***Software requirement specification for Clinic Information System (Icare)***

1. **Introduction:**

A Product requirements document is used in product marketing to plan andexecute new products.

A Software Requirements Specification is a complete description of thebehavior of the system to be developed. It includes a set of use cases thatdescribe all the interactions that users will have with the software.

Use Cases are also known as Functional Requirements. In addition to use cases, the **SRS** also contains nonfunctional requirements.

The software requirements document is a written statement of what thesoftware will do.

What the software does is directly perceived by its users. When the userperforms some action, the software responds in a particular way.

Therefore, you must agree on actions the users can perform and response theyshould expect. This common understanding is captured in the requirementsdocument.

* 1. **Purpose:**

This document contains the tests requirements for Icare clinic information System.

* 1. **Project scope:**

This document encapsulates the functional requirements for the software that will be developed in detail. And include details about most likely use cases and how the system should react to them.

1. **Requirements**

This part of the requirements document serves to present the "big picture" of the application. Here you lay out the objectives of the application.

* 1. **Login :**

Graphical user interface, application

Description automatically generatedThe login will be the first interface the user interacts with when the application will start, there will be two inputs username and password , and two buttons login and clear.

* + 1. **Functional Requirements :**
       1. **Req001:**

User clicks sign without entering any information

**Req001a:** Error text will appear at top of screen

**Req001b:** Error text will be in red

**Req001c:** error message will be “No inputs given please enter username and password”

* + - 1. **Req002:**

There will be three users at the launch of the application:

1.Owner(admin)

2.Mannger

3.Receptionest

Each user will have a unique ID for login where moreover each of them will have a different prefix of the username and the ID must be longer than 3 therefore it will be prefix which is 3 letters and one number minimum.

**Req002a :**

Owner username must start with “OWN” in capital or small then followed by users unique ID.

**Req002b :**

Manager username must start with “MAN” capital or small followed by the users unique ID.

**Req002c:**

Receptionist username must start with “REP” capital or small followed by the users unique ID.

* + - 1. **Req003** :

User gave incorrect username or username

**Req003a :** Don’t enter the system

**Req003b:** Error message will be displayed at top of screen

**Req003c:** Error message will be displayed at top of screen

**Req003d :** Display invalid error message “Invalid Email or Password Please Try again”

* + - 1. **Req004:**

Password must be longer then 3

* + - 1. **Req005:**

Username and password must not be empty

* + - 1. **Req006:**

Clear Button will empty contents of text boxes

* + 1. **Login Graphical user interface (GUI) :**
       1. **Req007:**

Interface on start up

* + - * 1. **Req007a** : Label “Sign in” visible: True
        2. **Req007b** : Label “error Message” visible: False
        3. **Req007c :** Label “Username” visible: True
        4. **Req007d :** Textbox “Enter Username” visible: True
        5. **Req007e :** Label “Password” visible: True
        6. **Req007f :** Textbox “Enter Password” visible: True
        7. **Req007g :** Button “Sign In” visible: True
        8. **Req007h :** Button “Clear” visible: True
  1. Graphical user interface, application

     Description automatically generated**Owner Screen:**
     1. **Description :**

This is the screen which will appear after user signs in successfully as an Owner , will be the main hub for all their work as it leads to all the other screens that have all there permitted actions.

* + 1. **Functional Requirements:**
    2. **Req008:** welcome message + user’s full name
    3. **Req009:** Show number of patient on the system
    4. **Reg0010:** Shownumber of doctors on the system
    5. **Reg011:** Show number of employees on the system
    6. **Reg012:** Pressing "log out" button at any time should close the page and log the time the user logged out and open the log in page
    7. **Reg013:** Pressing "Refresh stats" to connection with database
    8. **Reg014:**Menu tap edit account
    9. **Reg015:**Menu tap doctors
    10. **Reg016:**Menu tap employees
    11. **Login Graphical user interface (GUI) :**
    12. **Reg017:**

1. Label “welcome massage + username” visible: True
2. Label “number of patience” visible: True
3. Label “number of patients in the system” visible: True
4. Label “number of doctors” visible: True
5. Label “number of doctors in the system” visible: True
6. Label “number of employees” visible: True
7. Label “number of employees in the system” visible: True
8. Button “log out” visible: True
9. Button “refresh stats” visible: True
10. Menu tap “edit account” visible: True
11. Menu tap “doctors” visible: True
12. Menu tap “employees” visible: True
    * 1. Graphical user interface, website

