**Software Requirement Specification**

**Project Name: Bed Management Optimization**

**Team Name: Tech Neophytes**

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5. **Introduction**

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS. The aim of this document is to develop a website that can predict the discharge of the patient and their length of stay in hospitals.

* 1. **Purpose**

The purpose of this project is to develop a website that can help hospitals to predict the time of discharge of patients and their length of stay in hospitals for efficient functioning of hospitals.

* 1. **Scope**

Primarily, the scope pertains to the hospital’s bed management system. Our project will help hospital to predict the length of stay of the patients suffering from major diseases like cancer, diabetes etc. Prediction of length of stay play an important role in bed management. The hospitals will have early awareness about the patients which are going to discharge. Thus, helping the hospitals to maintain patient flow and in determining the availability of beds.

In addition to the website, we have also created an Android Application for the user end. The user will be able to get information about the availability of beds in hospitals around him / her. Also, if the user finds that beds are not available in his/her selected hospital then, he / she can find nearby hospitals within the radius of 10km and get the number of available beds in the snippets.

* 1. **Definitions/Abbreviations/ Acronyms**
  2. **References**
  3. **Overview**

The remaining sections of this document provide a general description, including characteristics of the users of this project, the product's hardware, and the functional and data requirements of the product.  Overall description of the project is discussed in section 2 of this document.  Section 3 gives the specific requirements, data requirements and constraints and assumptions made while designing the Prediction model.  It also gives the user viewpoint of product. Section 3 also discusses the external interface requirements and gives detailed description of functional requirements. Section 4 is for supporting information.

1. **Overall Description**

This document contains the problem statement that the current system and the users are facing which are longer patient wait time and overcrowding / unutilised wards, operation theatres which could be very critical for the patients. It further contains the list of stakeholders and users of the proposed solution. It also briefly describes the major features and a brief description of the proposed system.

The following SRS contains the detailed functions of the proposed system with user characteristics permitted constraints, assumptions and dependencies and requirement subsets.

* 1. **Product Perspective**
* The proposed system provides mechanism that will predict patient’s length of stay in a particular hospital for major diseases like Cancer, Diabetes, Lung Infection etc.
* Our system offers operating support for most of the known operating systems.
* The user end application is currently based on Android but we are willing to move further to other devices as well.
* Though the number of users being supported by the system is precisely not mentioned but the system is able to support a large number of online users at a time.

1. **System interface**
2. **Hardware Interfaces**
3. **Software Interfaces**
4. **Communication Interfaces**
5. **Memory Constraints**
6. **Operation**
7. **Site adaptation requirements**
   1. **Functionality**

This sub section contains the requirements for the proposed system. These requirements are organized by the features that are refined into use case diagrams and data flow diagram to best capture the functional requirements of the system.

* + 1. Self-configured to predict the length of stay of patients
       1. The system shall display all the patients that are there in the hospital.
       2. The system shall allow doctors to predict the length of stay based on the symptoms.
    2. Visualization of the predicted data
       1. The system can view the data in the form of pie charts, histograms, scattered graphs etc.
       2. This will help users to view complex data in an infographic form.
    3. Detailed Bed Availability Categorization
       1. The system shall display the available beds which will be sub divided into ward types (general ward, OTs, ERs, ICU’s etc).
    4. Provide search facility
       1. The system shall allow users (patients) to search hospitals by the name.
    5. Provide nearby place feature
       1. The app that is used by the user will provide the nearby hospitals within a given radius along with the availability of beds.