**MedVoice**

Software Design Document

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**1. INTRODUCTION**

**1.1 Purpose**

This software design document describes the architecture and system design of the MedVoice application.

**1.2 Scope**

This document will focus on the GUI of the MedVoice application.

**1.3 Overview**

This Design Document will contain a:

1. Purpose
2. Scope
3. Reference
4. System Overview
5. System Architecture
6. Data Design
7. Component Design
8. Appendix

**1.4 Reference Material**

*This section is optional.*

List any documents, if any, which were used as sources of information for the test plan.

**2. SYSTEM OVERVIEW**

Give a general description of the functionality, context and design of your project. Provide any

background information if necessary.

**3. SYSTEM ARCHITECTURE**

**3.1 Architectural Design**

Develop a modular program structure and explain the relationships between the modules to

achieve the complete functionality of the system. This is a high level overview of how

responsibilities of the system were partitioned and then assigned to subsystems. Identify each

high level subsystem and the roles or responsibilities assigned to it. Describe how these

subsystems collaborate with each other in order to achieve the desired functionality. Don’t go

into too much detail about the individual subsystems. The main purpose is to gain a general

understanding of how and why the system was decomposed, and how the individual parts

work together. Provide a diagram showing the major subsystems and data repositories and

their interconnections. Describe the diagram if required.

**3.2 Decomposition Description**

Provide a decomposition of the subsystems in the architectural design. Supplement with text

as needed. You may choose to give a functional description or an objectoriented

description.

For a functional description, put toplevel

data flow diagram (DFD) and structural

decomposition diagrams. For an OO description, put subsystem model, object diagrams,

generalization hierarchy diagram(s) (if any), aggregation hierarchy diagram(s) (if any),

interface specifications, and sequence diagrams here.

**3.3 Design Rationale**

**3.3.1 Trade Study**

|  |  |  |
| --- | --- | --- |
| Quality Attribute | Bootstrap | Foundation |
| Performance | 7 | 7 |
| Ease of Use | 7 | 6 |
| Compatibility | 10 | 9 |
| Supportability | 8 | 4 |
| Productivity | 7 | 4 |
| Responsiveness | 6 | 2 |
| **Total** | 45 | 32 |

**4. DATA DESIGN**

**4.1 Data Description**

MongoDB shall be used as the database.

**4.2 Data Dictionary**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Element** | **Description** | **Composition/Data Type** | **Length** |
| Care Client | A registered user of MedVoice. | **+**User’s email address  +User’s date of birth |  |
| Care Client’s email address | The Care Client’s email address | Alphanumeric | 30 |
| Care Client’s date of birth | The date of birth of the Care Client’s | Date MM/DD/YYYY | 10 |
| Ad Payment | Information about ads’ payment from advertisers to MedVoice | Payment amount  +Payment method  +Transaction number |  |
| Payment Amount | The amount paid to MedVoice from advertiser for ad placement | Numeric, dollars, and cents | dddddd.cc |
| Payment Method | The method that advertiser used to pay MedVoice for ad placement | Alphabetic | 16 |
| Transaction Number | MedVoice system assigned a unique number for each payment transaction | Integer | 12 |

**5. COMPONENT DESIGN**

**5.1 Login Pseudocode**

header.php  
check for cookie  
if exist set control panel with options and logout  
if none exist check session,  
if exist set control panel with options,  
if none exist  
exit

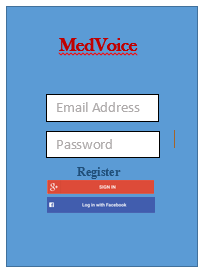
Ask for login and password with remember option (will set cookie)  
user inputs details, database check to see if user exists  
if exist register session and setcookie if remember option true  
else  
show signup so user can register

**6. HUMAN INTERFACE DESIGN**

**6.1 Overview of User Interface**

The user interface for the system will allow the user to easily obtain health reports, connect with other Care Clients, connect with Caregivers, store health history, and record vitals to test for diseases. The user interface should contain a menu tool bar containing major features for easy navigation through the app.

**6.2 Screen Images**

****

**6.3 Screen Objects and Actions**

**7. REQUIREMENTS MATRIX**

Provide a crossreference

that traces components and data structures to the requirements in your

SRS document.

Use a tabular format to show which system components satisfy each of the functional

requirements from the SRS. Refer to the functional requirements by the numbers/codes that you

gave them in the SRS.

**8. APPENDICES**

**8.1 Prioritization Matrix**

FR-1: Register for an Account

FR-2: Login

FR-3: Purchase Report

FR-4: Edit Profile

FR-5: Delete Account

FR-6: Search Database for a Specific Disease

FR-7: Connect with Another Care Client

FR-8: Obtain Service from a Caregiver

FR-9 Edit Health History

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Feature** | **Benefit** | **Penalty** | ***Total Value*** | **Cost** | ***Cost %*** | **Risk** | ***Risk %*** | **Priority** |
| FR-1 | 9 | 7 | *16* | 4 | *10.5* | 2 | 7.69 | 0.880 |
| FR-2 | 8 | 6 | *14* | 2 | *5.26* | 2 | 7.69 | 1.08 |
| FR-3 | 7 | 4 | *11* | 6 | *15.8* | 7 | 26.9 | 0.258 |
| FR-4 | 2 | 3 | *5* | 1 | *2.63* | 1 | 3.85 | 0.772 |
| FR-5 | 1 | 2 | *3* | 2 | *5.26* | 3 | 11.5 | 0.179 |
| FR-6 | 6 | 7 | *13* | 7 | *18.4* | 7 | 26.9 | 0.287 |
| FR-7 | 8 | 8 | *16* | 8 | *21.1* | 1 | 3.85 | 0.641 |
| FR-8 | 8 | 7 | *15* | 6 | *15.8* | 1 | 3.85 | 0.763 |
| FR-9 | 2 | 2 | *4* | 2 | *5.26* | 2 | 7.69 | 0.309 |
| Total | 51 | 46 | *97* | 38 | *100%* | 26 | 100% |  |

**Highest Priority**

FR-2

FR-1

FR-4

FR-8

FR-7

FR-9

FR-6

FR-3

FR-5