         Description automatically generated **Change name screen :**
      2. **Reg018:** No fields can be empty
      3. **Reg018a:** if detected any field is empty when add button is pressed

display error message “Empty TextField Detected”

* + 1. **Req019 :**Owner username must start with “OWN” in capital or small then followed by users unique ID
    2. **Reg020:** Full name must not contain any numbers
    3. **Reg021a:** if detected number in Full name field when add button pressed display error message “Full-name Cannot Contain Number”
    4. **Reg022 :** Pressing "Apply change" to save changes to database
    5. **Login Graphical user interface (GUI) :**

**Reg023:**

1. Menu tap “change name” visible: True
2. Menu tap “change username” visible: True
3. Menu tap “change password” visible: True
4. Label “Enter username” visible: True
5. textbox visible: True
6. Label “Error message” visible: False
7. Label “Enter new full name” visible: True
8. textbox visible: True
9. Button “apply change” visible: True
   * 1. Graphical user interface, website

        Description automatically generated**Change username screen:**
     2. **Reg024:** No fields can be empty
     3. **Reg024a:** if detected any field is empty when add button is pressed display error message “Empty TextField Detected”
     4. **Req025 :**Owner username must start with “OWN” in capital or small then followed by users unique ID
     5. **Reg026 :** Pressing "Apply change" to save in database
     6. **Login Graphical user interface (GUI) :**

**Reg027:**

1. Menu tap “change name” visible: True
2. Menu tap “change username” visible: True
3. Menu tap “change password” visible: True
4. Label “Enter old username” visible: True
5. textbox visible: True
6. Label “Error message” visible: False
7. Label “Enter new username” visible: True
8. textbox visible: True
9. Button “apply change” visible: True
   * 1. Graphical user interface, website

        Description automatically generated **Change password screen:**
     2. **Reg028:** No fields can be empty
     3. **Reg028a:** if detected any field is empty when add button is pressed display error message “Empty TextField Detected”
     4. **Req029 :**Owner username must start with “OWN” in capital or small then followed by users unique ID
     5. **Reg030:** Password must be longer then 3
     6. **Reg031:** Pressing "Apply change" to save in database
     7. **Login Graphical user interface (GUI) :**

**Reg032:**

1. Menu tap “change name” visible: True
2. Menu tap “change username” visible: True
3. Menu tap “change password” visible: True
4. Label “Enter username” visible: True
5. textbox visible: True
6. Label “Error message” visible: False
7. Label “Enter new password” visible: True
8. textbox visible: True
9. Button “apply change” visible: True
   * 1. Graphical user interface

        Description automatically generated**Add manager screen:**
     2. **Reg032:** No fields can be empty

**Reg032a:** if detected any field is empty when add button is pressed display error message “Empty TextField Detected”

* + 1. **Reg033:** Full name must not contain any numbers

**Reg033a:** if detected number in Full name field when add button is pressed display error message “Full-name Cannot Contain Number”

* + 1. **Reg034:** Manager username must start with “MAN” capital or small followed by the users unique ID
    2. **Reg035:** Password must be longer then 3
    3. **Reg036:** ID must be smaller than 2147483646

**Req036a:** if detected ID is bigger than 2147483646 when add button is pressed display error message “ID Is Too Big”

* + 1. **Req037:** If Manager added successfully display message “Manager Added Successfully” in blue

**Req037a:** If Manager wasn’t added for any reason display error message “Manager Wasn’t Added Successfully” in red

* + 1. **Reg038:** Clear Button will empty contents of text boxes
    2. **Reg039:** Menu tap add manager
    3. **Reg040:** Menu tap edit manager username
    4. **Reg041:** Menu tap edit manager password
    5. **Reg042:** Menu tap delete manager
    6. **Login Graphical user interface (GUI) :**

**Reg043:**

1. Menu tap “add manager” visible: True
2. Menu tap “edit manager username” visible: True
3. Menu tap “edit manager password” visible: True
4. Menu tap “delete manager” visible: True
5. Label “full name” visible: True
6. textbox visible: True
7. Label “Error message” visible: False
8. Label “username” visible: True
9. textbox visible: True
10. Label “password” visible: True
11. textbox visible: True
12. Label “ID” visible: True
13. textbox visible: True
14. Button “add” visible: True
15. Button “clear” visible: True
    * 1. Graphical user interface, website

         Description automatically generated **Edit manager username screen:**
      2. **Reg044:** No fields can be empty

