Health Care
Software Requirements Specification
For **Information Collection and Reporting System**

Version 1.0

Revision History

Date	Version	Description	Author
03/10/16	1.0	Initial Document	Thejan Wjiesinghe Imesh Chinthaka Prasanna Deshappriya Bhanuka Mahanama

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Software Requirements Specification

1. Introduction

a. Purpose

The purpose of the document is to provide a general description on the Information Collecting and Reporting System, Epidemic Data collection system for Epidemiology department of Ministry of Health. The Document will cover the areas of General introduction on the system, functional and non-functional requirements, constraints, technologies and supporting information related to the project.

b. Scope

Health Care, is an Epidemic data collection system for the Epidemiology department of Ministry of Health. The System consists of a mobile application that is used to collect epidemiological data from across the country. The application will include an embedded database that could collect data even when the user is not connected to the internet and capable of uploading data gathered during offline operations when connected.
In addition, the app will also consist of suitable user roles based on the ground conditions. For instance, the validation procedures and constraints will be different for medical officers, health officers, and patients.

c. Definitions, Acronyms, and Abbreviations

Term/ Acronym/ Abbreviation	Description
Medical officer	Users who have registered as medical officers in the application (with the approval of the authorities)
Health officer	Users who are registered as Health officers in the mobile application
Standard user	Someone who interact with the mobile application
User (Unless specifically mentioned)	Any user of the application/system regardless of the authority level
Web application [1]	a client-server software application in which the client (or user interface) runs in a web browser.
Web server/ Server [2]	A Web server is a program that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users, in response to their requests, which are forwarded by their computers' HTTP clients

d. References

[1] "https://en.wikipedia.org/wiki/Web_application," [Online].

[2] "https://en.wikipedia.org/wiki/Web_server," [Online].

d. Overview

The net section of this document describe the background of the requirements, characteristics, constraints and dependencies without pointing out the specific requirement list which is deeply described in the third section.

In the third section we'll analyze the requirements that are identified in second section and find the functional, non-functional requirements and design constraints. Then we'll analyze the assumption that we take to simplify the practical problem. Finally we listed the technologies that we are going to use.

2. Overall Description

This will give an overview of the whole system. The system will be explained in its context to show how the system interacts with other systems and introduce the basic functionality of it. It will also describe what type of stakeholders that will use the system and what functionality is available for each type. At last, the constraints and assumptions for the system will be presented.

a. Product Perspective

The front end of the system will comprise of two components: a mobile applications and an online dashboard. The mobile application will be available for all the levels of the users for download and install on their mobile device. The online dashboard will be only available for medical officers and health officers and can only be accessed through the web application.

The mobile application will communicate with the server to post, view and amend data on the epidermises as authorized by the user level of the user of the application. The app will store data to a temporary memory (an embedded database) and the data will be sent to the central database when the user connects with the internet.

The web dashboard will provide detailed information on the epidermises. The authorization level for the web application is restricted to the medical officers and health officers. Through the web application, users (medical officers and health officers) will be able to manage the system.
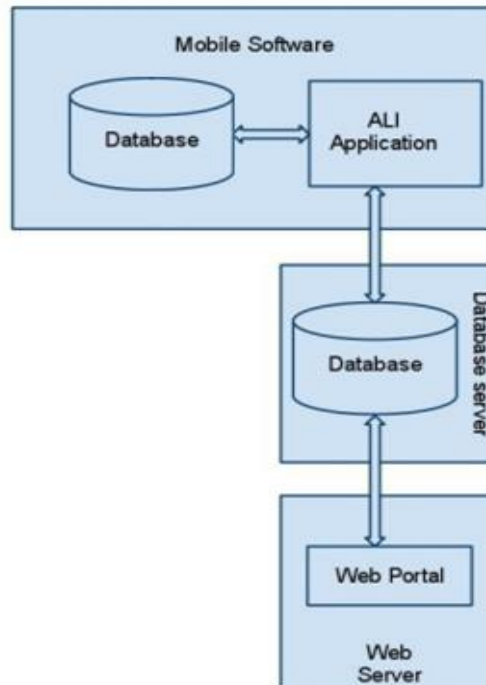
b. Product Functions

