

# Software Requirement Specification

## Vaccination Record iOS App

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## Appendix

# 1 INTRODUCTION

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This Software requirements specification for Vaccination Record iOS App will provide the basic outlook of what software requirements at this point. Vaccination record will enable staff to access child health history in order to provide them vaccination on correct manner of time. It also enable sharing the child record within our network so that every people who related to our system all around the world can access to it. This SRS provides detailed information on the internal, external view of the system and also user interfaces.

## 1.1 PURPOSE

This SRS is to define the requirements for developing the Vaccination Record iOS app, known as “the App” hence forth, as in accordance to the “Records for Life” contest defined in the RFP on Bill and Melinda Gates Foundation. By reading this document, you can understand how our program is developed and know exactly how it work .

This SRS is for members of team six and any other person interested in the development of the App.

## 1.2 SCOPE

The development effort will produce an application that will run on an iOS ipad device. The App serve at least five functions in a health system:

A unique identifier that is intimately connected to the child

A source of critical information for health workers about the child’s health and vaccination status, and what the child needs at each point of contact with the health system

A source of critical information for families, such as date of next visit for vaccination

A source of critical information for household surveys, which many countries and policymakers rely on to validate coverage levels obtained from administrative data systems

An educational tool for families to learn more about health interventions

## 1.3 REFERENCES

RECORDS FOR LIFE CONTEST “<http://www.gatesfoundation.org/How-We-Work/General-Information/Grant-Opportunities/Records-for-Life-RFP>”

# 2 OVERALL DESCRIPTION

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Vaccination Record iOS App as mentioned throughout this document will be a software product which will allow the Staff to easily access to a child profile in order to know its vaccination history and record, Then modify when needed. This program will be created in X-code using Objective C language.

## 2.1 Product perspective

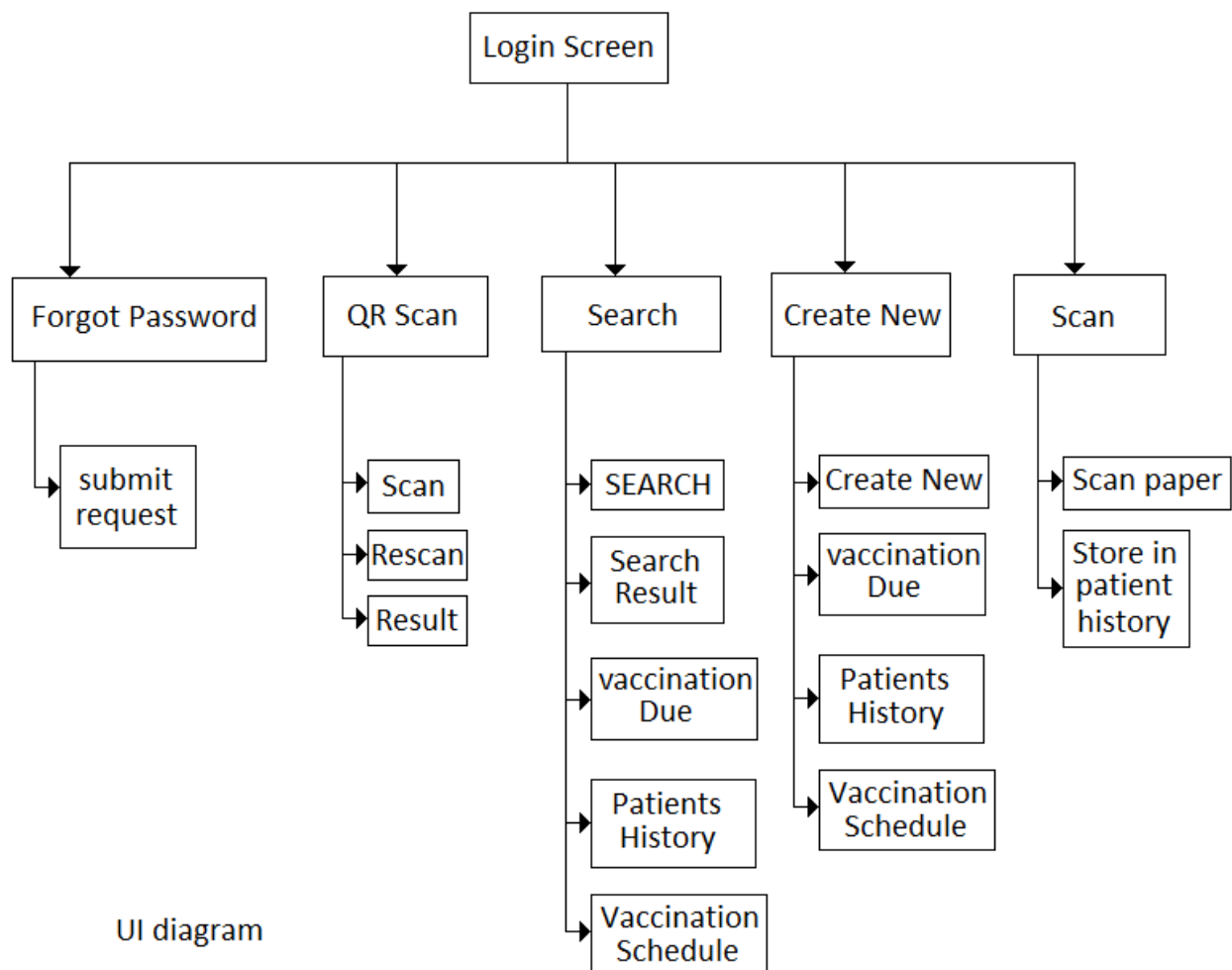
This product is helpful to the Vaccination Record iOS App because it will independently allow the staff to be able to access, record and modify the child entries. This product will allow the staff to keep track of their patient's information, records, and history of vaccination.

