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**Requirements document for PHmHEALTH**

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| **Project Name** | PHmHEALTH |
| **Document Name** | Requirements document |

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| **Ver #** | **Date** | **Author** | **Reviewer** |
| 1.0 | March 6, 2013 | Srinivas B Bhat | Prashanth P Prabhu |
| 2.0 | June,18,2013 | Ashok Kumar MB | Srinivas B Bhat |

Table of Contents

[1.0 General Info 3](#_Toc359319559)

[2.0 Request Summary 3](#_Toc359319560)

[3.0 Scope 3](#_Toc359319561)

[4.0 Business requirements 4](#_Toc359319562)

[5.0 Current Process 6](#_Toc359319563)

[6.0 Proposed Process 6](#_Toc359319564)

[7.0 Acceptance Criteria 6](#_Toc359319565)

# 1.0 General Info

PHmHEALTH uses Near Field Communication (NFC) to improve efficiency, aid accountability, and reduce fraud in the home health care sector.

With PHmHEALTH’s proprietary platform, home health providers can "check in" to patient visits and access essential patient information using an NFC-enabled smartphone. Data gathered through the PHmHEALTH platform provides a real-time, auditable trail of visit activity, helping home health agencies create efficiencies, reducing payers’ risk of improper billing or fraud, and enabling families to know more about their loved ones' care. Some of the key features include:

* Minimizes risk of billing errors.
* Create instant and transparent record of activity
* Analyze information
* Visit patterns
* Possible reduction in time to reimbursement
* Potentially lower costs
* Increased time with patients
* For a patient’s family and loved ones, the PHmHEALTH gives peace of mind.
* Approved users can track visits or receive an alert if the healthcare provides does not arrive on schedule.

Data security:

* + All data encrypted
  + Securely stored
  + Preserves patient confidentiality
  + Integrity
  + Simplifies home health care documentation

# 2.0 Request Summary

Thinking code team will work as a seamless extension of clouidIO and will contribute to addition of front end features and extensions to the PHmHEALTH platform.

# 3.0 Scope

The scope of the work is to deliver the following:

Sprint 1: Deliver first version of PHmHEALTH Login, Patient Visit/Schedule, and demographic functionalities for Nexus 7 on Android Ice Cream Sandwich

Sprint 2: Deliver second version of PHmHEALTH Patient Panel, Patient detail, and Google Map integration for Nexus 7 on Android Ice Cream Sandwich.

# 4.0 Business requirements

The following business requirements are part of this service request.

* Sprint 1 Front End
* Login with user credentials

HCP taps the application icon on Phone to open the application.

* HCP keys in the Username and Password for accessing the PHmHEALTH application on the phone.
  + - * 1. Password mask to be set as min 4 characters and max 15 characters.
* Password is sent to service and the application waits for the response.
* App starts a response timer, which is a timeout to indicate whether the auth message has been acknowledged or not. Hour glass is displayed on the screen and the message “Authentication in progress…” is displayed. If the authentication fails the application displays the message “Authentication failed…” and the user is taken to the retry state.
* In the retry state the Password can be sent again for login if the initial authentication fails.
* App authenticates the HCP and app opens. The application now does the following:
* Start NFC reader
* Display NFC icon
* Wait for patient tag NFC read (a message “Awaiting NFC Tag In…” is displayed.
* Once the patient is authenticated the details of the patient is displayed on the screen.
* The application starts a “Start timer”, which is used to clock the time for start and end of the visit. The display should have a large digital or analog timer widget – the timer should dominate the view.
* When the HCP taps on “End Visit” button the application waits for patient’s NFC tag-out.
* Sprint 2 Front end
* Patient Panel  
  After successful login the user will redirected to patient listing or the appointment schedule page.
* Each item in the list contains patient name, visit date/time, and tag-in button.
* When the HCP taps one of the patients in the list, it will open the patient detail page.
* When the HCP taps on the tag-in button, it will take you to tag-in screen.
* There are different validations performed during tag-in
* If the card with different patient-id (With patient id that is not present in the result set returned from the server?) is swiped, the following message will be displayed “Un-Authorized Patient”.
* If a card which is not NDEF formatted is swiped, the following message will be displayed “This card is not NDEF formatted”.
* If a card which has no data on it is swiped, the following message will be displayed “No patient id found”.
* Patient Detail

The patient detail screen contains patient name, phone number, address, and appointment date / time.

It contains two buttons, one for viewing the patient location in the google map and another one is for viewing more information about the patient such as patients name, phone, address, birth date, gender and marital status

An end encounter button will be displayed when the HCP swipes the page to left

On click of the end encounter button, an image will appear with a message “Awaiting NFC Tag out (Patient)”.

At this point the same NFC card (previously used for tag-in) needs to be swiped for tag-out

All the validations that were applicable for tag-in are applicable for tag-out as well, except when the invalid patient card is swiped, a message will be displayed saying, “Please tag-out with the card used for tag-in”.

On successful tag-out the HCP will be taken back to the Log In screen i.e. the first screen of the application.

# 5.0 Current Process

N/A

# 6.0 Proposed Process

* HCP must install an app on their mobile which is provided by the PHmHEALTH.
  + PHmHEALTH must be able to uniquely identify the HCP and the installed application so that only the patients that need to visit the particular HCP can tag-in or tag-out of the application.

# 7.0 Acceptance Criteria

* NFC testing will be done by using simulation using NFC libraries to start with. The final testing will be done using NFC card and tablet.