**Cairo University  
Faculty of Computers and Artificial Intelligence**

Monqez

Software Requirements Specifications

September, 2020

**Table of contents**

[Monqez 1](#_Toc51524678)

[Team 3](#_Toc51524679)

[Document Purpose and Audience 3](#_Toc51524680)

[Introduction 3](#_Toc51524681)

[Software Purpose 3](#_Toc51524682)

[Software Scope 3](#_Toc51524683)

[Definitions, acronyms, and abbreviations 4](#_Toc51524684)

[Requirements 4](#_Toc51524685)

[Functional Requirements 4](#_Toc51524686)

[Non Functional Requirements 10](#_Toc51524687)

[System Models 11](#_Toc51524688)

[Use Case Tables 11](#_Toc51524689)

[Class Diagram 39](#_Toc51524690)

[Traceability Matrix 40](#_Toc51524691)

[Ownership Report 41](#_Toc51524692)

# 

# Team

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Name** | **Email** | **Mobile** |
| 20170093 | Hussien Ashraf Feteiha | hussienashraf99@gmail.com | 01016395068 |
| 20170098 | Khaled Ezzat El-Hadary | khaledelhadary@outlook.com | 01276016539 |
| 20170085 | Hatem Mamdouh Saed | matrix.leader@yahoo.com | 01016192209 |
| 20170148 | Ehab Fawzy Ibrahim | ehab1571999@yahoo.com | 01204860055 |

# Document Purpose and Audience

**This document will define the design of the Monqez application. It contains specific information about expected input, output, classes and functions. The interaction between the classes to meet the desired requirements are outlined in detailed figures at the end of the document. Therefore, the intended reader groups for this software requirement specification are the project manager, developers, supervising professor, and any person interested in developing any application like Monqez.**

# Introduction

## Software Purpose

**This software's purpose is to develop the full Monqez application, it should be able to match and connect between the user calling for help and the nearest available Monqez as well as provide some basic first aid help either via pictures or calls. The software aims to provide a quick help for the user in need until the ambulance arrives or gets well.**

## Software Scope

**The application helps the community by saving their lives by providing first aid to people in need by qualified people as soon as possible. Users of this application should be divided into 3 main types: Normal, Helper (first aider), and Administrator. The normal user can ask for a helper either online via video call or onsite where the helper arrives to the location provided and rate them. The normal user can see the basic instructions in an easy way that is tailored to his situation. The Helper can select the time he wants to receive requests, accept or decline requests, view more information about the accepted request as well as rate the normal user after the request is fulfilled. The admin can view all the applications as well as accept or decline it and review all the complaints and ratings.**

## Definitions, acronyms, and abbreviations

|  |  |
| --- | --- |
| **Acronyms** | **Definition** |
| **Monqez** | **It is the first aider (helper) that arrives to help the person calling for help.** |
| **ETA** | **Estimated Time of Arrival** |

# Requirements

## Functional Requirements

* **Normal User:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Function ID** | **Description** | **Input** | **Processing** | **Output** | **Complexity** |
| **1** | **This function allows the user to create an account in our database.** | **User's personal information such as email, password, name, gender, national ID, chronic diseases, and date of birth.** | **Create new account with user’s personal information provided.** | **Account with user information** | **2** |
| **2** | **Users login to their account in our system whenever they want.** | **User’s email and password** | **Match the entered email and password with the email and password stored in our database** | **Token to access the application** | **1** |
| **3** | **Users log out from their account in our system.** | **-** | **Terminate user existing session from the system.** | **Logged out of the account and redirects to the login page.** | **2** |
| **4** | **Modify users personal information** | **Any of the user's personal information such as email, password, name, gender, and date of birth that the user wishes to edit.** | **Change the old information with the new edited information.** | **User gets his data modified correctly.** | **2** |
| **5** | **User can view the first aid instructions to specific injury** | **Injury type** | **Retrieve all photos and comments of the specific injury first aid instructions from the system.** | **Show the instructions in a simple clear method that is easy to understand and follow** | **2** |
| **6** | **User can request a helper (Monqez) to the site.** | **User’s current location, injury type, and other optional information such as if the request was for himself or other, the specific address and any other notes for the Helper.** | **The system matches the request with the best Helper for the user and notifies him.** | **Helper receives the necessary information and arrives to site within the given ETA.** | **5** |
| **7** | **User can request a helper (Monqez) online for a video call.** | **Injury type and any notes for the helper.** | **The system puts the request in the video queue until his turn arrives and a helper answers him.** | **A video call connection is established between the user and the helper.** | **4** |
| **8** | **User can request a helper (Monqez) online for a voice call.** | **Injury type and any notes for the helper.** | **The system puts the request in the voice queue until his turn arrives and a helper answers him.** | **A voice call connection is established between the user and the helper.** | **4** |
| **9** | **User can rate the helper after the requests are fulfilled.** | **Number of stars for the helper and comment about why he rated him so.** | **Adding the rating to the Helpers account and modifying his average rating.** | **Acknowledge that the rating has been recorded successfully.** | **2** |
| **10** | **User can submit a complaint about any incident he had at his request.** | **Subject and content of the complaint.** | **Add the complaint to the complaints queue until acknowledged by one of the administration.** | **Acknowledge that the complaint has been recorded successfully.** | **2** |
| **11** | **User can communicate with the chatbot to help him in any problem he is facing.** | **User’s problem or text.** | **The chatbot replies to the user or redirects him until the user’s requests are fulfilled or leaves the chat session.** | **User’s problem is solved.** | **5** |

