Methodology – Work in Progress

Initial literature reviews followed by a State of the Art analysis were conducted. The group found articles from the World Health Organization, where mHealth and eHealth were discussed.

State of the Art –

For this project, interviews are going to be conducted with one of the group member’s family doctor and their receptions, to try and get insights of how successful this project could be if it were to come into being. Besides interviews, a lo-fi/hi-fi prototype was used to assert the ease of the system. From the interviews, system requirements are going to be extracted.

Research methodology

Work in Progress

Literature:

Meetings/Interviews:

Development methodology

An agile development methodology was selected, due to the nature of this project and the way development had to be done. The agile development methodology allows a better “fit” for this project, as it allows alterations of both software and business requirements. SCRUM was selected as the way to go, from the multitude of different agile methodologies.

The SCRUM methodology was introduced by Schwaber and Beedle in 2001. For this project, some elements of the SCRUM methodology were used (these are going to be elaborated further down).

SCRUM Sprint cycle image and discussed

Roles

The SCRUM framework uses three roles. Due to the nature of this project, not all roles have an actual physical person.

Product owner

The product owner for this project can be considered to be Aalborg University or it can even be omitted. For this project, the product owner does not involve himself in SCRUM meetings, nor does it help to generate and prioritize business requirements and objectives.

Development team

The development team is made up of 3 individuals (student group). They are doing the actual work (analysis, design, development, testing, documentation, etc.). The student group is compromised of individuals with similar sets of skills, and complementing each other in terms of strengths and weaknesses. Due to the lack of influence, or presence from the product owner, it was the development team’s duty to self-organize in order to achieve the desired goals.

SCRUM master

The SCRUM master was the project supervisor, Henning Olesen. He played a major role in helping remove obstacles in the development team’s way, and made sure the team managed to develop and deliver a prototype. Progress has been made in increments. Since the presence of the product owner was absent, the SCRUM master and the development established and maintained an active communication between the two parties, thus making sure to be up to date with development’s team progress.

The SCRUM master also provided key points during the submitted sprints.

Workflow

Here we will discuss how we agreed to have regular meetings with Henning and what came out of them.

Product development

Spring backlog

Prototyping

Tools

When starting out the project, after acknowledging the requirements of the project, the student group/development team started discussing different ideas on which to base the project. All of the ideas revolved around having a database, a server, a webpage and maybe a mobile application. After initial consideration, the group decided to go with all of the above.

Mobile Application

Having decided on having a database, a server, a webpage and a mobile application, the team had to figure out for which platform should the application be developed. Taken into considerations each of the group members’ knowledge of programming, it was decided that the application would be running on the iOS platform (running on iPhones and iPads). The application is a native application, not hybrid or cross-platform application.

IDEs

For the mobile application development, the used IDE is called Xcode[[1]](#footnote-1). It is available on the Mac App Store. Current version is 9.2.

The programming language used for the mobile application is Swift, version 4.x.

The iOS SDK is included with Xcode. This makes it possible to develop applications that run on iPhones, iPads, Apple TV and Apple Watch. The SDK includes also an iOS Simulator, which facilitates testing the app on a computer, instead of an actual iOS device.

3rd party frameworks used in the iOS app

To manage more easily the different libraries used in the project. Cocoapods was used. Cocoapods is a depency manager, making it easier for developers to download, use and managed 3rd party frameworks/libraries that are not included in the iOS SDK.

Node.js

Presentation of Node.js

MongoDB

Presentation of MongoDB

JavaScript

Presentation of JavaScript

Testing

Concept idea

Alpha version

Beta version

1. https://itunes.apple.com/dk/app/xcode/id497799835?mt=12 [↑](#footnote-ref-1)