Ipad can only be connected to the system through cellular data service or Wi-Fi connection. The staff will interacting with a 1024x768 pixel Led multi-touch screen, on screen keyboard, 5 Mega Pixel Camera. The app is compatible with the current version iPad iOS 7.3.

Current support version of iPad: iPad2, iPad 3, the new iPad, iPad Air.

### 2.1.1 System interfaces

This section describe the main system interfaces.



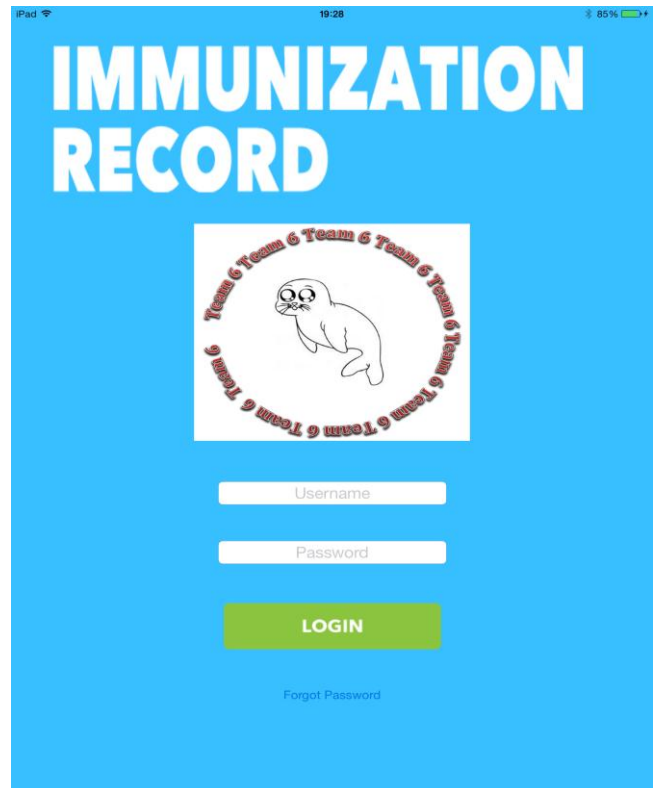
### 2.1.2 User interfaces

This will describe the way users interact with the app.

## 1.Login screen menu

When staff start the application, this is the first screen that appear. Staff need to enter his assigned Username and password for security. If they forget their password , they need to contact admin site to verify their information before they are given new password.

This page is to secure that only allowed staff or doctor can access to the patient database.