* **Helper User**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Function ID** | **Description** | **Input** | **Processing** | **Output** | **Complexity** |
| **12** | **Helper user can submit an application to be able to use our services.** | **User's personal information such as email, password, name, gender, national ID, chronic diseases, date of birth, and certificate of first aid course completion.** | **Add the application into the applicants queue until one of the administration approve it.** | **Acknowledge the applicant that his/her request is pending.** | **3** |
| **13** | **Users login to their account in our system whenever they want.** | **User’s email and password** | **Match the entered email and password with the email and password stored in our database** | **Token to access the application** | **1** |
| **14** | **Users log out from their account in our system.** | **-** | **Terminate user existing session from the system.** | **Logged out of the account and redirects to the login page.** | **2** |
| **15** | **Modify helper user personal information** | **Any of the user's personal information such as email, password, name, gender, and date of birth that the user wishes to edit.** | **Change the old information with the new edited information.** | **User gets his data modified correctly.** | **2** |
| **16** | **Helper user can determine his active status.** | **One of the four possible states: online, online for calls only, online for onsite requests only, or offline.** | **Change his active status and add/remove him to/from the current active helper list** | **Acknowledge that his status is changed.** | **2** |
| **17** | **Helper user can receive nearby requests that he can accept or decline.** | **-** | **In case of accepting the request, the helper gets all necessary information about the request.** | **Notify the normal user with the accepted helper’s current location.** | **3** |
| **18** | **Helper user can accept online video call requests from the queue** | **-** | **Start a video call between the helper and the user on the top of the queue** | **A video call connection is established between the user and the helper.** | **4** |
| **19** | **Helper user can accept online voice call requests from the queue** | **-** | **Start a voice call between the helper and the user on the top of the queue** | **A voice call connection is established between the user and the helper.** | **4** |
| **20** | **Helper can show more information about the current accepted request.** | **-** | **Retrieve all additional information about the current request.** | **Display all information about the current request.** | **2** |
| **21** | **Helper can submit a complaint about any incident he had at the request.** | **Subject and content of the complaint.** | **Add the complaint to the complaints queue until acknowledged by one of the administration.** | **Acknowledge that the complaint has been recorded successfully.** | **2** |

* **Administrator User**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Function ID** | **Description** | **Input** | **Processing** | **Output** | **Complexity** |
| **22** | **Administrator can add another admin to the system.** | **User's personal information such as email, password, name, gender, national ID, chronic diseases, and date of birth.** | **Create an account for the admin with provided information.** | **The account is added to the system and the new admin is acknowledged.** | **2** |
| **23** | **Administrator login to his account in our system whenever he wants.** | **User’s email and password.** | **Match the entered email and password with the email and password stored in our database.** | **Token to access the application.** | **1** |
| **24** | **Modify administrator user’s personal information** | **Any of the user's personal information such as email, password, name, gender, and date of birth that the user wishes to edit.** | **Change the old information with the new edited information.** | **User gets his data modified correctly.** | **2** |
| **25** | **Administrator log out from his account in the system.** | **-** | **Terminate user existing session from the system.** | **Logged out of the account and redirects to the login page.** | **2** |
| **26** | **Administrator can review the helpers’ application requests.** | **-** | **Helpers’ application requests are retrieved from the system.** | **All helpers’ application requests.** | **2** |
| **27** | **Administrator can accept or decline the helper’s application request.** | **In case of declining, feedback should be provided to the applicant.** | **Activate the helper’s account in case of acceptance and delete the request in case of declining.** | **Acknowledge the applicant with the action taken about his application. A feedback is provided in case of declining otherwise the account is activated.** | **1** |
| **28** | **Administrator user can review all the provided complaints.** | **-** | **Users’ complaints are retrieved from the system.** | **All users’ complaints.** | **2** |
| **29** | **Administrator user can ban helper or normal users.** | **User that has to be banned and feedback.** | **Deactivate the account.** | **The user is banned and gets notified with the feedback.** | **2** |
| **30** | **Administrator can add new injury with its first aid instructions to the system.** | **Injury name, severity, and instructions (photos and comments).** | **Store the new injury to our system database.** | **The admin is acknowledged that the injury is stored successfully.** | **3** |

