MedVoice (Health Awareness Mobile Application)

Software Requirements Specification

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1. 1. Introduction

1.1. Purpose

The purpose of this document is to give a detailed description of the requirements for the data analytics portion of MedVoice. It will illustrate the purpose and complete declaration for the development of the system. It will also explain system constraints, interface and applicable interactions with other external applications. This document is primarily intended to be proposed to the customer for its approval and a reference for developing MedVoice for the development team. The use of MedVoice is intended for the general public and male population.

1.2. Scope

MedVoice promotes health awareness. Using voice recognition, and specific user inputs (i.e. gender, height, weight) the mobile application will display possible conditions predisposed to the user based on the analysis of the collected and input data. MedVoice also allows the user to view their health history, and form a social network with care providers and other care recipients with similar predisposed conditions and interests.

MedVoice will have the ability to retrieve and send data to and from databases upon logging into the application. Using the collected data, users will be grouped according to interests and similarities.

1.3. Definitions, acronyms, and abbreviations

SRS	Software Requirements Specification.
GUI	Graphical User Interface

1.4. References:

[1] IEEE Recommended Practice for Software Requirements Specifications Software Engineering Standards Committee of the IEEE Computer Society. 1998.

1.5. Overview:

The rest of this document will have two major sections and Appendixes and will be ended with an index for the SRS documents [1]. The second section will contain all the product outlines, perspective, function, interface, and user characteristics. The third section will include some specific requirements (e.g. hardware requirements).

2. Overall description

MedVoice will collect basic data such as name and email upon logging into the GUI. Data analytics will then be performed to group users based on interests and similarities.

2.1. Product Perspective

This section will give an overall description of the back end (data analytics) portion of the mobile application.

2.1.1. System Interfaces

MedVoice will be able to interface with other databases and mobile applications to retrieve and send data.

2.1.2. User Interfaces
The user interface will be the GUI to present and retrieve data.

2.1.3. Hardware interfaces
MedVoice will support most mobile platforms and will require a mobile device capable of recording audio.

2.1.4. Software interfaces
The interface for the software will be a web browser and programming software to design and emulate the mobile application layout and workflow.

