectator, I want to see a team’s stats when I select it.
* As a spectator, I want to choose how the scoreboard is sorted so it is catering to my needs.
* As a spectator, I want the scoreboard to sort by the highest by default.

# Admin User Stories:

* As an admin, I want to add teams to the scoreboard system so that I can setup the competition.

# General User Stories:

* As a user, I want to access the system from a variety of different devices.