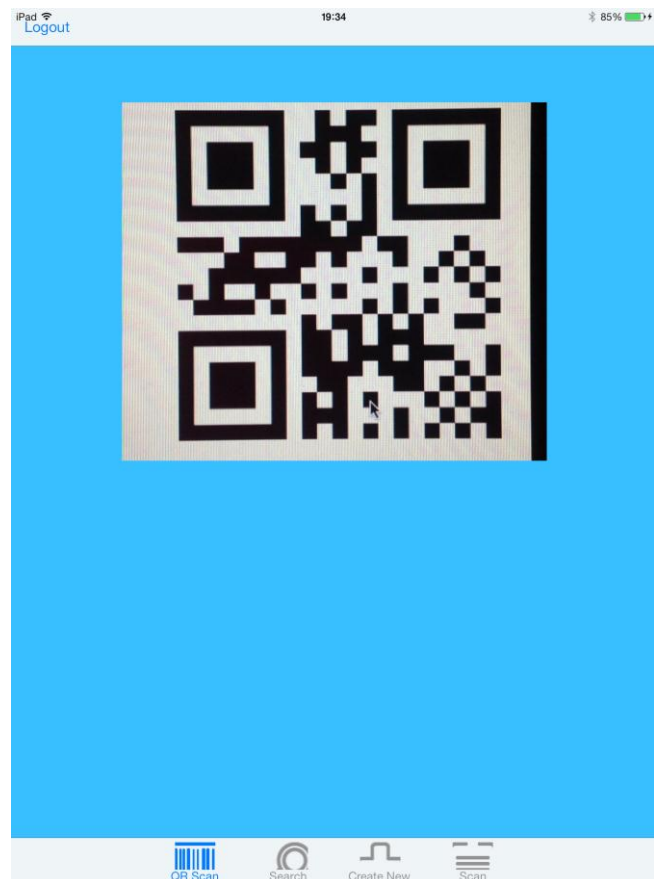


## 2.QR scan menu

After log in, then this screen will appear. It contain for 4 button in respectively: QR Scan, Search, Create new, Scan.

If the patient has the paper of vaccination record with them, for quick access to that patient information, staff can scan the QR code that appear on patient paper. System then will translate this QR code and then link to patient information (if found).

This will link to section 4 below.



### 3. Search menu

If the patient do not bring any paper work with them, then staff should click on the search button on the menu to find the patient information. Then a “SEARCH For Record” screen will appear

In this page, staff will enter information they got from the patient : First Name, Last Name , Gender, Mother Maiden Name, Father name.. Then click search and the app will find patient information in the database. If not found , nothing will happen. If found screen will be link to that patient page.

For example, here we will find a child name kate morgan

### 4. Search result menu

As mentioned in above section 3, if found Search result screen will appear. Or if found in section 2, this screen will also appear.

If app find the child with name kate morgan in the database, it will appear on the Search Results menu. Now staff just need to click on the child name to access the child’s information

### 5. Child details menu

From “Search result menu “ , click on the child appear will link to this screen , the child information.

It will show basic information of the child like: First Name, Last Name , Date of Birth , Gender, Address At birth(City, State, Zip code), Mother Maiden Name, Current address(City, State, Zip code).

If the staff need to update new information, he/she just edit the text and then click Update details button. The new information will be saved into database.

Or if the information of the child is correct, staff can go ahead on the vaccination details by clicking on View Vaccinations.

Child Details

Record ID\* 0010123

Last Name\* Morgan Middle Name First Name\* Kate

Date Of Birth

Gender Male Female

Mother's Maiden Name\* Alexander

Mother's Name Sharon

Father's Name Thomas

Address At Birth:

7401 S Main St

City Houston State Texas Zip Code 77030

Current Address:

2014 Old Spanish Trail

City Houston State Texas Zip Code 77054

View Vaccinations Update Details

SEARCH

### 6. Vaccine due menu

This record is belong to the child staff is looking for. It will show which vaccine need to be taken by the child on show date according to vaccination history

Child Details Kate Morgan

Inactivated Poliovirus: < 18 yrs

Due Date 09-22-2013

Search For Record

Last Name\* First Name\* Gender Mother's Maiden Name\* Mother's Name Father's Name

Vaccines Due Patient History Vaccination Schedule

SEARCH

### 7. PATIENT HISTORY menu

This page will show history of vaccine taken by the child. Name of vaccine taken and date taken. Everything that was recorded will be here.