2.1.5. Communication interfaces
Cellular networks and/or wireless networks are required.

2.1.6. Memory constraints
Memory is limited to the mobile device's memory capacity (RAM).

2.1.7. Operations
Operation will be when the program is executed until the program is exited.

2.1.8. Site adaptation requirements
There is no site adaption requirement.

2.2. Product functions

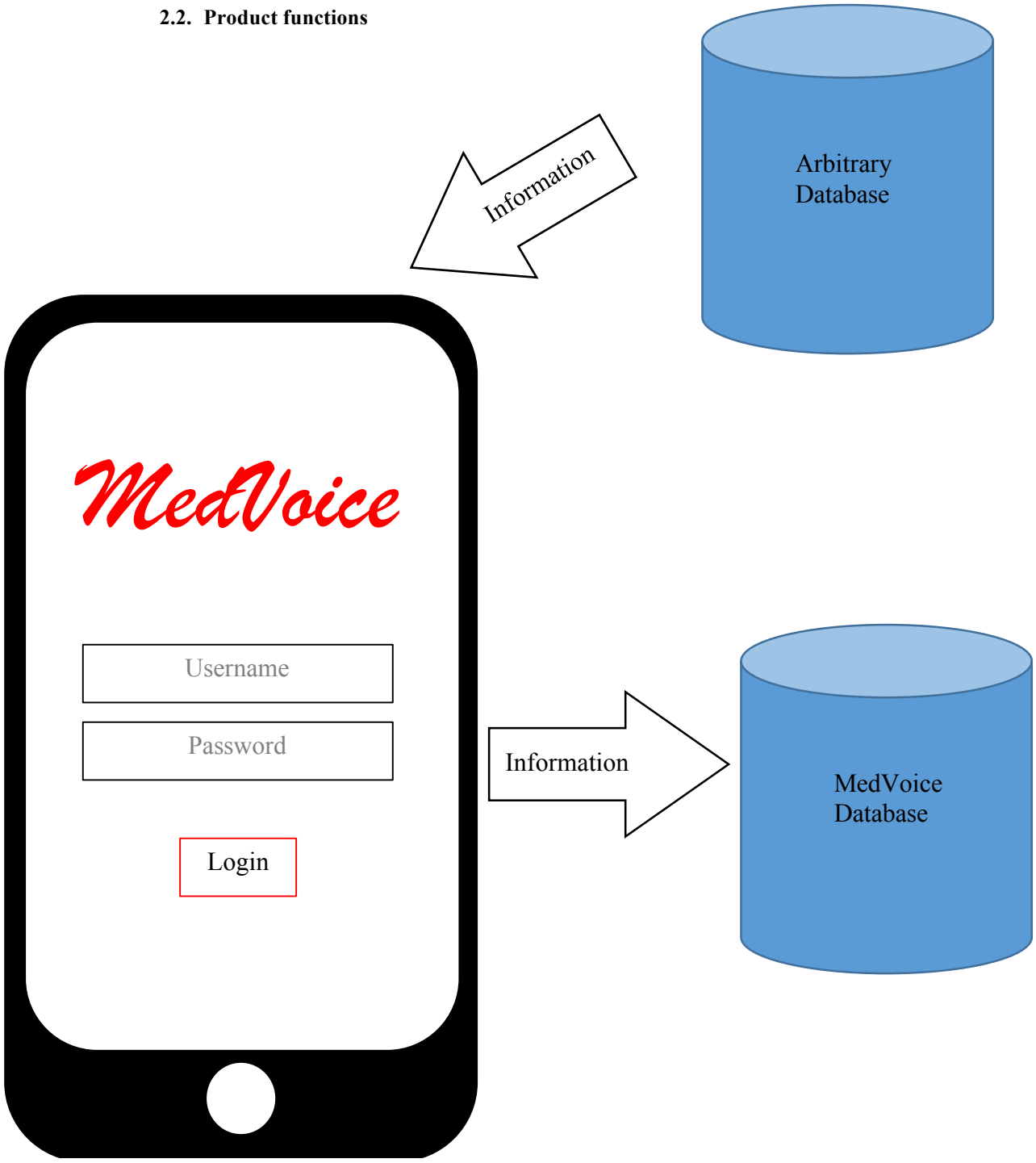

Figure 1 Sequence Diagram

2.3. User characteristics
The projected users of the software are the general public, and male population.

2.4. Constraints
System should be able to handle multiple users logged into the system, and the database should be able to store multiple sets of user data.

2.5. Assumptions and dependencies
MedVoice will be able to retrieve data at time of login, and upon request. Data presented will be in full screen.

2.6. Apportioning of requirements
- MedVoice will have the ability to make correlations from the data.
- Ability to display media/data based on interests and similarities
- Loyalty programs
- Ability to detect “bread crumbs”
- Census data
- Detect geographical location

3. Specific requirements

This section contains all the software requirements at a level of detail sufficient to enable designers to design a system to satisfy those requirements, and testers to test that the system satisfies those requirements.

3.1. External interface

This section contains a detailed description of possible inputs into and outputs from the software system.

- Inputs
    - Login Information
    - Age, Gender, Weight, etc.
    - Posts
        - Pictures
        - Videos
        - "Likes"
    - Audio/Video Recordings
    - Medical Articles/Data
        - Results, Charts, Graphs, etc.
- Outputs (currently out of scope)
    - Medical Articles/Data
    - Results, Charts, Graphs, etc.
    - Posts
    - Pictures
    - Videos
    - Audio/Video Recordings

3.2. Functions

- Group users based on similarities and interests.
- Ability to send, store, and retrieve data.

3.3. Performance requirements

- Coding will be done to optimize the processing of multiple users using the system.
- Coding will be done to optimize data storage of multiple users using the system.

3.4. Logical database requirements

- Ability to store login information, place of residence, and contact information upon logging into the application.
- Ability to group users based on interests and similarities.

3.5. Design constraints

- Data storage limited by device memory capacity.
- Back end data storage limited by database memory capacity.

3.5.1. Standards compliance

The Software will comply with software coding standards.

3.6. Software system attributes

3.6.1. Reliability

The Software should be functional during execution.

3.6.2. Availability
The Software will be accessible through most mobile platforms, and major mobile platforms (IOS, Android).

3.6.3. Security
The Software should have security features for only users that have access to the Software.

3.6.4. Maintainability
The code will be well documented and most modules will be reusable.

3.6.5. Portability
The code used in this program will be completely portable, allowing the code to go from one application to another as long as they comply with the hardware and software requirements detailed in this document.

3.7. Organizing the specific requirements

3.7.1. System mode
- On (normal) mode – when the application is open.
- Off mode – when the application is not open.

3.7.2. User class
- Care Recipients
- Care Providers

3.7.3. Objects
See the Sequence Diagram in Figure 1.

3.7.4. Feature
Ability to group users based on interests and similarities.

3.7.5. Stimulus
- Login information required to associate data with user.
- Posts and Newsfeed to determine similarities.

3.7.6. Response
- Ability to group users based on interests and similarities.
    - Display users with similarities
- Ability to retrieve and store data to the database upon login, and upon request.
    - Login denied or accepted (i.e. invalid password).

