### **Detailed Use Case Descriptions**

#### **Mobile Application System Package**

|  |  |
| --- | --- |
| USE CASE | **Login** |
| DESCRIPTION | Logging into the application to access the features of the mobile application. |
| GOAL | The caretaker can select a patient to view details. |
| ACTORS | Caretaker |
| CONDITIONS | * Need to be pre-registered to the system. * Valid Login credentials should be used |
| FLOW OF EVENTS | The use case starts when the user opens the application. The user is prompted to input his login credentials and based on the validity of the login credentials , the user is logged into the application to access his profile . |
| ISSUES | * Unable to add a patient to the system. * Unable to alter details of the database. |
| CONNECTED PACKAGES | Database |

|  |  |
| --- | --- |
| USE CASE | **Logout** |
| DESCRIPTION | Logging out of the application. Thus, the features of the mobile application are not accessible. |
| GOAL | The caretaker can stop from accessing the application’s features. |
| ACTORS | Caretaker |
| CONDITIONS | * Need to be logged into the system. |
| FLOW OF EVENTS | The use case starts when the logged in user presses the logout button. Then, the user is logged out of the application to back to the application’s login page. |
| ISSUES | None |

|  |  |
| --- | --- |
| USE CASE | **Update Profile** |
| DESCRIPTION | Change the details of the caretaker’s profile . The new profile details would be update in the database. |
| GOAL | The caretaker can change his details.   * Add/remove a contact detail * Change his username and password. * Change his profile picture. |
| ACTORS | Caretaker |
| CONDITIONS | * Need to be logged into to the system. * Need to press the ‘Edit profile’ button for redirection to the intended page of the application. |
| FLOW OF EVENTS | The use case starts when the user presses the ‘Edit Profile’ button the application. Then the user can change the intended details. |
| ISSUES | * Unable to change the related hospital and other fixed details. |
| CONNECTED PACKAGES | Database |

|  |  |
| --- | --- |
| USE CASE | **Change Password** |
| DESCRIPTION | Changing the login password of his/her profile if the existing password was exposed or as per need of the user. The new password would be updated in the database. |
| GOAL | The caretaker can create an alphanumeric password and confirm the password. |
| ACTORS | Caretaker |
| CONDITIONS | * Need to know the current password to be qualified for password changing feature of the application. |
| FLOW OF EVENTS | The use case starts when the user presses the change password button in the profile page. Then the caretaker is redirected to change password page . |
| ISSUES | * Get a code to change the password to the contact numbers provided to change the password upon forgetting the password. |
| CONNECTED PACKAGES | Database |

|  |  |
| --- | --- |
| USE CASE | **Select Patient** |
| DESCRIPTION | Select a patient out of all the patients under the care of the caretaker. |
| GOAL | The caretaker can select the patient of whom he needs to get details of. |
| ACTORS | Caretaker |
| CONDITIONS | * Need to know the name of the patient of which the user needs the detail. |
| FLOW OF EVENTS | The use case starts when the user presses the select patient button. Then , the user selects a patient and views his / her details. |
| ISSUES | None |

|  |  |
| --- | --- |
| USE CASE | **Get Details** |
| DESCRIPTION | Get location and medical details of the selected patient from the local buffer storage. The details in the local buffer storage are those retrieved from the database at refreshed intervals. |
| GOAL | The caretaker can view the details of the patient. |
| ACTORS | Caretaker |
| CONDITIONS | None |
| FLOW OF EVENTS | The use case starts when the user presses the button with the patient’s name. Then, the user views the patient’s details. |
| EXTENSIONS | * Get Medical Details: This would provide the details of the past seven days. * Get Location Details: This would provide the recent distinct locations. |
| CONNECTED PACKAGES | Database |

#### **Database Package**

|  |  |
| --- | --- |
| USE CASE | **Check Login Credentials** |
| DESCRIPTION | The validity of the login credentials for both the mobile and desktop applications is checked to grant access to the features of the system. |
| GOAL | Check whether the login credentials entered by the user matches with the login credentials in the database if exist. |
| ACTORS | No direct connection with any of the actors.  Indirect connection with Caretaker and Operator |
| CONDITIONS | Need to be updated with latest login credentials. |
| FLOW OF EVENTS | The use case starts when the user enters the login credentials and presses the login button of the application systems’ interface. Then the validity of the credentials are checked if exiting. |
| ISSUES | None |
| CONNECTED PACKAGES | * Mobile Application System * Desktop Application System |

|  |  |
| --- | --- |
| USE CASE | **Login and Profile** |
| DESCRIPTION | Updating of the database with the latest changes in profile of a user of the application systems. |
| GOAL | Updating the database instantly upon any changes to a user profile. |
| ACTORS | No direct connection with any of the actors.  Indirect connection with Caretaker and Operator |
| CONDITIONS | Need to be updated with latest profile information instantly. |
| FLOW OF EVENTS | The use case starts when the user submits the changes to his/her profile in the application systems. Then, the database is updated with the changes. |
| ISSUES | None |
| CONNECTED PACKAGES | * Mobile Application System * Desktop Application System |