## 

## Non Functional Requirements

|  |  |
| --- | --- |
| **1- Performance** | **The normal user request should be matched as quickly as possible since the duration is an important factor to save the patients’ lives. (At most 2 minutes)** |
| **2- Safety** | **During the registration process, the user is asked to attach a photo of the national id to be used in the event that anyone does anything illegal or unethical.** |
| **3- Reliability** | **The ability of the program to work with full functionality in worst cases. (Peak Demand)** |
| **4- Availability** | **The application should always be available to serve the users at least 90% of the time.** |
| **5- Security** | **All user information must be encrypted to protect it in the event of any breach. The system will protect the data and services from unauthorized access.** |
| **6- Portability** | **This software should be usable on different environments such as (iOS, web, and Android).** |
| **7- Usability** | **The ability of the program to do all the basic features by 3 touches as a maximum.** |

# 

# 

# System Models

## Use Case Tables

|  |  |
| --- | --- |
| Use Case ID: | 1 |
| Use Case Name: | Sign up |
| Actors: | Normal User, Helper (Monqez) |
| Pre-conditions: | No account for the user in the database |
| Post-conditions: | New account added to database with the user information. |
| Main Scenario: | 1. System displays the signup page. 2. User enters the credentials (email and password). 3. System stores the credentials. 4. System redirects the user to Additional Information Page. |
| Exceptional Scenario: | 1. System displays error message. 2. System displays the signup page. |

|  |  |
| --- | --- |
| Use Case ID: | 2 |
| Use Case Name: | Add additional information |
| Actors: | Normal User |
| Pre-conditions: | User is signed up. |
| Post-conditions: | Additional information is added to the existing user. |
| Main Scenario: | 1. System displays the add additional information page. 2. User enters the required data (Full Name, phone number, national ID, date of birth, address, and gender). 3. System stores the information. 4. System redirects the normal user home page. |
| Exceptional Scenario: | 1. System displays error message. 2. System displays add additional information page. |

|  |  |
| --- | --- |
| Use Case ID: | 3 |
| Use Case Name: | Apply as Monqez |
| Actors: | Helper (Monqez) User |
| Pre-conditions: | User is signed up. |
| Post-conditions: | Application is submitted and pending approval. |
| Main Scenario: | 1. System displays the add additional information page. 2. User enters the required data (Full Name, phone number, national ID, date of birth, address, gender, and first-aid certificate). 3. System stores the information. 4. System redirects the login page. |
| Exceptional Scenario: | 1. System displays error message. 2. System displays add additional information page. |