3.7.7. Functional hierarchy

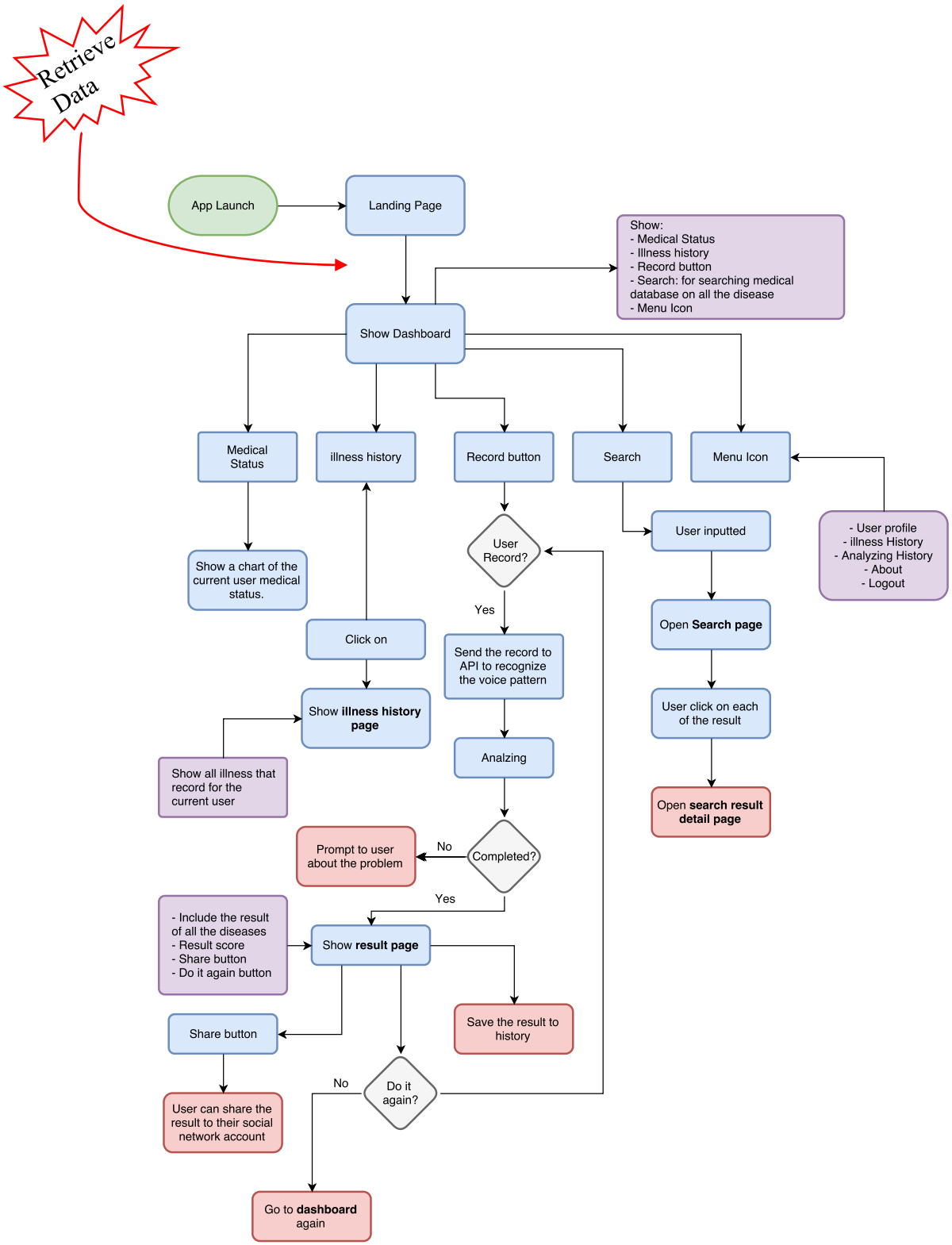
Retrieve Data
App Launch
Landing Page
Show:
- Medical Status
- Illness history
- Record button
- Search: for searching medical database on all the disease
- Menu Icon
Show Dashboard
Medical Status
illness history
Record button
Search
Menu Icon
- User profile
- illness History
- Analyzing History
- About
- Logout
Show a chart of the current user medical status.
Click on
User Record?
Yes
User inputted
Open Search page
User click on each of the result
Open search result detail page
Send the record to API to recognize the voice pattern
Show illness history page
Show all illness that record for the current user
Analzing
Completed?
No
Prompt to user about the problem
Yes
- Include the result of all the diseases
- Result score
- Share button
- Do it again button
Show result page
Share button
Save the result to history
User can share the result to their social network account
Do it again?
No
Go to dashboard again

Figure 2 MedVoice Mobile Application Workflow

3.8. Additional Comments

No additional comments.

4. Support Information

4.4.1 Table of Contents and index

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