**Software Requirement Specification**

**1. Introduction**

This Software Requirements Specification (SRS) document outlines the requirements for the Meta Avatar system. The Meta Avatar system is a software application designed to assist patients in communicating their symptoms in their local language, storing symptom information securely, and notifying nearby doctors for medical assistance.

**1.1 Purpose**

The purpose of this document is to provide a comprehensive overview of the requirements of the Meta Avatar system, including its features, functionalities, and constraints. It serves as a reference for stakeholders involved in the development, testing, and deployment of the system.

**1.2 Scope**

The Meta Avatar system aims to provide a user-friendly interface for patients to register, input their symptoms, and receive medical assistance. The system will store patient information and symptom data securely in a database and notify nearby doctors about patient symptoms for further analysis and treatment recommendations.

**1.3 Definitions, Acronyms, and Abbreviations**

* SRS: Software Requirements Specification
* UI: User Interface
* DB: Database
* HTTP: Hypertext Transfer Protocol
* TCP/IP: Transmission Control Protocol/Internet Protocol

**2. Overall Description**

**2.1 Product Perspective**

The Meta Avatar system is an independent software application that interacts with patients through a kiosk interface deployed on a tablet device. It communicates with a database server to store patient information and symptom data securely. Additionally, it interacts with an avatar component for speech recognition and synthesis and notifies nearby doctors for medical assistance.

**2.2 Product Functions**

* Patient Registration: Allows patients to register in the system using their Aadhar card number and provide basic personal information.
* Symptom Input: Facilitates communication between patients and the system to input their symptoms in their local language.
* Information Storage: Stores patient information and symptom data securely in a database for future reference.
* Doctor Notification: Notifies nearby doctors about patient symptoms for further medical assistance.

**2.3 User Classes and Characteristics**

* Patients: Users who interact with the system to register, input symptoms, and seek medical assistance.
* Doctors: Users who receive notifications about patient symptoms and provide medical assistance.

**3. Specific Requirements**

**3.1 External Interface Requirements**

**3.1.1 User Interfaces**

* The kiosk interface should be intuitive and user-friendly for patients to navigate and input their information.
* The doctor interface should provide relevant patient information and symptom details for medical analysis and treatment recommendations.

**3.1.2 Hardware Interfaces**

* The system should be compatible with standard tablet devices for the kiosk interface.
* The avatar component should be compatible with hardware devices capable of speech recognition and synthesis.

**3.1.3 Software Interfaces**

* The system should interact with the database server using HTTP protocol for data storage and retrieval.
* The avatar component should provide APIs for speech-to-text and text-to-speech conversion.

**3.2 Functional Requirements**

**3.2.1 Patient Registration**

* The system shall allow patients to register using their Aadhar card number.
* The system shall validate the Aadhar card number for authenticity.
* The system shall prompt patients to provide basic personal information such as name, age, gender, contact, and address.

**3.2.2 Symptom Input**

* The system shall provide a language selection option for patients to choose their preferred language.
* The system shall facilitate communication with patients in their selected language for symptom input.
* The system shall record symptom information provided by patients accurately.

**3.2.3 Information Storage**

* The system shall securely store patient information and symptom data in a database.
* The system shall ensure data integrity and confidentiality of stored information.
* The system shall allow authorized users to retrieve patient information and symptom data as needed.

**3.2.4 Doctor Notification**

* The system shall notify nearby doctors about patient symptoms in real-time.
* The system shall provide relevant patient information and symptom details to doctors for medical analysis.
* The system shall allow doctors to respond to notifications and provide medical assistance to patients.

**4. Non-Functional Requirements**

**4.1 Performance Requirements**

* The system shall respond to patient interactions within 3 seconds.
* The system shall store and retrieve patient information and symptom data with minimal latency.
* The system shall support concurrent user interactions without performance degradation.

**4.2 Security Requirements**

* The system shall encrypt patient information and symptom data stored in the database.
* The system shall authenticate users before granting access to sensitive information.
* The system shall comply with data protection regulations and privacy laws.

**4.3 Usability Requirements**

* The kiosk interface shall be intuitive and accessible to users of all ages and backgrounds.
* The avatar component shall accurately recognize and interpret patient speech inputs in their local language.
* The doctor interface shall provide relevant patient information and symptom details in a clear and organized manner.

**5. Other Requirements**

* The system shall be scalable to accommodate future expansions and updates.
* The system shall be maintain