SOFTWARE REQUIREMENT SPECIFICATION

National COVID Management System

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1. Introduction

1.1. Purpose

The purpose of this document is to give a detailed description of the requirements for the "National COVID Management System" (NCMS) software. It will illustrate the purpose and complete declaration for the development of system. It will also explain system constraints and interface. This document is primarily intended to be proposed to a customer for its approval and a reference for developing the first version of the system for the development team.

1.2. Scope

The "National COVID Management System (NCMS)" is an application which can manage health care system of the Wakanda Island during the COVID 19 pandemic. Through the application patients having symptoms can register and allocate hospital beds. Hospital staff can keep track of the patients & bed allocations through the application. Ministry of Health (Administration) can monitor the patient & hospital statistics.

Furthermore, the software needs Internet connection to fetch and display results. All system information is maintained in a database, which is located on a web-server. The application also has the capability of representing both summary and detailed information about the patients, hospitals & waiting queue.

1.3. Definitions, acronyms and abbreviations

Table 1: Definitions

Term	Definition
Patient	A citizen in Wakanda island who is having COVID 19 Symptoms
NCMS	National COVID Management System
MoH	Ministry of Health
Hospital "X" - District "Y"	Hospital number X in District number Y
DESC	Description
DEP	Dependency

1.4. Project Perspective

This system will consist of one web application. All the users (citizens, hospital staff, doctors and MoH) can login using their credentials and use the specified features. The web application will communicate with database through the web server in order to store and query the data.
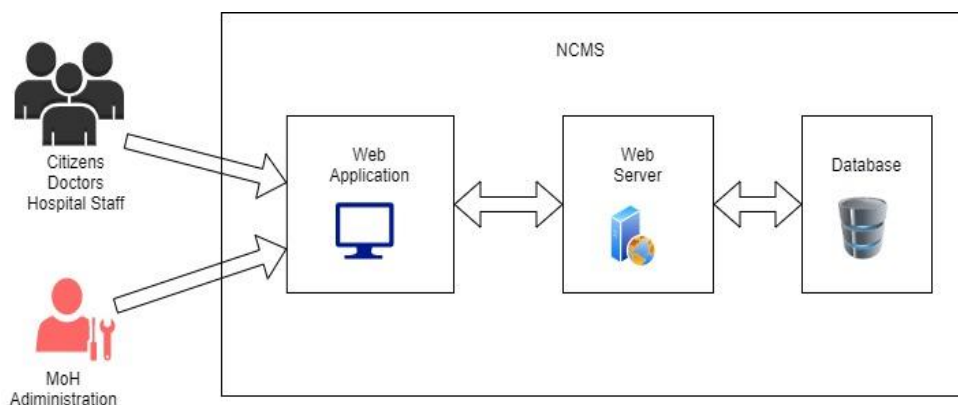

Figure 1: High-level Overview

2. Requirements

2.1. Functional Requirements

2.1.1. User Class 1 - Citizen

2.1.1.1. Functional Requirements 1.1

ID: FR1

TITLE: Register as a Patient

DESC: If a citizen is having COVID symptoms he/she should be able to register as a patient through the web application and receive Serial Number and a bed Number (if available) or a queue number.

DEP: None

2.1.1.2. Functional Requirements 1.2

ID: FR2

TITLE: View Daily statistics and overall status

DESC: Citizens should be able to see patient statistics of Daily update (country level, district level, hospital level) and Overall status until now.

DEP: None

2.1.2. User Class 2 – Hospital Staff

2.1.2.1. Functional Requirements 2.1

ID: FR3

TITLE: Inform the hospital staff about new patient registration

DESC: Hospital staff should be notified when a new patient is registered with the serial number of the patient and the bed number.

DEP: None

2.1.2.2. Functional Requirements 2.2

ID: FR4

TITLE: Confirm the Patient's admission

DESC: Hospital staff should be able to update the system when patient get admitted to the allocated hospital.

DEP: None

2.1.3. User Class 3 – Doctors

2.1.3.1. Functional Requirements 3.1

ID: FR5

TITLE: Assign patient's severity level

DESC: Doctors should be able to update patient's severity level as low or moderate or critical.

DEP: None

2.1.3.2. Functional Requirements 3.2

ID: FR6

TITLE: Discharge a patient

DESC: Doctors should be able to update patient's status when they get discharged.

DEP: None

2.1.4. User Class 4 – MoH

2.1.4.1. Functional Requirements 4.1

ID: FR7

TITLE: Check Daily Statistics on Patients, Hospitals and Beds

DESC: MoH should be able to Patient, Hospitals and Bed Statistics on Daily update (country level, district level, hospital level) and Overall status until now.

DEP: None

2.1.4.2. Functional Requirements 4.2

ID: FR7

TITLE: Get updates on Queue

DESC: MoH should be notified when queue of patients (without bed allocations) exceeds length of 4.

DEP: None

2.1.4.3. Functional Requirements 4.3

ID: FR8

TITLE: Add Details on New hospitals

DESC: MoH should be able to build and update new hospital details when queue got exceeded.

DEP: FR7

2.1.4.4. Functional Requirements 4.4

ID: FR8

TITLE: Add all the patients in the queue to new hospital

DESC: MoH should be able to add all the patients who are waiting in the queue to the new hospital.

DEP: FR8

2.2. Non - Functional Requirements

2.2.1. Non – Functional requirement 1.1

ID: NFR1

TITLE: Security Requirements

DESC: System should be protecting from unauthorized accesses, malicious attacks, etc.

DEP: None

2.2.2. Non – Functional requirement 1.2

ID: NFR1

TITLE: Performance Requirements

DESC: The System should be able to tolerate with large number of accesses, storing large number of data, fast responses etc.

DEP: None

2.2.3. Non – Functional requirement 1.3

ID: NFR1

TITLE: Application Extendibility

DESC: The System should be easy to extend. The code should be written in a way that it favors implementation of new functions.

DEP: None