Logout 2:41 AM 56%

< Child Details Kate Morgan

**HepB**  
2013-07-22 10:30:00

**HepB**  
2013-08-22 10:30:00

**RV-1**  
2013-09-22 10:30:00

**DTaP**  
2013-09-22 10:30:00

**Hib**  
2013-09-22 10:30:00

**PCV13**  
2013-09-22 10:30:00

Mother's Name  
Father's Name

Vaccines Due Patient History Vaccination Schedule

SEARCH

QR Scan Search Create New Scan

### 8. VACCINATION SCHEDULE menu

If the doctor/ staff plan to give the child an vaccination on specific date, it will appear here. Staff will click on "VACCINATION SCHEDULE" to make an appointment on which vaccine to inject on which date.

Logout 2:41 AM 56%

< Child Details Kate Morgan

**Hepatitis B**  
01/22/2014

**Rotavirus 2-does series**  
11/22/2013

**Diphtheria, tetanus, & acellular pe...**  
11/22/2013

**Haemophilus influenzae type B**  
11/22/2013

**Pneumococcal conjugate**  
11/22/2013

**Inactivated Poliovirus: < 18 yrs**  
11/22/2013

Mother's Name  
Father's Name

Vaccines Due Patient History Vaccination Schedule

SEARCH

QR Scan Search Create New Scan



### 9. Create New record menu

If the QR scan does not find the child, or search can not find the child either. That last choice to do is create new record for that child. Or if that child first time to come , Create New Record will also be used.

Staff will click on “Create new” button and this screen will appear.

Here staff/doctor will input information of the child : First Name, Last Name , Date of Birth , Gender, Address At birth(City, State, Zip code), Mother Maiden Name, Current address(City, State, Zip code).

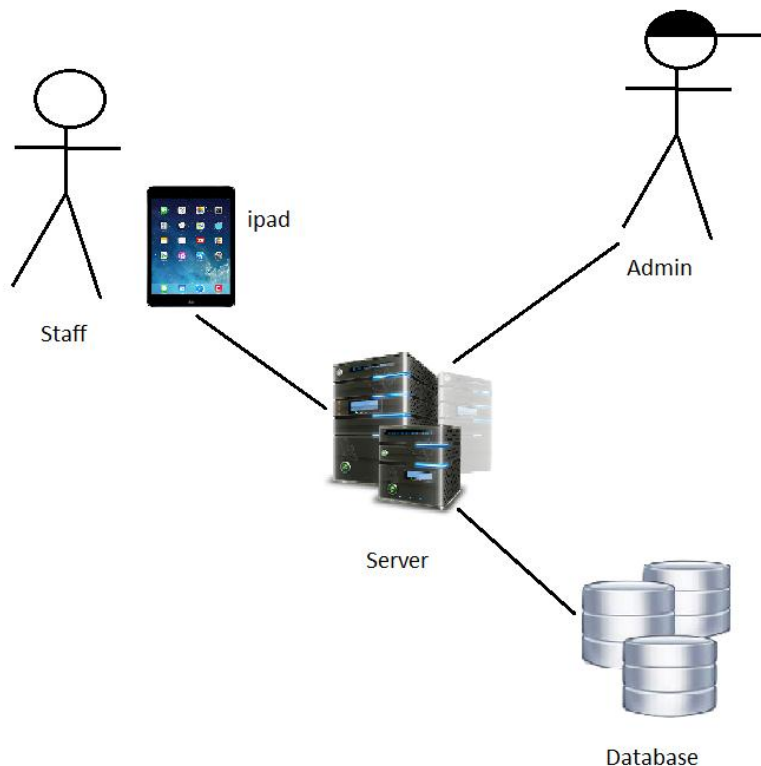
After input all information, Staff/doctor will tap on “Create new” button. New child will be created and saved in the database. Then the screen will be linked to section 6 where staff/doctor can input new vaccination record for the child.