|  |  |
| --- | --- |
| USE CASE | **Send/Fetch Details** |
| DESCRIPTION | The details from the wheelchair are updated to the database and retrieved to local buffer storages of the devices using the application system. |
| GOAL | Updating the database instantly upon any changes in sensors mounted on wheelchairs that monitor the patient. |
| ACTORS | No direct connection with any of the actors.  Indirect connection with Caretaker, Patient and Operator |
| CONDITIONS | Need to be updated with latest medical information instantly. |
| FLOW OF EVENTS | The use case starts when changes are observed in a wheelchair sensors. Then, the database is updated with the changes. |
| ISSUES | None |
| CONNECTED PACKAGES | * Mobile Application System * Desktop Application System * Wheelchair System |

|  |  |
| --- | --- |
| USE CASE | **Move to Backup** |
| DESCRIPTION | The details from the primary database are moved to the backup database upon a delete request from the desktop Application System. |
| GOAL | Transferring of data from primary database to backup database for later view.  Make the user unable to access the features of the system. |
| ACTORS | No direct connection with any of the actors.  Indirect connection with Operator |
| CONDITIONS | Need to store only required details. |
| FLOW OF EVENTS | The use case starts when the operator has requested to delete a user of the system. The details of the user is moved to the backup database. |
| ISSUES | None |
| CONNECTED PACKAGES | Backup Database |

#### **Backup Database Package**

|  |  |
| --- | --- |
| USE CASES | **Retrieve Data, Store Data and Send Data** |
| DESCRIPTION | The details from the primary database are retrieved to the backup database and stored. The Stored details are accessed by the operator if needed. |
| GOAL | Use the details stored when needed. |
| ACTORS | No direct connection with any of the actors. |
| CONDITIONS | Need to store only required details. |
| FLOW OF EVENTS | The use case starts when the operator has requested to delete a user of the system and the move to backup is initiated. The details of the user are moved to the backup database . |
| ISSUES | The storage capacity of the backup database should be concerned. |
| CONNECTED PACKAGES | Database |

#### **Wheelchair Package**

|  |  |
| --- | --- |
| USE CASE | **Send Details to Database** |
| DESCRIPTION | The details from the wheelchair are updated to the database instantly. |
| GOAL | Updating the database instantly upon any changes in sensors mounted on wheelchairs that monitor the patient. |
| ACTORS | No direct connection with any of the actors.  Indirect connection with Patient |
| CONDITIONS | Need to be updated with latest medical information instantly. |
| FLOW OF EVENTS | The use case starts when changes observed in the wheelchair sensors are received . Then, the database is updated with the changes. |
| ISSUES | None |
| CONNECTED PACKAGES | Database |

|  |  |
| --- | --- |
| USE CASE | **Get Details** |
| DESCRIPTION | The health details of the patient are obtained using sensors. The blood oxygen level, blood sugar level, temperature, skin moisture and pulse rate are obtained from the patient along with the location of the wheelchair from the wheelchair itself. |
| GOAL | Monitor the patient’s health and location of the wheelchair. |
| ACTORS | Patient |
| CONDITIONS | Need to monitor the status of each sensor.  Need to be signaling whether the state has changed at fixed time intervals. |
| FLOW OF EVENTS | The use case starts when changes are observed in a wheelchair sensor. Then, the database is updated with the changes. |
| ISSUES | Would probably have to connect the sensors to a central server which would monitor the status of each sensor. Dependent on how the sensors worked they would either send a signal when their state changed, at fixed time intervals, or the server would have to poll input. Once a change has been sent/received by the server it would update a database of all sensor states. |
| CONNECTED PACKAGES | None |

|  |  |
| --- | --- |
| USE CASE | **Motion** |
| DESCRIPTION | The motion of the wheelchair is monitored using voice commands from the patient. |
| GOAL | * Auto obstacle detection and avoiding * Monitor the motion using specific voice commands * Tracking the distance travelled |
| ACTORS | Patient |
| CONDITIONS | Motion cannot exceed a specified speed limit. |
| FLOW OF EVENTS | The use case starts when changes are observed in a wheelchair sensor. Then, the database is updated with the changes. |
| ISSUES | Obstacle detection should be accurate and responsive. |
| CONNECTED PACKAGES | None |

