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# Software Requirement Specification

## Document

### Medical Assistance System

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The reviewer signoff shall signify the recommendation for acceptance of this document.

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# 1 Introduction

## 1.1 Purpose

The purpose of this Software Requirements Specification (SRS) document is to provide a detailed overview of the requirements for the Medical Assistance System. The system aims to streamline medical assistance processes by offering three key panels: registration, doctor investigation, and central panel advisor doctor. Its goal is to enhance the efficiency and effectiveness of medical consultations and treatments through seamless collaboration among patients, investigator doctors, and specialized central medical teams.

## 1.2 Document Conventions

- **Bold text signifies terms defined in the glossary.**
- *Italicized text denotes emphasis or additional notes.*
- "FR" prefixes denote Functional Requirements.

## 1.3 Intended Audience and Reading Suggestions

This document is intended for stakeholders, including project managers, developers, quality assurance teams, and the client. For a comprehensive understanding, start with the introduction, followed by the overall description, and then delve into specific requirements as relevant.

## 1.4 Project Scope

The Medical Assistance System aims to revolutionize healthcare services by providing an efficient platform for patient management, appointment scheduling, and medical records management. Through streamlined processes, it empowers healthcare providers to deliver better treatment outcomes while enhancing patient care quality and facilitating seamless patient transfers between healthcare facilities. Additionally, the system incorporates treatment tracing functionalities, ensuring comprehensive monitoring and follow-up of patients' medical journeys for optimal care continuity.

## 1.5 References

- No specific references are mentioned at this stage.

## 2 Overall Description

### 2.1 *Product Perspective*

The Medical Assistance System is an independent platform designed to integrate seamlessly with existing Electronic Health Records (EHR) systems. It adheres to standardized data exchange formats to ensure compatibility and interoperability across diverse healthcare IT ecosystems

### 2.2 *Product Features*

- **1. Register Panel**

- **Description:** The Register Panel serves as the entry point for patients to create accounts within the system and manage their personal and medical information.
- **Priority:** High
- **Functional Requirements:**
  - FR1: Provide a user-friendly interface for new patients to register by entering personal and medical details.
  - FR2: Validate patient information during registration to ensure accuracy and completeness.
  - FR3: Implement secure authentication mechanisms, such as email verification or two-factor authentication, to protect patient data.
  - FR4: Allow registered patients to log in securely and access their accounts at any time.
  - FR5: Enable patients to update their profiles, including demographic information, medical history, and contact details.

- **2. Investigator Doctor Panel**

- **Description:** The Investigator Doctor Panel serves as a workspace for investigator doctors to review patient cases, conduct assessments, and make referrals to specialized medical teams.
- **Priority:** High
- **Functional Requirements:**
  - FR1: Display a dashboard with a list of pending patient consultations for investigator doctors.
  - FR2: Provide tools for investigator doctors to review patient profiles, medical history, and diagnostic findings.



- FR3: Allow investigator doctors to document their assessments, diagnoses, and treatment recommendations within the system.
- FR4: Implement communication features to facilitate collaboration between investigator doctors and specialized medical teams.
- FR5: Enable investigator doctors to refer patients to specialized medical teams for further evaluation and treatment planning.

### 3. Central Panel Advisor Doctor

- **Description:** The Central Panel Advisor Doctor serves as a centralized hub for specialized medical teams to review referrals, discuss treatment options, and provide expert advice.
- **Priority:** High
- **Functional Requirements:**
  - FR1: Provide a dashboard for specialized medical teams to access and review patient cases referred by investigator doctors.
  - FR2: Allow central panel advisor doctors to upload treatment plans, recommendations, and expert opinions for patients and investigator doctors.
  - FR3: Implement discussion forums and messaging features to facilitate collaboration and communication among members of the central panel advisor doctors.
  - FR4: Support telemedicine capabilities for virtual consultations and remote patient monitoring.
  - FR5: Ensure that all interactions and communications within the central panel advisor doctor are securely encrypted and compliant with privacy regulations.

## 2.3 User Classes and Characteristics

### Panel 01. Register

**Description:** The Register class represents individuals who are new to the Medical Assistance System and are in the process of registering for an account.

**Characteristics:**

- Individuals in this class are potential patients who are seeking to create an account within the system to access medical assistance and treatment.
- They may have varying levels of familiarity with the system and may require guidance through the registration process.

- Register users prioritize ease of use and clarity in the registration process to ensure accurate and complete account creation.

**Requirements:**

- The system should provide a straightforward and intuitive registration process for Register users, guiding them through the necessary steps to create an account.
- Clear instructions and prompts should be provided to assist Register users in entering their personal and medical information accurately.
- Secure authentication mechanisms should be implemented during the registration process to safeguard Register users' data and ensure privacy and security.

**Panel 02. Investigator Doctors**

**Description:** Investigator doctors are medical professionals responsible for conducting initial patient consultations, assessments, and referrals within the Medical Assistance System.

**Characteristics:**

- Investigator doctors possess medical expertise and diagnostic skills, requiring tools for reviewing patient information and making informed decisions.
- They prioritize efficiency and accuracy in patient assessments and referrals to specialized medical teams.
- Investigator doctors may collaborate with other healthcare providers and specialists to ensure comprehensive patient care.

