CSE471-System Analysis and Design

Lab Project

Topic: Android Covid Patient Tracker System

Group Number: 05

Section: 08

Group Members:

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Requirement Analysis:

Functional Requirement:

1. Authentication:

    1.1. System will provide a google form to register new users.

    1.2. Users can login with their username and password.

2. Booking appointment:

    2.1. User can search for their preferred hospital where they can test themselves.

    2.2. User will be able to book appointments of doctors according to their symptoms, booking for emergency isolation also they can book for vaccination date by checking the availability of the vaccine.

    2.3. User can see their bookings by visiting their profile and anytime they want they can cancel their booking.

    2.4. User will be able to apply for a request to be added to a queue if they are not able to book any appointment by which system will automatically send that user a notification if any slot gets managed because of the cancellation of another user's appointment.

3. Administrative function:

    3.1. Authority will be able to login their desired page by using their administrative username and password.

    3.2. Authority will be able to update their database of affected, recovery, and dead patient ratio on a daily basis.

3.3.   Authority will be able to provide their available doctors list, number of isolation beds, amount of vaccines in this system.

3.4.   Authority will be able to respond to this system user's questions and any other necessary by using their hotline number.

3.5.   Authority will be able to analyze user's COVID test results by viewing their reports.

4. <u>Regulatory requirements:</u>

4.1.   Government will be able to enforce lockdown by analyzing the daily summary of COVID affected, recovery patient list.

4.2.   Government will be able to encourage common people through this system to wear 'face-mask', 'hand-sanitizing' and if anyone does not follow this, then the government will be able to enforce a fine on him/her.

Nonfunctional requirements:

1. Operational:

1.1.   The system should be able to work on any web browser such as Microsoft Edge, Google Chrome, Safari etc.

1.2.   The database of the system will be managed using Oracle 12c.

1.3.   The system will be designed by using the python programming language.

1.4.   The system is expected to run on any windows, mac-OS and smartphone environments.

2. Performance:

2.1.   The system provides acknowledgement within just 2 second once the patient information is checked.

2.2.   The system should be able to support at least 1000 patient at once.

2.3.   The system will notify the covid test result within 24 hours to the patient.

2.4.   The system will be kept updated within every 5 milliseconds.

3. Security:

3.1.   Users using this system need to hold a login ID and password.

3.2.   In case of forgotten the password/id, a security question and a reference email option will be provided during the registration for the users.

3.3.   The system must be protected from all unauthorized attempts to read or modify its data.

3.4. Administration should be able to view and modify all the information in the system.

3.5. Users personal information should be protected by the system.

4. Maintainability:

4.1. The system should provide the capability to back up their data.

4.2. The system should be able to keep track of every error as well as keep a record of it.

4.3. The cost of maintaining the system should be low.

5. Reliability:

5.1. The downtime for the system must be less than 10 hours in a week.

5.2. The system should be robust, bug free and satisfy all the requirements for the users.

5.3. The accuracy of the system shall be high and probability of failure shall be less than 0.5.

6. Cultural and Political:

6.1. The system should not display any religious symbols or words that might possibly offend any users.

6.2. The system must go accordance with the Digital Security Act of Bangladesh.

6.3. The system should produce all output in Both Bangla and English language.