**Reg044a:** if detected any field is empty when add button is pressed display error message “Empty TextField Detected”

* + 1. **Reg045:** Manager username must start with “MAN” capital or small followed by the users unique ID
    2. **Reg046:** Pressing "Apply change" to save in database
    3. **Login Graphical user interface (GUI) :**

**Reg047:**

1. Menu tap “add manager” visible: True
2. Menu tap “edit manager username” visible: True
3. Menu tap “edit manager password” visible: True
4. Menu tap “delete manager” visible: True
5. Label “enter manager old username” visible: True
6. textbox visible: True
7. Label “Error message” visible: False
8. Label “enter new username” visible: True
9. textbox visible: True
10. Button “apply change” visible: True
    * 1. Graphical user interface, website

         Description automatically generated **Edit manager password screen:**
      2. **Reg048:** No fields can be empty

**Reg048a:** if detected any field is empty when add button is pressed display error message “Empty TextField Detected”

* + 1. **Reg049:** Manager username must start with “MAN” capital or small followed by the users unique ID
    2. **Reg050:** Password must be longer then 3
    3. **Reg051:** Pressing "Apply change" to save in database
    4. **Login Graphical user interface (GUI) :**

**Reg052:**

1. Menu tap “add manager” visible: True
2. Menu tap “edit manager username” visible: True
3. Menu tap “edit manager password” visible: True
4. Menu tap “delete manager” visible: True
5. Label “enter manager username” visible: True
6. textbox visible: True
7. Label “Error message” visible: False
8. Label “Enter new password” visible: True
9. textbox visible: True
10. Button “apply change” visible: True
    * 1. Graphical user interface

         Description automatically generated **Delete manager screen:**
      2. **Reg053:** No fields can be empty

**Reg053a:** if detected any field is empty when add button is pressed display error message “Empty TextField Detected”

* + 1. **Reg054:** Manager username must start with “MAN” capital or small followed by the users unique ID
    2. **Reg055:** Pressing "Apply change" to save in database
    3. **Login Graphical user interface (GUI) :**

**Reg056:**

1. Menu tap “add manager” visible: True
2. Menu tap “edit manager username” visible: True
3. Menu tap “edit manager password” visible: True
4. Menu tap “delete manager” visible: True
5. Label “enter manager username to delete” visible: True
6. textbox visible: True
7. Label “Error message” visible: False
8. Button “apply change” visible: True
   1. Graphical user interface, application

      Description automatically generated**Manger Screen**
      1. Description :

This is the screen which will appear after user signs in successfully as a manager , will be the main hub for all their work as it leads to all the other screens that have all there permitted actions.

* + 1. **Functional Requirements:**

**Graphical user interface, application

Description automatically generated**

* + 1. **Req057:**Show welcome in the name of the manager
    2. **Req058:**On the first line Show number of doctors in the system
    3. **Req059:**On the second Show number of patients in the system
    4. **Req060**:On the Third line show number of Receptionist in the system
    5. **Req061**: Pressing "log out" button at any time should close the page and log the time the user logged out and open the log in page
    6. **Req062:**Pressing "Refresh stats" to connection with database
    7. **Req063:** Menu tab will be displayed at the top bar to navigate to edit doctor screen
    8. **Req064**: Menu tab will be displayed at the top bar to navigate to edit Receptionist screen
    9. **Manger main screen – Graphical User Interface**

**Req065:**

1. Label "number of doctor" visible: True.
2. - label " number of doctor in system " visible :true
3. Label " number of patients " visible: True.
4. - Label " number of patients in system " visible: True.
5. - Label " number of Receptionist " visible: True.
6. -Lebel " number of Receptionist in system" " visible: True.
7. - Button "log out" enabled: True.
8. - Button "Refresh stats" enabled: True.

**Graphical user interface, website

Description automatically generated**

* + 1. **Req066:** In the first line enter id doctor
    2. **Req067:** Enter full name of doctor
    3. **Req068:** Enter field
    4. **Req069:** Pressing "clear " to clear the data
    5. **Req070:** Pressing "add" to add the doctors
    6. **Req071:** Menu tab will be displayed at the top bar to navigate to add doctor screen
    7. **Req072:** Menu tab will be displayed at the top bar to navigate to Delete doctor screen
    8. **Doctor – Graphical Interface:**

**Req0073:**

1. **-** Label "Enter ID" visible: True.
2. - Textbox " Enter ID "", enabled :True, visible :true
3. - Label " Enter Full Name " visible: True.
4. - Textbox " Enter Full Name " ", enabled :True , visible: True.
5. - Label " Enter field " visible: True.
6. Textbox" Enter field " ", enabled :True, visible: True.
7. - Button "clear" enabled: True.
8. - Button "Add" enabled: True.

