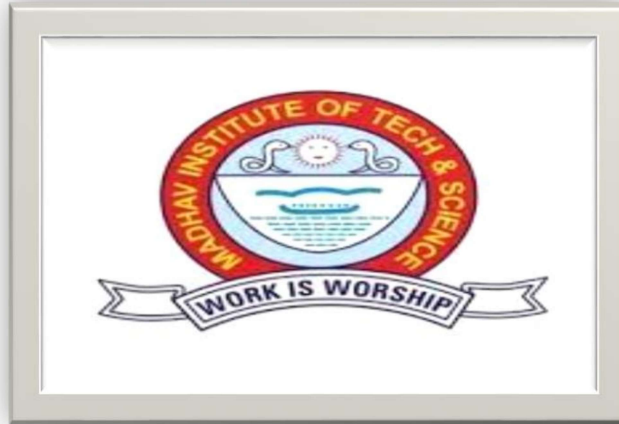


Madhav Institute of Technology and Science



Electrical Engineering Department

Branch – Internet of Things

Software Requirement Specification (SRS)

Patient Tracking System Software

Submitted by--

Pratham Bajpai (0901EO211043)
Shivam Sharma (0901EO211051)

Submitted to--

Dr. Kaushal Pratap

Sengar

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Introduction

1.1 Purpose

The purpose of this software is to create a patient tracking system that allows healthcare providers to track patient data throughout their hospital stay, from admission to discharge. The software will provide an easy-to-use interface for healthcare providers to access patient information and manage patient care.

1.2 Scope

The software will be designed to meet the needs of healthcare providers in hospitals and other healthcare facilities. The software will track patient information, including demographic data, medical history, current medications, allergies, and current diagnosis. The software will also provide a mechanism for healthcare providers to enter and track patient care plans and monitor patient progress.

1.3 Definitions, acronyms, and abbreviations

Patient: An individual who is receiving medical treatment in a hospital or healthcare facility.

Healthcare provider: A person who provides medical treatment to patients, such as a physician, nurse, or therapist.

Care plan: A document that outlines the care that a patient will receive during their hospital stay, including medication, therapy, and other treatments.

1.4 References

IEEE Std 830-1998: IEEE Recommended Practice for Software Requirements Specifications.

Overall Description

2.1 Product perspective

The patient tracking system will be a standalone software application that will run on Windows operating systems. The software will interact with other hospital systems, such as electronic

health record (EHR) systems and laboratory information systems, to retrieve and store patient data.

2.2 Product functions

The patient tracking system will provide the following functions:

Patient admission: The software will allow healthcare providers to enter patient information and create a new patient record in the system.

Patient tracking: The software will allow healthcare providers to track a patient's progress through their hospital stay, including medication administration, lab tests, and other procedures.

Care plan management: The software will allow healthcare providers to create and manage patient care plans, including medications, therapy, and other treatments.

Patient discharge: The software will allow healthcare providers to discharge a patient from the hospital and create a summary of their hospital stay.

2.3 User characteristics

The users of the patient tracking system will be healthcare providers, such as physicians, nurses, and therapists. The users will have basic computer skills and will be trained on how to use the software.

2.4 General constraints

The patient tracking system must comply with all relevant healthcare regulations, such as HIPAA (Health Insurance Portability and Accountability Act) and HITECH (Health Information Technology for Economic and Clinical Health) Act.

2.5 Assumptions and Dependencies

- a) The PTS will be developed using the Java programming language.
- b) The system will be hosted on a secure web server.
- c) The PTS will be integrated with existing EHR and EMR systems.

Specific Requirements

3.1 Functional Requirements

3.1.1 Patient Registration and Tracking The Patient Tracking System Software shall allow healthcare providers to register new patients and track their medical information.

3.1.2 Medical History Tracking The Patient Tracking System Software shall allow healthcare providers to track patients' medical history, including previous illnesses, surgeries, and allergies.

3.1.3 Diagnosis Tracking The Patient Tracking System Software shall allow healthcare providers to track patients' diagnoses and associated treatments.

3.1.4 Treatment Plan Tracking The Patient Tracking System Software shall allow healthcare providers to track patients' treatment plans, including medications, tests, and procedures.

3.1.5 Medication Tracking The Patient Tracking System Software shall allow healthcare providers to track patients' medication usage, including dosage and frequency.

3.1.6 Appointment Scheduling and Tracking The Patient Tracking System Software shall allow healthcare providers to schedule appointments with patients and track their appointment history.

3.1.7 Reporting The Patient Tracking System Software shall provide reporting capabilities to healthcare providers, including patient reports, appointment reports, and medication reports.

3.2 Non-Functional Requirements

3.2.1 Performance The software must be able to handle a large number of users and patient records without any performance issues.

3.2.2 Security The software must be secure and protect patient information from unauthorized access.

3.2.3 Reliability The software must be reliable and available at all times, with minimal downtime for maintenance and upgrades.

3.2.4 Usability The software must be user-friendly and easy to use for healthcare professionals with basic computer skills.

3.2.5 Maintainability The Patient Tracking System Software shall be easy to maintain and upgrade.

3.3 Design Constraints

The patient tracking system shall be designed using Microsoft .NET framework and will be developed using Java programming language.

3.4 Interface Requirements

The patient tracking system shall have a user-friendly interface that is easy to navigate and use. The software shall be compatible with Windows operating systems.

3.5 Operational Requirements

The patient tracking system shall be available 24/7, and the software shall be able to handle multiple requests simultaneously without downtime.

System Models

4.1 Use Case Diagram

This section provides a use case diagram that describes the interaction between users and the Patient Tracking System Software.

4.2 Activity Diagram

This section provides an activity diagram that describes the workflow of the Patient Tracking System Software.

Appendixes

4.1 Glossary

EHR: Electronic health record

HIPAA: Health Insurance Portability and Accountability Act

HITECH Act: Health Information Technology for

Appointment: A scheduled meeting between a patient and a healthcare provider.

Notification: A message sent to a user via email or SMS.