|  |  |
| --- | --- |
| Use Case ID: | 1 |
| Use Case Name: | User Sign up |
| Actors: | Normal User |
| Pre-conditions: | No account for the user in the database |
| Post-conditions: | New account added to database with the user information. |
| Main Scenario: | 1. System displays the signup page. 2. User enters the credentials (email and password). 3. System stores the credentials. 4. System redirects the user to Additional Information Page. |
| Exceptional Scenario: | 1. System displays error message. 2. System displays the signup page. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 2 | |
| Use Case Name: | Login | |
| Actors: | Normal User | |
| Pre-conditions: | Registered. | |
| Post-conditions: | Give access to use all application functionalities. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click Login button. |  |
|  | 2- Ask for email and password. |
| 3- Fill in the information. |  |
|  | 4- System verifies data. |
|  | 5- Open the home page of the application. |
| Exceptions: | **User Action** | **System Action** |
| If Normal user write wrong email or password. | System display the exception message to the user and allow him to reenter the information. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 3 | |
| Use Case Name: | logout | |
| Actors: | Normal User | |
| Pre-conditions: | Logged in | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click logout button. |  |
|  | 2- Load and Display the login page. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 4 | |
| Use Case Name: | Modify normal user’s personal information | |
| Actors: | Normal user | |
| Pre-conditions: | Logged in | |
| Post-conditions: | Replace the old account’s information with new information | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click on Edit profile button. |  |
|  | 2- System ask the user to enter the password. |
| 3- user enter his/her account password. |  |
|  | 4- System load his/her personal information. |
| 5- user update his/her information. |  |
| 6- Click on Save button |  |
|  | 7- System verifies data. |
|  | 8- System update the information and replace the new information with old in database. |
| Exceptions: | **User Action** | **System Action** |
| 1- If the user enters wrong password. |  |
|  | 2- The System display exception message to the admin and allow him to reenter the password. |
| 3- If the user enters Wrong password 3 times. |  |
|  | 4-The System block the account and send activation mail to user’s email. |
| 5-If user update any cell with wrong format. |  |
|  | 6-The System display the exception message to the user and allow him to reenter the information. |
| Notes and Issues: | National ID can’t be updated. | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 5 | |
| Use Case Name: | View first aid instruction to specific injury | |
| Actors: | Normal user | |
| Pre-conditions: | Normal user logged in | |
| Flow of events: | **User Action** | **System Action** |
| 1- The user clicks view instructions button |  |
|  | 2- The system shows all injuries to let user choose one of them to show the instructions of that injury |
| 3 – user select the injury |  |
|  | 4- The system shows all first aid instructions specified for that injury |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 6 | |
| Use Case Name: | Request helper onsite | |
| Actors: | Normal user | |
| Pre-conditions: | Normal user logged in | |
| Post-conditions: | Create Onsite request | |
| Flow of events: | **User Action** | **System Action** |
| 1- user selects his location on the map and clicks on request helper onsite |  |
|  | 2-The system asks user to enter type of injury |
| 3-The user enters the type of injury |  |
|  | 4- The system asks user to enter additional information like his address in details, the request for him or for other, any notes. |
| 5- The user enters the additional information |  |
| Notes and Issues: | In case the user make request for location and there is another request for that locations already exist the system shows exception message | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 7 | |
| Use Case Name: | User request a helper online for a video call | |
| Actors: | Normal user | |
| Pre-conditions: | Logged in as Normal user | |
| Post-conditions: | Add the user to video call queue | |
| Flow of events: | **User Action** | **System Action** |
| 1- user clicks on request online helper |  |
|  | 2- system asks user if he wants video call or voice call |
| 3- The user chooses video call |  |
|  | 4- the system asks user to enter the type of injury and any notes for helper |
| 5- User fill in the information. |  |
|  | 6-The system crates the request and add the user to the video call queue |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 8 | |
| Use Case Name: | User request a helper online for a voice call | |
| Actors: | Normal user | |
| Pre-conditions: | Logged in as Normal user | |
| Post-conditions: | Add the user to voice call queue | |
| Flow of events: | **User Action** | **System Action** |
| 1- user clicks on request online helper |  |
|  | 2- system asks user if he wants video call or voice call |
| 3- The user chooses voice call |  |
|  | 4- the system asks user to enter the type of injury and any notes for helper |
| 5- User fill in the information. |  |
|  | 6-The system crates the request and add the user to the voice call queue |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 9 | |
| Use Case Name: | Rate the Helper | |
| Actors: | Normal User | |
| Pre-conditions: | User logged in, User has a request fulfilled | |
| Post-conditions: | Average rating of the Helper is updated. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Normal user rate the helper of the fulfilled request from 5 stars. |  |
| 2- Normal user give a comment on why he gave such a rating. |  |
|  | 3- System store the rating and the comment and update the Helper’s average rating |
|  | 4- System acknowledge that the rating has been recorded successfully |
| Notes and Issues: | Show acknowledgement message. | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 10 | |
| Use Case Name: | Submit a complaint | |
| Actors: | Normal User | |
| Pre-conditions: | User logged in, User has a request fulfilled | |
| Post-conditions: | Complaint is added to complaint queue for the administration. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Normal user files a complaint about an incident that occurred in his last request. |  |
| 2- Normal user enters subject of the complaint and its content. |  |