#### **Desktop Application System Package**

|  |  |
| --- | --- |
| USE CASE | **Login** |
| DESCRIPTION | Logging into the application to access the features of the desktop application. |
| GOAL | The operator can view details of , add or remove Care house and users from the system. |
| ACTORS | Operator |
| CONDITIONS | * Valid Login credentials should be used |
| FLOW OF EVENTS | The use case starts when the user opens the application. The user is prompted to input his login credentials and based on the validity of the login credentials, the user is logged into the application to access . |
| ISSUES | None |
| CONNECTED PACKAGES | Database |

|  |  |
| --- | --- |
| USE CASE | **Logout** |
| DESCRIPTION | Logging out of the application. Thus, the features of the desktop application are not accessible. |
| GOAL | The operator can stop from accessing the application’s features. |
| ACTORS | Operator |
| CONDITIONS | * Need to be logged into the system. |
| FLOW OF EVENTS | The use case starts when the logged in user presses the logout button. Then, the user is logged out of the application to back to the application’s login page. |
| ISSUES | None |

|  |  |
| --- | --- |
| USE CASE | **Add User** |
| DESCRIPTION | Addition of a new user or user collection to the system database. |
| GOAL | * Add the user to the database inputting the details needed to do so. |
| ACTORS | Operator |
| CONDITIONS | Need to collect details of user prior to adding a user. |
| FLOW OF EVENTS | The use case starts when operator presses the add User button. Then, the operator is prompted to add the required details and proceed. |
| ISSUES | None |
| EXTENSIONS | * Add Caretaker:   The personal details of the caretaker and the care house to which he/she is assigned is added to the database.   * Add Patient:   The personal details of the patient and the caretaker to which he/she is assigned is added to the database.   * Add CareHouse:   The details of the care house to which he/she is assigned is added to the database. |
| CONNECTED PACKAGES | Database |

|  |  |
| --- | --- |
| USE CASE | **Remove User** |
| DESCRIPTION | Removal of an existing user or user collection from the system database. |
| GOAL | * Remove the user from the database inputting the details needed to do so. |
| ACTORS | Operator |
| CONDITIONS | Need to know the details of user prior to removal of a user. |
| FLOW OF EVENTS | The use case starts when operator presses the remove User button. Then, the operator is prompted to add the required details and proceed. |
| ISSUES | The removal of details from the primary database are moved to the backup database. |
| EXTENSIONS | * Remove Caretaker:   The details of the caretaker is moved from the primary database to the backup database and the details of care house to which he/she is assigned is altered in the database.   * Remove Patient:   The personal details of the patient is moved from the primary database to the backup database and the details of care taker to which he/she is assigned is altered in the database.   * Remove CareHouse:   The details of the care house is removed altering the details of caretakers and patients. This could be done only upon confirmation of from then care house as it affects all the users assigned under the care house. |
| CONNECTED PACKAGES | Database |

|  |  |
| --- | --- |
| USE CASE | **View Backup data** |
| DESCRIPTION | Viewing of the data in the backup database |
| GOAL | Viewing of the data in the backup database upon any emergency need. |
| ACTORS | Operator |
| CONDITIONS | None |
| FLOW OF EVENTS | The use case starts when operator presses the view backup button. Then, the operator is prompted to confirm and view details. |
| ISSUES | The removal of details from the primary database are moved to the backup database. |
| CONNECTED PACKAGES | Backup database |
| USE CASE | View Backup data |
| DESCRIPTION | Viewing of the data in the backup database |
| GOAL | Viewing of the data in the backup database upon any emergency need. |
| ACTORS | Operator |
| CONDITIONS | None |
| FLOW OF EVENTS | The use case starts when operator presses the view backup button. Then, the operator is prompted to confirm and view details. |
| ISSUES | The removal of details from the primary database are moved to the backup database. |
| CONNECTED PACKAGES | Backup database |

|  |  |
| --- | --- |
| USE CASE | **Select CareHouse** |
| DESCRIPTION | Selecting a care house to view/change details . |
| GOAL | * View or change details of users within the care house. |
| ACTORS | Operator |
| CONDITIONS | Need to know the NIC of user prior to view or change. |
| FLOW OF EVENTS | The use case starts when operator presses the select CareHouse button. Then, the operator is prompted to view or change details . |
| ISSUES | None |
| CONNECTED PACKAGES | Database |

|  |  |
| --- | --- |
| USE CASE | **View/Change Details** |
| DESCRIPTION | View/Change details of caretakers or patients |
| GOAL | View/Change details of caretakers or patients |
| ACTORS | Operator |
| CONDITIONS | Need to know the NIC of user prior to proceed. |
| FLOW OF EVENTS | The use case starts when operator presses the view/change details button. Then, the operator is prompted to select user type and proceed. |
| ISSUES | Only Certain details are permitted to be changed/ |
| EXTENSIONS | * View/Change details of caretaker:   The details of the caretaker is viewed or changed from/in the primary database.   * View/Change details of patient:   The details of the patient is viewed or changed from/in the primary database. |
| CONNECTED PACKAGES | Database |