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| --- | --- | --- | --- |
| Use case name | Login | Unique ID | CAREBOT-Admin-001 |
| Area | Medical-Care Application | | |
| Actor(s) | System Administrator | | |
| Level | Blue | | |
| Description | Admin logging to an administrative account. | | |
| Triggering Event | Admin click “Login” button in the application | | |
| Preconditions | * The admin needs to download application then open it. * The admin needs to have internet access * The user needs to have the authorities to log in as an admin. | | |
| Post-conditions | * Admin has successfully logged in to his account | | |
| Assumptions | * The admin have the medical-care application * A valid data | | |
| Steps Performed | | Information for Steps | |
| 1. Open application 2. Admin enters his data 3. Click on “Login” button 4. Validation of entered data by application | | Step 2: E-mail, Password | |
| Extensions (Alternative Flows) | * If user entered a non-valid data, a warning message should appear to him | | |

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| --- | --- | --- | --- |
| Use case name | Check Data-Integrity (Data management) | Unique ID | CAREBOT-Admin-004 |
| Area | System Back-End | | |
| Actor(s) | Administrator | | |
| Level | Blue | | |
| Description | The administrator verify the integrity of data. | | |
| Triggering Event | logging into the database and check the records. | | |
| Preconditions | The user must be verified as an admin & at least 1 new record available. | | |
| Postconditions | * Data integrity confirmed. | | |
| Assumptions | * A functional database to retrieve data & check integrity techniques. | | |
| Steps Performed | | Information for Steps | |
| 1. Open application 2. Log in as an admin 3. Check new records. 4. Apply integrity investigations. 5. Confirm data. | | Records. | |
| Extensions (Alternative Flows) | * No data to check. | | |

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| --- | --- | --- | --- |
| Use case name | Back & Restore (Data management) | Unique ID | CAREBOT-Admin-004 |
| Area | System Back-End | | |
| Actor(s) | Administrator | | |
| Level | Blue | | |
| Description | The administrator perform back-up or restore operation. | | |
| Triggering Event | Initiate back-up or Restoration process. | | |
| Preconditions | There must be a data to back-up or a backed-up data to restore. | | |
| Postconditions | * Data has been successfully backed-up or restored. | | |
| Assumptions | Available database section to perform back-up or restore & an authorized user. | | |
| Steps Performed | | Information for Steps | |
| 1. Open application 2. Log in as an admin 3. Open database. 4. Back-up a piece of data (if desired). 5. Restore a certain piece of data (if desired). 6. Confirm the process & save changes. | | Database.. | |
| Extensions (Alternative Flows) | * No data to back-up or restore. | | |

Conclusion & Future Work :

The timely access to healthcare avoiding unnecessary time wastage of patients & doctors is a major issue in the whole world especially in the Middle-East and Egypt where a lot of patients get in worse health-conditions due to lack of healthcare-ness. However, considering the exponential growth of mobile users and the need for a real-time medical diagnosis assistance tool, it is therefore important to explore the need for a cost-effective tele-healthcare platform, which allows the earlier detection of diseases and effective communication with patients (users) to a doctor with the assistance of a diagnose & treatment system.

Based on the highlighted needs, this study was able to successfully build a mobile-based health care & diagnosis system, which aids the doctor in the diagnosis process to avoid any misdiagnose & in-proper given treatment based on the medical history in addition to the ability of the doctor to scan & explore the medical history of the patients to take considerations & a dedicated account where patients & doctors can check their profiles to do the mentioned above.

We were able to combine NLP and machine learning algorithm and integrate them into Mobile-based Application to offer diagnosis , treatments based on a recorded speech conversation between the doctor & the patient & the medical history of the patient.

Future-Work :-

Integrate more features and machine learning models to improve the accuracy of the diagnose process and the diversity of the diseases that being diagnosed (i.e) a computer vision model to scan medical X-Rays.