|  | 3- System checks subject and content of complaint exits and is above the minimum number of letters. |
|  | 4- System stores the complaint in the complaints queue for administration. |
|  | 5-System acknowledge that the complaint has been recorded successfully. |
| Exceptions: | **User Action** | **System Action** |
| 1- Normal user files a complaint about an incident that occurred in his last request. |  |
| 2- Normal user doesn’t enter the subject of the complaint or its content or insufficient number of letters. |  |
|  | 3- System checks subject and content of complaint exits and is above the minimum number of letters. |
|  | 4- System provides a feedback of why the complaint has not been recorded. |
| Notes and Issues: | Minimum number of letters is 100 letters. The complaint must be clear and understandable. | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 11 | |
| Use Case Name: | Communicate with Chatbot | |
| Actors: | Normal User | |
| Pre-conditions: | User logged in | |
| Flow of events: | **User Action** | **System Action** |
| 1- Normal user tells the chatbot the problem he is facing |  |
|  | 2- chatbot offers variety of solutions |
| 3- Normal user chooses the solution that best for him. |  |
| 4- Normal user terminates the chat session. |  |
| Exceptions: | **User Action** | **System Action** |
| 1- Normal user tells the chatbot the problem he is facing |  |
|  | 2- Chatbot can’t find a proper solution. |
|  | 3- Chatbot redirects the Normal user to a Helper. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 12 | |
| Use Case Name: | Submit Application | |
| Actors: | Helper User | |
| Pre-conditions: | User has no pre-existing accounts in the database. | |
| Post-conditions: | User has account in the database. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Fill all required data |  |
|  | 2- Check that this data is not existing in the database.  Data does not exist in the database |
|  | 3- Add application to the application queue for the administration. |
|  | 4- Acknowledge the user that his application is now pending the administration approval. |
|
| Exceptions: | **User Action** | **System Action** |
| 1- Helper user enter all the required data |  |
|  | 2- Check that this data is not existing in the database.  Data exists in the database  3- Acknowledge the helper user that his application is refused. |
| Notes and Issues: | Email and phone number must be of right format | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 13 | |
| Use Case Name: | Login to the system | |
| Actors: | Helper user | |
| Pre-conditions: | Helper User has an account in our database | |
| Post-conditions: | Helper User logged in | |
| Flow of events: | **User Action** | **System Action** |
| 1- User enters email and password |  |
|  | 2- System checks if email exists |
| 3- Fill in the information. | 3- System checks if password entered matches the password in database. |
|  | 4- System logs user in and sends the user his token. |
| Exceptions: | **User Action** | **System Action** |
| 1- User enters wrong email or password |  |
|  | 2- System checks login credentials. |
|  | 3- System tells the user that the login credentials are incorrect. |
| Notes and Issues: | Email must be of correct format. | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 14 | |
| Use Case Name: | Logout | |
| Actors: | Helper User | |
| Pre-conditions: | Login | |
| Post-conditions: | Helper user login session is terminated | |
| Flow of events: | **User Action** | **System Action** |
| 1. User chooses to logout of system |  |
|  | 2- System terminates the login session and redirects user to login screen. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 15 | |
| Use Case Name: | Modify user account. | |
| Actors: | Helper User | |
| Pre-conditions: | User logged in | |
| Post-conditions: | Modified account | |
| Flow of events: | **User Action** | **System Action** |
| 1- Choose to modify the account. |  |
|  | 2- System displays current account information. |
| 3- Choose data to modify. |  |
| 4- Enter the new data. |  |
|  | 6- System verifies new data. |
|  | 7- System stores the new data in the database. |
| Exceptions: | **User Action** | **System Action** |
| 1- User enter email, phone number and password. |  |
|  | 2- Wrong Email or phone number or password is weak.  3- System display the exception message to the user and allow him to reenter the information. |
| Notes and Issues: | User should create strong password.  User cannot change his national ID number. | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 16 | |
| Use Case Name: | Modify Active Status | |
| Actors: | Helper User | |
| Pre-conditions: | Logged in as a helper. | |
| Post-conditions: | The active status is changed. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click on the active status drop box. |  |
|  | 2- In case of changing the status to offline, he is removed from the online list otherwise the system adds helper user to the online list. |
|  | 3- The system acknowledges the helper user that his status is changed. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 17 | |
| Use Case Name: | Receive nearby online request | |
| Actors: | Helper user | |
| Pre-conditions: | Logged in as a helper. | |
| Flow of events: | **User Action** | **System Action** |
| 1- The normal user creates a request with the injury information. |  |
|  | 2- The system notifies the nearest 3 helper users with a request. |
| 3- The helper user accept/decline the request. |  |
|  | 4- If helper user accepted the request, then the system provides him with the detailed information about the request. |
|  | 5- The system removes the notification from the 2 other helper users. |
| 6- The user that has accepted can navigate from his location to the case location. |  |
| Exceptions: | **User Action** | **System Action** |
| Notes and Issues: | The system will notify the nearest 3 helper users (if it is an onsite request). In case of the helper has accepted the request, the system removes the notification from the 3 other helper users. | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 18 | |
| Use Case Name: | Receive nearby online video call request | |
| Actors: | Helper user | |
| Pre-conditions: | Logged in as a helper. | |
| Flow of events: | **User Action** | **System Action** |
| 1- The normal user creates an online video call request with the injury information. |  |