**Graphical user interface, application

Description automatically generated**

* + 1. **Req074:**Enter Id of doctor to delete the Appointment Booking
    2. **Req075:** Pressing "Delete " to delete the doctor
    3. **Delete Doctor – Graphical Interface**

**Req076:**

1. - Label " Enter Id of doctor to delete " visible: True.
2. - Textbox " Enter Id of doctor to delete "", enabled :True, visible :true
3. - Button "Delete" enabled: True.

**Graphical user interface, application

Description automatically generated**

* + 1. **Req077:** In the first line enter full name of Receptionist
    2. **Req078:** Enter the username
    3. **Req079:** Enter Password
    4. **Req080:** Enter ID to add Receptionist
    5. **Req081:** Pressing "Add " to Add the Receptionist
    6. **Req082:** Pressing "Clear " to Clear the Data
    7. **Req083:** Menu tab will be displayed at the top bar to navigate to Add Receptionist screen
    8. **Req084:** Menu tab will be displayed at the top bar to navigate to Edit Receptionist username screen
    9. **Req085:** Menu tab will be displayed at the top bar to navigate to Edit Receptionist password screen
    10. **Req086:** Menu tab will be displayed at the top bar to navigate to Delete Receptionist screen
    11. **Receptionist – Graphical Interface**

**Req087:**

1. **-** Label "Full name" visible: True.
2. - Textbox " Full name "", enabled :True, visible :true
3. - Label " Username " visible: True.
4. - Textbox " Username " ", enabled :True , visible: True.
5. - Label " Password" visible: True.
6. Textbox" Password " ", enabled :True, visible: True.
7. - Button "clear" enabled: True.
8. - Button "Add" enabled: True.

**Graphical user interface, website

Description automatically generated**

* + 1. **Req088:** In the first Enter manger old username
    2. **Req089:** In the second line Enter New Username
    3. **Req090**: Pressing "Apply change" to save changes to database
    4. **Receptionist – Graphical Interface**

**Req091:**

1. **-** Label " Enter manger old username " visible: True.
2. - Textbox " Enter manger old username "", enabled :True, visible :true
3. - Label " Enter New username " visible: True.
4. - Textbox " Enter New username " ", enabled :True , visible: True.
5. - Button "Apply change" enabled: True.

**Graphical user interface, website

Description automatically generated**

* + 1. **Req092**: In the first Enter Receptionist username
    2. **Req093:** In the second line Enter New Password
    3. **Req094:** Pressing "Apply change" to save changes to database
    4. **Receptionist – Graphical Interface**

**Req095:**

1. **-** Label " Enter Receptionist username " visible: True.
2. - Textbox " Enter Receptionist username "", enabled :True, visible :true
3. - Label " Enter New Password " visible: True.
4. - Textbox " Enter New Password " ", enabled :True , visible: True.
5. - Button "Apply change" enabled: True

**Graphical user interface, text, application

Description automatically generated**

* + 1. **Req096:** Enter Receptionist Username
    2. **Req097:** Pressing "Apply change" to save changes to database
    3. **Receptionist – Graphical Interface**

**Req098:**

1. - Label " Receptionist Username " visible: True.
2. - Textbox " Receptionist Username "", enabled :True, visible :true
3. - Button "Apply change" enabled: True.
   1. **Graphical user interface

      Description automatically generatedReceptionist Screen**
      1. **Description:**

This is the screen which will appear after user signs in successfully as a receptionist, will be the main hub for all their work as it leads to all the other screens that have all there permitted actions.

* + 1. **Functional Requirements:**
       1. **Re099:** No fields can be empty

**Re099a:** if detected any field is empty when add button is pressed display error message “Empty TextField Detected”

* + - 1. **Re100:** Full name must not contain any Numbers

**Re100a:** if detected number in Full name field when add button is pressed display error message “Full-name Cannot Contain Number”

* + - 1. **Re101:** Number must contain exactly 10 numbers

**Re101a:** if detected number of numbers not equal to 10 when add button is pressed display error message “Number Must contain 10 numbers given number is + (number of numbers given by user)”

**Re101b:** Number must start with 05

**Re101c:** if detected number doesn’t start with 05 when add button is pressed display error message “Number Must Start with 05”

**Re101d:** number must be smaller than 2147483646

**Re101e:** if detected number is bigger than 2147483646 when add button is pressed display error message “Number Is Too Big”

