User requirement –secure the database

User requirement definition:

3. The database of mobile application should use some security measures and protect data from being leaked and altered.

System requirements specification:

3.1 The software shall do both browser side and server side validation for any user input so as to make sure that unauthorized users cannot see and alter any information.

3.2 The system should automatically generate the logging report which can be used to detect abnormal behaviour.

3.3 authorized users cannot deny any action and every action will be recorded.

3.4 database administration portal shall be hidden from users.

3.5 The password shall be encrypted before adding into database.

Functional requirements

TITLE: Mobile application - Profile page

DESC: On the mobile application, a user should have a profile page. A user can check their details and edit their password, phone number and email address.

RAT: In order for a user to have a profile page on the mobile application.

DEP: FR1

Functional requirements

TITLE: Mobile application – find the shortest path to the landfill

DESC: When a user clicks empty button, the back-end algorithm will use user and landfill’s location and skips’ states to find shortest path for dumping trash.

RAT: In order for a user to get shortest route to the landfill.

DEP: FR1

Functional requirements

TITLE: Mobile application – View skips states on the map

DESC: On the mobile application, a user should have ability to see states of nearby skips.

RAT: In order for a user to have ability to see states of skips on the mobile application.

DEP: FR1

Functional requirements

TITLE: Mobile application – Inform operator

DESC: After a user click empty button, the system will send a message to operator’s email.

RAT: In order for the operator to know that a full skip will come.

DEP: FR1

Functional requirements

TITLE: Mobile application – View details of skip

DESC: Details of skip should be shown on a new page that pops up on the map. There should be two button on the new page. Left button is to trigger empty skip function and another one is to close this page.

RAT: The way skip details are displayed.

DEP: FR1

Non-functional requirements

TITLE: Availability

DESC: Users can get access to the mobile application anytime and anywhere. Denial of service should not happen.

TITLE: Database response time

DESC: Adding, updating, querying and deleting data should take less than 3 seconds and take less than 5 seconds on peak time.

Title: Scalability

DESC: Database should have enough room for saving data and avoid overloading and data overflow. Data volume will grow, as the number of registered users increase.

TITLE: Compatibility

DESC: Operation system of this mobile application is Android. The mobile application should be compatible for most types of mobile phone.

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