|  | 2- The system gets the first helper user from the active online queue or from the active online calls only queue. |
| 3- The helper user accept/decline the request. |  |
|  | 4- If helper user accepted the request, the system will establish a video call between normal user and helper user. |
|  | 5- The system adds the helper user that has accepted the request to end of the queue. |
| Exceptions: | **User Action** | **System Action** |
| Notes and Issues: | The system will notify the first helper user in the queue. In case of the helper has declined the request, the system adds him to the end of the queue and notify the next helper user. | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 19 | |
| Use Case Name: | Receive nearby online voice call request | |
| Actors: | Helper user | |
| Pre-conditions: | Logged in as a helper. | |
| Flow of events: | **User Action** | **System Action** |
| 1- The normal user creates an online voice call request with the injury information. |  |
|  | 2- The system gets the first helper user from the active online queue or from the active online calls only queue. |
| 3- The helper user accept/decline the request. |  |
|  | 4- If helper user accepted the request, the system will establish a voice call between normal user and helper user. |
|  | 5- The system adds the helper user that has accepted the request to end of the queue. |
| Exceptions: | **User Action** | **System Action** |
| Notes and Issues: | The system will notify the first helper user in the queue. In case of the helper has declined the request, the system adds him to the end of the queue and notify the next helper user. | |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 20 | |
| Use Case Name: | Show more information about the current accepted request. | |
| Actors: | Helper user | |
| Pre-conditions: | Logged in as a helper. | |
| Flow of events: | **User Action** | **System Action** |
| 1- The helper user clicks the show more information button. |  |
|  | 2- The system retrieves the information that normal user has provided. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 21 | |
| Use Case Name: | Complain about an incident he has at the request. | |
| Actors: | Helper user | |
| Pre-conditions: | Logged in as a helper. | |
| Flow of events: | **User Action** | **System Action** |
| 1- The helper user clicks the button complain. |  |
| 2- He adds subject and content of the complaint. |  |
|  | 3- The system adds the complaint to the complaints queue. |
| 4- The helper user is acknowledged by an administrator. |  |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 22 | |
| Use Case Name: | Add another admin to the system. | |
| Actors: | Administrator user | |
| Pre-conditions: | Logged in as an administrator. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click on add admin button. |  |
|  | 2- System ask the admin to enter the password. |
| 3- Admin enter his/her account password. |  |
|  | 4- System load his/her personal information. |
| 5- Logged in admin adds the new admin’s information. |  |
| 6- Click on save button. |  |
|  | 7- The system acknowledges the new admin with his information. |
| Exceptions: | **User Action** | **System Action** |
|  | If the admin enters wrong password. | The System display exception message to the admin and allow him to reenter the password. |
|  | If the admin enters Wrong password 3 times. | The System block the account and send activation mail to admin’s email. |
|  | If admin update any cell with wrong format. | The System display the exception message to the admin and allow him to reenter the information. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 23 | |
| Use Case Name: | Login | |
| Actors: | Admin | |
| Pre-conditions: | Registered. | |
| Post-conditions: | Give access to use all application functionalities. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click Login button. |  |
|  | 2- Ask for email and password. |
| 3- Fill in the information. |  |
|  | 4- System verifies data. |
|  | 5- Open the home page of the application. |
| Exceptions: | **User Action** | **System Action** |
| If admin write wrong email or password. | System display the exception message to the user and allow him to reenter the information. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 24 | |
| Use Case Name: | Modify administrator user’s personal information | |
| Actors: | Admin user | |
| Pre-conditions: | Logged in | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click on Edit profile button. |  |
|  | 2- System ask the admin to enter the password. |
| 3- Admin enter his/her account password. |  |
|  | 4- System load his/her personal information. |
| 5- Admin update his/her information. |  |
| 6- Click on Save button |  |
|  | 7- System verifies data. |
|  | 8- System update the information. |
| Exceptions: | **User Action** | **System Action** |
| If the admin enter wrong password. | The System display exception message to the admin and allow him to reenter the password. |
| If the admin enter Wrong password 3 times. | The System block the account and send activation mail to admin’s email. |
| If admin update any cell with wrong format. | The System display the exception message to the admin and allow him to reenter the information. |
| Notes and Issues: | National ID can’t be updated. | |
| Use Case ID: | 25 | |
| Use Case Name: | logout | |
| Actors: | Admin | |
| Pre-conditions: | Logged in | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click logout button. |  |
|  | 2- Load and Display the login page. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 26 | |
| Use Case Name: | Admin review the helper application request. | |
| Actors: | Admin user. | |
| Pre-conditions: | Logged in. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click on Show Applications requests button. |  |
|  | 2- Load All the application requests. |
|  | 3- Display List with all application requests. |
| 4- Select one of the requests. |  |
|  | 4- System open full details about this application. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 27.1 | |
| Use Case Name: | Admin Accept the helper application request. | |
| Actors: | Admin user. | |
| Pre-conditions: | Logged in. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Review the application details. |  |
| 2- Click on Approval button. |  |
|  | 3- Activate the applicant account in the system. |
|  | 4- Send acknowledge mail to the applicant. |
|  | 5- Remove the current application from the list of applications requests. |