The screenshot shows an iPad screen with the 'IMMUNIZATION RECORD' app. The top bar is blue with 'Logout' and '19:30' and '85%' battery. The main title is 'IMMUNIZATION RECORD'. Below it is a green header 'Create New Record'. The form has the following fields:

- Last Name\* (text input)
- First Name\* (text input)
- Date Of Birth (calendar picker showing July 19, 2010 to January 24, 2016)
- Gender (Male/Female buttons)
- Mother's Maiden Name\* (text input)
- Address At Birth: (text input)
- City (text input), State (text input), Zip Code (text input)
- Current Address: (text input)
- City (text input), State (text input), Zip Code (text input)

A 'Create New' button is at the bottom. The bottom navigation bar has icons for QR Scan, Search, Create New, and Scan.

### 2.1.3 Hardware interfaces



The above figure shows how the Vaccination iOS app System. This system can only be accessed from terminal and iPad. Terminals are used by operating administrators and system analysts. Staff/doctor and nurse at clinic can also access as well by using their provided username and password. Vaccination iOS app System is hosted on a 3<sup>rd</sup> party hired server provider. They will provide host and data storage for the whole system.

### 2.1.4 Software interfaces

Refer to section 2.1.1, 2.1.2, 2.1.3 about hardware and user interface

## 2.2 Site adaptation requirements

Currently the app can be only used on iPad 2,3, new iPad, iPad Air. Further device such as iPhone or iMac will be released in the future

## 2.3 User Characteristics

The user is assumed to be familiar with iPad to perform basic actions like navigational, input, swipe, touch assist.

## 2.4 Constraints

Vaccination Record iOS App requires live connection thoroughly using the app. If a connection is lost, then the staff may only view current screen which has been downloaded. He can not interact with system anymore. When he clicks on something it will show "connection lost" and exit app.

## 2.5 Assumptions and dependencies

We assume that there will be a database hosted by a server. The server is provided by a well-known and trusted 3<sup>rd</sup> party to ensure that the database is online 24 hours/7 days. We, the developer, also assume that the users must have an iPad with a good WiFi source/ or cellular data enabled to access internet. The app only runs online. No other device than iPad is supported until further announcement.

# 3. SPECIFIC REQUIREMENTS

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## 3.1 Actor

### Role: Patient

Most patient is child under 18 (according to Melinda and gate requirement)