* + - 1. **Req102:**ID must be smaller than 2147483646

**Req102a:** if detected ID is bigger than 2147483646 when add button is pressed display error message “ID Is Too Big”

* + - 1. **Req103:** If patient added successfully display message “Patient Added Successfully” in blue

**Req103a:** if patient wasn’t added for any reason display error message “Patient Wasn’t Added Successfully” in red

* + - 1. **Req104:** Combo box will contain all the available doctors in the clinic which the patient will be assigned to
      2. **Req105:** logout button will return user to login screen and log the time in which they logged out
      3. **Req106:** Refresh button would refresh the database so if any changes happened user can see them
      4. **Re107:** Menu tab will be displayed on top bar to allow access to doctor print option which will print to a file all the information about the doctors
      5. **Re108:** Menu tab will be displayed on top bar to allow access printing todays Appointments

**Re108a**:If no Appointments available on the same day Error message “No Appointments Have Been Booked Today”

**Re108b**: If appoints booked on the day a file will be saved in the Prints directory and opened on the user’s desktop.

* + 1. **Login Graphical user interface (GUI) :**
       1. **Req109:**

Interface on start up

* + - * 1. Tab “Main Screen” visible : True
        2. Tab “Search for Patient” Visible: True
        3. : Label “ID” visible: True
        4. :Textbox ”Enter Patient ID” visible: True
        5. **:** Label “Error message” visible: False
        6. **:** Label “Full Name” visible: True
        7. **:** Textbox “Enter Patient Name” visible: True
        8. **:** Label “Number” visible: True
        9. **:**Textbox “Enter Patient Phone Number” visible: True
        10. **:** Label “Age” visible: True
        11. **:** Textbox “Enter Patient Age” visible: True
        12. : label “Choose Doctor” visible: True
        13. **:** Combo Box visible : True
        14. **:** Button “Log Out” visible: True
        15. **:** Button “Refresh” visible: True
    1. **Search screen :**

Graphical user interface, application

Description automatically generatedThis screen can be accessed by a tab on the top of the user’s interface which will display the following screen that will allow the user to search for a patient by their ID.

* + - 1. **Re110 :** TextField must not be empty

**Re110a:** if TextField detected empty display error message “ Empty TextField Detected”

**Re110b:** ID must be valid i.e., a patient must have that ID

**Re110c:** if given an invalid ID display error message “Patient Wasn’t Found”

**Re110d:** if ID is valid display message “ Patient Found” in blue and display that patient’s information in the name, age, and number

* + 1. **Login Graphical user interface (GUI) :**
       1. **Req111:**

Interface when user selects Search for Patient Tab

1. Label "Enter Patiant ID:” Visable :True
2. Textbox Visable :True
3. Button "Search " Visible :True
4. Label “Error Message” Visible: True
5. Label ”name” Visible:True
6. Label ”Age ” Visible :True
7. Label ”Number ” Visible :True
8. Label “Users Name” Visible: False
9. Label “Users Age” Visible: False
10. Label “Users Number” Visible: False
    1. **Graphical user interface, website

       Description automatically generatedBook Appointment Screen:**
       1. **Description :**

This screen will be accessed through the first screen via menu tab which will open the above interface

* + 1. **Functional requirements :**
    2. **Req112:** The Patient ID will follow same Requirements as Req033
    3. **Req113:** Combo box will display all the doctors’ names to book appointment with
    4. **Req114:** Date picker will allow the user to select the date for the appointment
    5. **Req115:** Spinner will allow the user to select the time for the appointment

**Req115a:** the hours will only display work hours options (8-16) in the 24 hours system

* + 1. **Req116:** If doctor booked on that time and date no other appointments can be booked on top

**Req116a:** if user attempts to book an already booked appointment display error message “Appointment Already Booked With The Same Doctor And Time”

* + 1. **Req117:** User can book up to maximum 3 appointments per day

**Req117a:** If user already booked 3 appointments and receptionist tries to book on more on that same date display error message “Appointment Limit Of 3 A Day Reached”

* + 1. **Login Graphical user interface (GUI) :**
    2. **Req118: Screen after user clicks book appointment menu tab**

1. Label “Error Message” Visible =False
2. Label “Patient ID” Visible =True
3. Text Box “Patient ID”
4. Label “Doctor” Visible =True
5. Combo box for doctors
6. Label “Date” Visible =True
7. Date Picker Visible =True
8. Label “Time(Hours)” Visible =True
9. Spinner to choose time Visible =True
10. Button “Make Appointment “ Visible =True