With the mobile application installed on the mobile, user of all the levels will be able to update information on the epidermises. The data uploaded by the standard users are subjected the validation by the health officers and the medical officers.
The web application will provide functionality to manage the system and epidermises information in addition to the functions of the mobile application.

c. Product Characteristics

Main characteristic of the product is the high focus towards the mobility., As a result, the product includes a mobile application as the main component.
The mobile application will allow offline usage and hence will include an embedded database for the use while the device is offline.
Ease of use is also a main characteristic of the mobile application as the mobile application is expected to be used by a wide range of people with different levels of digital literacy.
Minimum data and battery usage by the application.

3. Specific Requirements

a. Functionality

- *User class 1: Standard User*

  i. **Register with the system**

      Any person with the mobile application installed on their mobile application can register with the system through the mobile application

  ii. **Login to the system**

      A registered user can login with to the system by providing the username and the password for the system.

  iii. **Add Epidemics information**

      The user can report for epidermises information by logging into the system and marking the locations for possible epidermises.

  iv. **View epidermises information**

      A logged in user can search for possible epidermises in the area.

- *User class 2: Medical officers*

  i. **Register with the system**

      To register as medical officer for the system, a medical officer will have to go through steps of validation in the Ministry of Health. Once verified of the identity, a medical officer will be given credentials for access.

  ii. **Login to the system**

      A user registered as a medical officer can login to the system with the credentials provided in the registration process.

  iii. **View Epidemics information**

      A medical officer will be able to view epidemics information in a certain area.

  iv. **Report epidermis**

      A medical information will also be able to report for a epidermis and confirm epidermis reported by the standard users. epidermis reported by a medical officer will not require any form of validation.

- *User class 3: Health officers*
    i. Register with the system
        Similar to the medical officers, registration of the health officers will be done through the Ministry of Health.

    ii. Login to the system
        A user registered as a medical officer can login in to the system with the credentials provided in the registration process.

    iii. View epidermis data
        A health officer will be able to view epidermis information in a certain area

    iv. View reported, confirmed epidermis
        A health officer will be able view epidermis that have been reported or confirmed by medical officers

    v. Remove epidermis
        A health officer will also be able to remove epidermis from the system. A removal will be equivalent to the elimination of the epidermis from the certain area

- *For all User classes*
    i. Download the application
        User will be able to download the mobile application through either an application store or some other service on the mobile phone. The application will be published free.

    ii. Download new application updates
        User also need to check for application updates and version updates manually. Downloading new release and new updates should be done through the mobile phone.

b. Non Functional Requirements

- *Security*
  User's personal data will be stored in a secure database and only authorized officer can access them.

- *Reliability*
  The reliability of the information will depend on the information provided by the user of the system even though some precautions are having been taken to improve the reliability of the information.

- *Maintainability*
  The mobile application will maintain properly with the release of new application updates which makes the application user friendly.

- *Performance*
  As the mobile application is expected to run on majority of the widely used mobile devices, However the performance will vary depending on the specification of the device.

- *Scalability*
  The system will be designed to incorporate possible changes, improvements to the system.

c. Design Constraints

The mobile application is constrained by the operating system of the mobiles. For instance, the application will not be available for older operating systems such as Symbian, blackberry and Nokia S series.
Internet connection is also a constraint for the application as more update information will require internet connection. In addition, the internet connection is required to upload the data in the embedded database to the server.
Furthermore, the mobile application is constrained by the system resources available for the mobile device such as processor. However, the mobile application is expected to run on most of the widely used mobile devices.

d. Assumptions

One of the main assumptions is that the mobile devices targeted by the application will have sufficient performance to run the application.

In addition, the mobile application is expected to run on at least 90% of the widely used mobile devices.

The information provided by the medical officer are assumed to be valid and true.

e. Technologies

Database - MYSQL
Web server - PHP
Mobile application - Ionic and Cordova
Web application - HTML, JS, CSS