**Requirements:**

- The system should provide investigator doctors with a dashboard for managing patient consultations and referrals, enabling them to efficiently review and assess patient cases.
- Tools for reviewing patient profiles, medical history, and diagnostic findings should be readily accessible within the system to facilitate informed decision-making by investigator doctors.
- Seamless communication features should be implemented to enable investigator doctors to collaborate effectively with specialized medical teams, ensuring timely and accurate referrals and treatment planning.

**Panel-03. Central Panel Advisor Doctors**

**Description:** Central panel advisor doctors are specialized medical teams responsible for reviewing referrals, discussing treatment options, and providing expert advice within the Medical Assistance System.

**Characteristics:**

- Central panel advisor doctors possess advanced medical knowledge and expertise in specific areas of specialization.
- They prioritize thorough case reviews, evidence-based decision-making, and providing targeted treatment plans for patients.
- Central panel advisor doctors may collaborate with other specialists and healthcare professionals to optimize patient outcomes.

**Requirements:**

- The system should provide a centralized platform for central panel advisor doctors to review patient referrals and discuss treatment options, enabling them to collaborate effectively and make informed decisions.
- Collaboration tools, such as discussion forums and messaging features, should be integrated into the system to facilitate communication among central panel advisor doctors, ensuring efficient and effective collaboration.
- Telemedicine capabilities should be supported to enable virtual consultations and remote patient monitoring by central panel advisor doctors, enhancing accessibility and convenience for patients.

## 2.4 *Operating Environment*

The system will be web-based, accessible via web browsers on both desktop and mobile devices. It will be compatible with the latest versions of Chrome, Firefox, Safari, and Edge.

## 2.5 *Design and Implementation Constraints*

- The system must comply with the Health Insurance Portability and Accountability Act (HIPAA) for all patient data handling.
- Many more

## 2.6 *User Documentation*

- User manuals for each user class Register, investigator doctors, central medical team.
- Online help documentation and FAQs
- Training webinars and tutorial videos

## 2.7 *Assumptions and Dependencies*

- User engagement assumes ease of use and accessibility.

## 3 System Features

### 3.1 Register Panel

**3.1. Feature Name:** *Patient Registration*

**3.1.1 Description:** Allows new to the Medical Assistance System to register for a Patient profile.

**3.1.2 Priority:** High

**3.1.3 Stimulus/Response Sequences:**

- **Stimulus:** User initiates the registration process.
- **Response:** System guides the user through the registration steps and prompts for necessary information.

**3.1.4 Functional Requirements:**

- **REQ-1:** The system shall provide a user-friendly registration interface guiding users through the account creation process.
- **REQ-2:** Clear instructions and prompts shall be provided to assist users in entering their personal and medical information accurately.
- **REQ-3:** Secure authentication mechanisms shall be implemented to safeguard user data and ensure privacy and security during the registration process.

### 3.2 Investigator Doctor Panel

**3.2 Feature Name:** *Patient Case Management*

**3.2.1 Description:** Enables investigator doctors to manage patient consultations, assessments, and referrals.

**3.2.2 Priority:** High

**3.2.3 Stimulus/Response Sequences:**

- **Stimulus:** Investigator doctor accesses the patient case management dashboard.
- **Response:** System displays patient cases for review and assessment.

**3.2. Functional Requirements:**

- **REQ-1:** The system shall provide investigator doctors with a dashboard for managing patient consultations and referrals.

- **REQ-2:** Tools for reviewing patient profiles, medical history, and diagnostic findings shall be readily accessible within the dashboard.
- **REQ-3:** Seamless communication features shall be implemented to enable collaboration with specialized medical teams for referrals and treatment planning.

### 3.3 Central Advisor Doctor Panel

#### 3.3 Feature Name: *Referral Review and Treatment Planning*

**3.3.1 Description:** Allows central panel advisor doctors to review referrals, discuss treatment options, and provide expert advice.

**3.3.2 Priority:** High

#### 3.3.3 Stimulus/Response Sequences:

- **Stimulus:** Central panel advisor doctor accesses the referral review platform.
- **Response:** System displays patient referrals and facilitates discussion among the medical team.

#### 3.3.4 Functional Requirements:

- **REQ-1:** The system shall provide a centralized platform for central panel advisor doctors to review patient referrals and discuss treatment options.
- **REQ-2:** Collaboration tools, such as discussion forums and messaging features, shall be integrated into the platform to facilitate communication among central panel advisor doctors.
- **REQ-3:** Telemedicine capabilities shall be supported for virtual consultations and remote patient monitoring, enhancing accessibility and convenience for patients.

## 4 External Interface Requirements

### 4.1 User Interfaces

- **Patient Portal UI:** Intuitive interface for patient registration, profile management, and consultation history.
- **Investigator Dashboard UI:** Customizable dashboard for reviewing patient cases and managing referrals.
- **Specialized Team Workspace UI:** Collaborative interface designed for case discussion and treatment planning.

[Further details on Hardware Interfaces, Software Interfaces, and Communications Interfaces would be provided here.]

## **5 Other Nonfunctional Requirements**

[This section would include specifics on performance, safety, security, software quality attributes, and business rules tailored to the healthcare context.]

## **6 Other Requirements**

[This section will outline any additional requirements not covered in previous sections.]