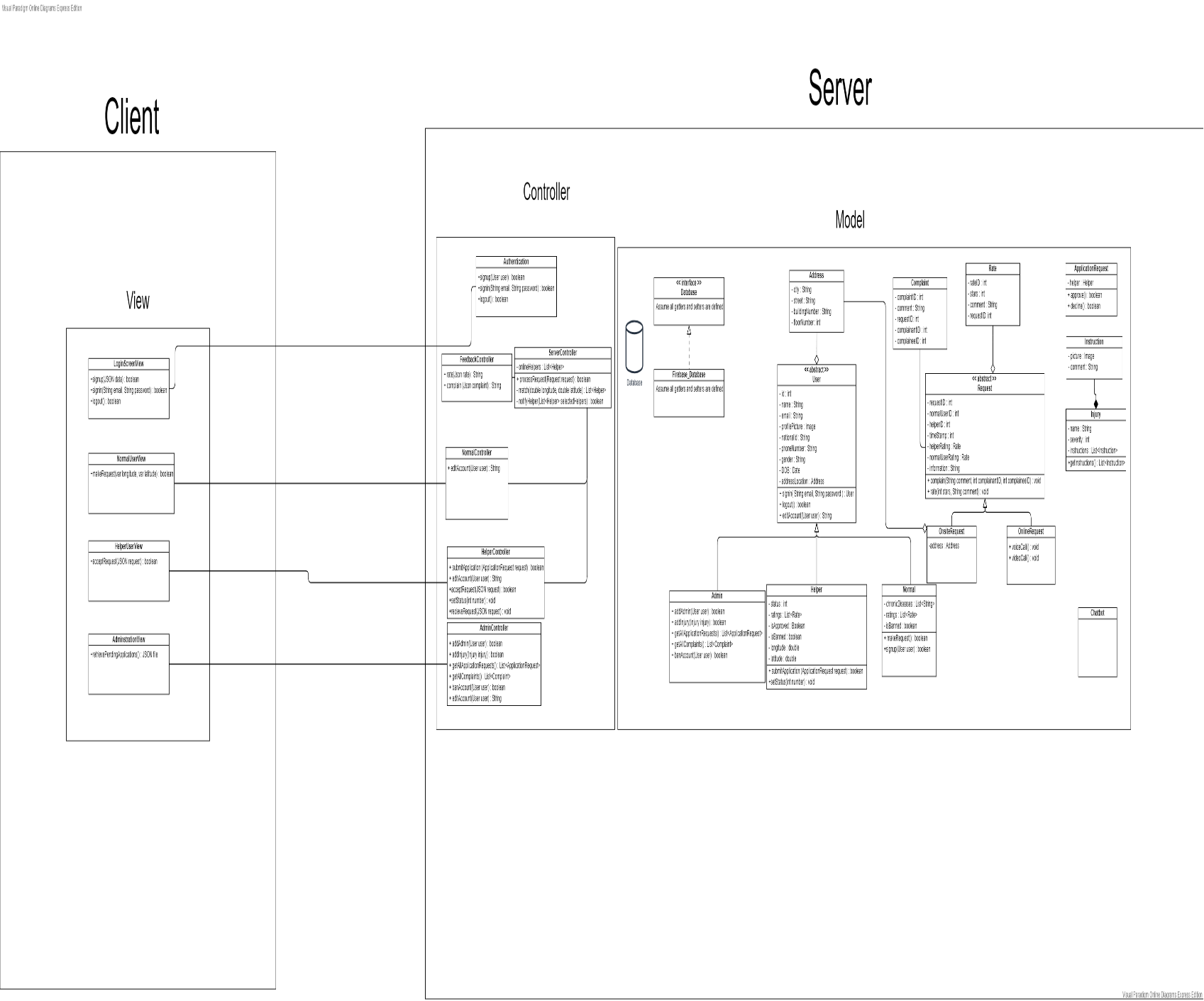
|  |  |  |
| --- | --- | --- |
| Use Case ID: | 27.2 | |
| Use Case Name: | Admin decline the helper application request. | |
| Actors: | Admin user. | |
| Pre-conditions: | Logged in. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Review the application details. |  |
| 2- Click on decline button. |  |
|  | 3- Load feedback form. |
| 4- Write the problems with this applications. |  |
| 5- Click on Send button. |  |
|  | 6- System saves the application with its feedback. |
|  | 7- Send acknowledge mail to the applicant with the feedback. |
|  | 8- Remove the current application from the list of applications requests. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 28 | |
| Use Case Name: | Admin review the complaints. | |
| Actors: | Admin user | |
| Pre-conditions: | Logged in. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click on Show Complaints button. |  |
|  | 2- Load All the Complaints. |
|  | 3- Display List with all Complaints. |
| 4- Select one of the Complaint. |  |
|  | 4- System open full details about this Complaints. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 29 | |
| Use Case Name: | Admin blocks user’s account. | |
| Actors: | Admin user. | |
| Pre-conditions: | Logged in. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click on Block User button. |  |
|  | 2- System ask the admin to enter the password. |
| 3- User enter his/her account password. |  |
|  | 4- System load and display block user form. |
| 5- Write the email of the user. |  |
| 6- Write the reasons of the block. |  |
| 7- Click on Block button. |  |
|  | 8- System deactivate the account of the user. |
|  | 9- Sent mail to the target user with the reason of the block. |
| Exceptions: | **User Action** | **System Action** |
| If the admin enter wrong password. | The System display exception message to the admin and allow him to reenter the password. |
| If the admin enter Wrong password 3 times. | The System block the account and send activation mail to admin’s email. |
| If Admin write Invalid email | The System display the exception message to the admin and allow him to reenter the email. |

