

# NHS & IBM - What's the plan: Bi-Weekly Report 2

Byoung Hun Min, Shivam Shah, Eduard Ursinschi

## Overview

In the past two weeks we have assigned team roles to each team member to aid in project management. We have also selected areas for each member to research into such as existing/similar solutions to the problem, and potential frontend/backend technologies that could be used in development. We also started gathering our MoSCoW requirements in the first half of the two weeks and have been refining them since through regular communication with our client. As a team we have also met up on multiple occasions to discuss our research findings and evaluated them against our project requirements.

## Meetings

### 14th October:

- Had a team meeting at the MPEB Computer Lab where we assigned specific team roles to each member. Discussed below.
- Discussed what research each team member would carry out. Discussed below.
- Arranged a client meeting (conference call) on the 20th of October.

### 20th October:

- Had a conference call with our client Paul Fleming.
- Gathered initial requirements from client and organised them into the first draft of the MoSCoW format.

### 21st October:

- Attended a lab session where we discussed the findings of our research into existing solutions, frontend, and backend technologies. We also briefly evaluated the advantages and disadvantages of each.

### 24th October:

- Revisited initial MoSCoW requirements with the team, evaluating feasibility and importance to the problem for each. After which some were reassigned to different headings in the MoSCoW format based on the review.
- Reworded each requirement as a user story so that it is clearer to understand from the user's perspective.
- Emailed the refined MoSCoW requirements to our client Paul Fleming.
- Arranged a conference call meeting with our client on 28th of October.

### 28th October:

- Had another conference call with the client to discuss most recently refined requirements. In the process, we established some requirements were irrelevant such as those for a doctor, and so these requirements were removed.
- Had a team meeting further discussing research done by each other in our assigned areas.
- Created a Trello board to aid with project management and track progress.

## Completed tasks

- Assigned team roles to each team member, Brian is Team Leader, Technical Lead and Client Liaison - responsible for leading the team, interacting with the client and leading the creation of the Proof Of Concept design, Shivam is Deputy Team Leader and Chief Editor - responsible for leading the creation of the team documentation and maintaining high team productivity, and Eduard is Chief Researcher and Technical Lead - responsible for leading the Proof Of Concept design work and research.
- Assigned specific research assignments to each team member, Shivam researched existing technologies or similar solutions, Eduard researched front-end frameworks as well as made contributions in existing technologies research and Brian researched back-end frameworks.
- Researched existing or similar solutions. This research looked into:
  - Nursing Care Plans - NANDA which is an app that helps nurses write customized care plans for their patients, and identifying similarities/differences to this project.
  - NHS Summary Care Record - SCR is the electronic record used by the NHS in order to support the patient care, which is a copy of the valuable information from the GP record.
  - XenApp/XenDesktop by Citrix for delivering robust healthcare software involving Electronic Healthcare Records in a professional manner by prioritising security and compliance.
  - NHS Project Pathways which was a web app developed for clinicians and their cancer patients to store treatment information and history, cancer information/diagnosis etc. It aimed to eliminate some big weaknesses of paper based workflows and encourage patients to use digital environments.
  - Medication archetypes through visiting websites and accessing powerpoint slides related to openEHR. This is directly related to one of our requirements.
- Researched front end technologies
  - Bootstrap - powerful design kit for creating innovative interfaces which consists of CSS and Javascript.
  - Ionic - platform which is used for creating hybrid apps using AngularJS and HTML5
- Researched back end technologies. This research involved:
  - Google's Firebase Platform - a backend-as-a-service platform designed for mobile applications, works with multiple platforms including Android and iOS. Integrates well with Ionic framework.
  - Back& - a backend-as-a-service platform for AngularJS and ReactJS, also has integration with Ionic framework.
  - PHP/MySQL - legacy languages that can work together as a backend server.
- Contacted our client and gathered initial requirements, later refining these requirements based on the client's needs and their feasibilities. The requirements were also initially reworded as user stories and grouped by 'Patient' and 'Doctor' in order to view them more clearly through a potential user's perspective. However, as the result of a misunderstanding, the doctor requirements were later removed as they were not required.

## Problems

- Misunderstanding with client in gathering requirements - the target user will not include clinicians.

## Plan for the next two weeks

- Get the project website up and running, and populate with any documentation already acquired.
- Finalise the project requirements with our client and sign them off.
- Potentially meet up with a GP contact provided by our client.
- Sketch designs of the app based on the project requirements.
- Research further into openEHR medication archetypes.
- Continue researching technologies for the app.

## Individual reflection

**Shivam Shah** - Researched further into existing and similar solutions to the current problem. This involved looking into the NHS Pathways project, NANDA-Nursing Care Plans App, XenLab/XenDesktop by Citrix in delivery of healthcare software. All of which I then evaluated in terms of strengths and weaknesses (if applicable) against the requirements of this project. I also researched specifically medication archetypes based on openEHR by collecting useful data off websites and presentations. I also helped gather the initial requirements during the conference call and later contributed in refining them and converting them into user stories for more clarity of the potential user's perspective of the proposed system. In the past two weeks I have attended all lab sessions, team meetings and conference calls.

**Byoung Hun Min** - Contacted our client and attended a conference call to discuss the MoSCoW requirements. Contributed to the team's research by analyzing various backend technologies including Google's Firebase platform and Back& platform which are both backend-as-a-service platforms. I then analysed and evaluated each platform and how each would fit the requirements of this project.

**Eduard Ursinschi** - Researched existing platforms for indexing patient's information. Researched in detail on the NHS Summary Care Record analyzing regarding how it would be implemented in the project. Searched in the existing platforms for elements that match the requirements gathered from our client. Looked into potential front end platforms including Bootstrap and Ionic.