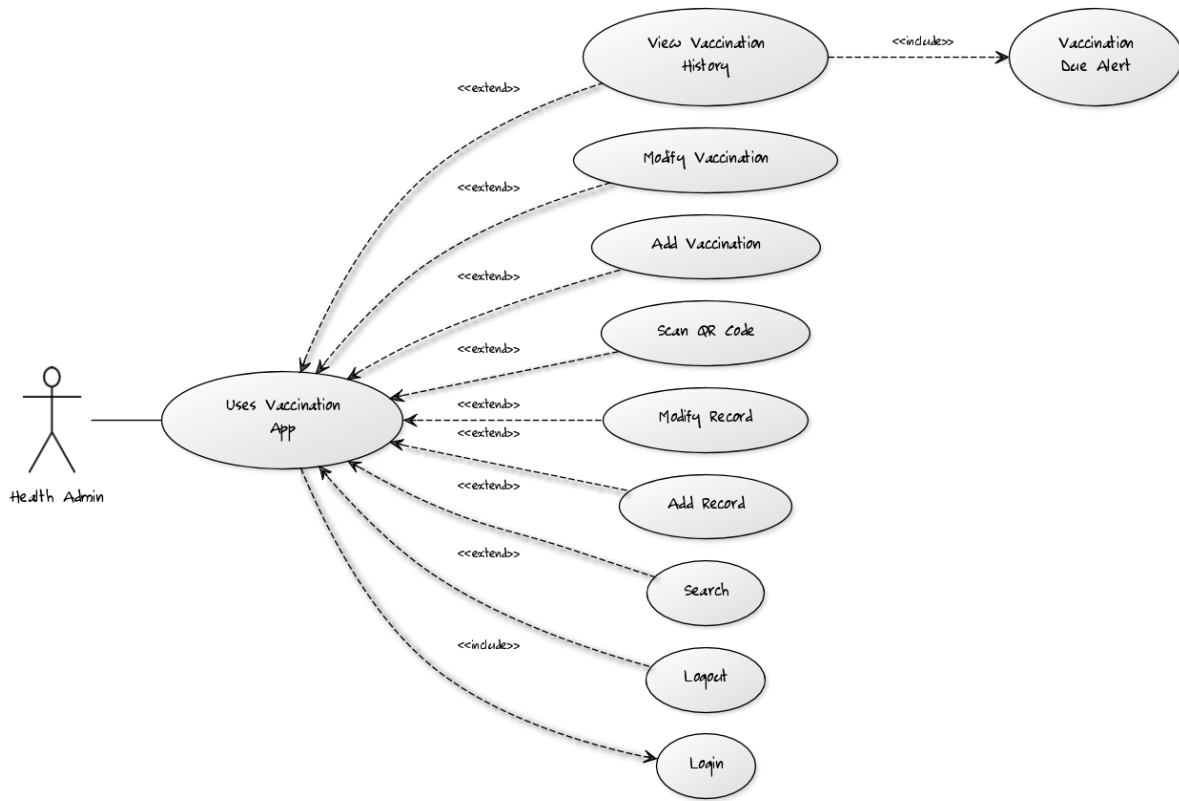
### Role: Health admin

This can be staff/nurse/doctor or anyone that are permitted to take action on the child, access record, inject vaccination.

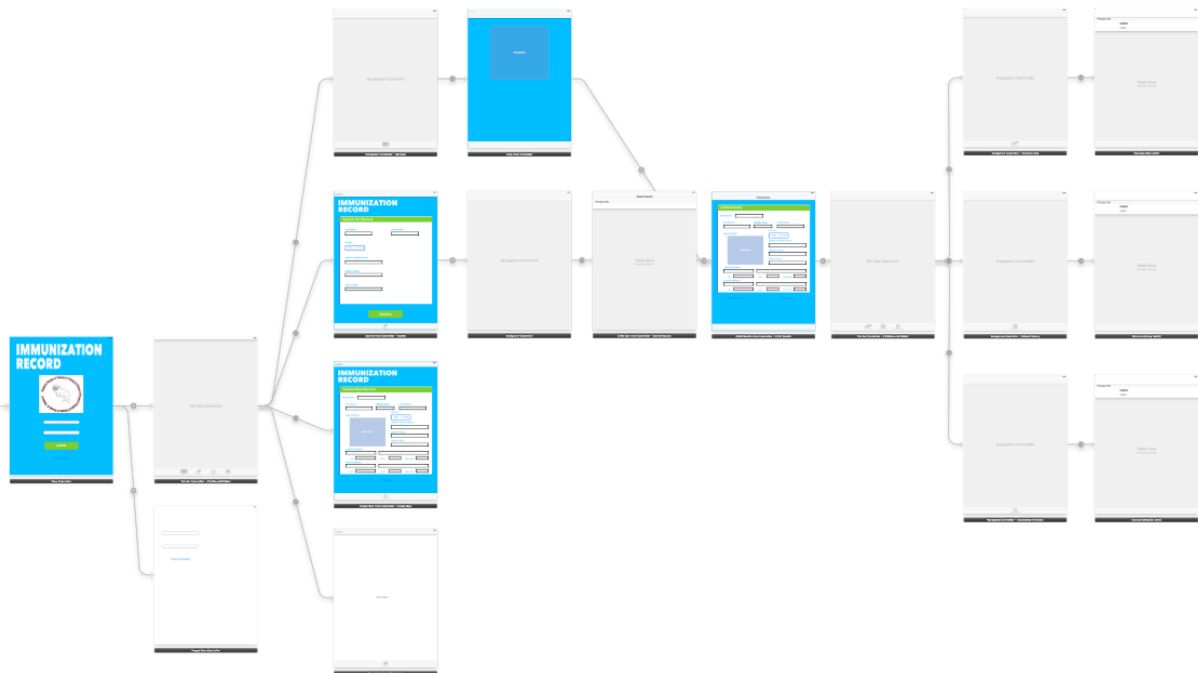
### Role: administrator

Taking care of the system. These people will maintain system and support for user (health admin) in password/username recovery.

## 3.2 Use Case Model



### 3.3 Story board



### 3.3 Database