|  |  |  |
| --- | --- | --- |
| Use Case ID: | 30 | |
| Use Case Name: | Admin add new injury with its first aid instruction. | |
| Actors: | Admin User. | |
| Pre-conditions: | Logged in. | |
| Post-conditions: | Send notification to all helper and normal users with the inserted data. | |
| Flow of events: | **User Action** | **System Action** |
| 1- Click on add new injury button. |  |
|  | 2- Load the injury creation form. |
|  | 3- Display the injury creation form. |
| 3- Fill in the instructions. |  |
|  | 4- System verifies data. |
|  | 5- System add this to injury instruction list. |
| Notes and Issues: | Admin will add text and maybe image. | |

## Class Diagram



# Traceability Matrix

|  |  |
| --- | --- |
| **Functional requirement number** | **Class Name** |
| **1** | **Authentication** |
| **2** | **Authentication** |
| **3** | **Authentication** |
| **4** | **User** |
| **5** | **Injury** |
| **6** | **NormalUser** |
| **7** | **NormalUser** |
| **8** | **NormalUser** |
| **9** | **Request** |
| **10** | **Request** |
| **11** | **Chatbot** |
| **12** | **HelperUser** |
| **13** | **Authentication** |
| **14** | **Authentication** |
| **15** | **User** |
| **16** | **HelperUser** |
| **17** | **HelperController** |
| **18** | **HelperController** |
| **19** | **HelperController** |
| **20** | **Request** |
| **21** | **Request** |
| **22** | **AdminUser** |
| **23** | **Authentication** |
| **24** | **User** |
| **25** | **Authentication** |
| **26** | **AdminUser** |
| **27** | **ApplicationRequest** |
| **28** | **AdminUser** |
| **29** | **AdminUser** |
| **30** | **AdminUser** |

# Ownership Report

|  |  |
| --- | --- |
| **Item** | **Owners** |
| **Table of contents** | Khaled Ezzat |
| **Document Purpose** | Hussien Ashraf |
| **Software Purpose** | Khaled Ezzat |
| **Software Scope** | Abdelrahman Mohamed |
| **Definitions and Acronyms** | Hatem Mamdouh |
| **Functional Requirement (User)** | Hussien Ashraf |
| **Functional Requirement (Group)** | All |
| **Non-Functional Requirement** | All |
| **User Case ID (1:8)** | Hatem Mamdohh |
| **User Case ID (9:15)** | Hussien Ashraf |
| **User Case ID (16:22)** | Khaled Ezzat |
| **User Case ID (23:30)** | Ehab Fawzy |
| **UML Class diagram** | All |
| **Traceability matrix** | Hatem Mamdoh |