Sprint Reflection 8

Context Project: Health Informatics

Group: HI4

User Story	Task	Task Assigned To	Estimated Effort per Task	Actual effort per task	Done (yes/no)	Notes
The user wants to analyze multiple persons at the same time	- Implement the analysis of multiple persons with the output in a single file.	Remi	5 Hours	2 Hours	No	Partially implemented but since this was not required, we decided to leave this.
The user wants to chunk on day of the week and on time of day	- Implement chunking on day of the week - Implement chunking on time of the day	Hans Hans	2 Hours 2 Hours	2 Hours 2 Hours	Yes Yes	
The user wants to see all the timestamps in the	- Add the timestamp to the results table.	Sven	3 hours	3 Hours	Yes	

results table (not in a column), for an overview.						
The user wants to use the tool to answer questions about the behavior of patients. Recheck all the questions and find example solutions.	- What time of the day and on what day do people measure themselves?	Hans	2 Hours	2 Hours	Yes	
	- What time of the day and on what day do they enter the measurement in mijnnierinzicht?	Hans	2 Hours	2 Hours	Yes	
	- What is the difference in time between measurement device and entering data in Mijnnierinzicht?	Hans	2 Hours	2 Hours	Yes	
	- Is there a difference between StatSensor measurement and what patients enter into Mijnnierinzicht?	Matthijs	2 Hours	2 Hours	Yes	
	- How often do patients measure themselves before they enter data into Mijnnierinzicht?	Matthijs	2 Hours	2 Hours	Yes	
	- If a patient did measure multiple times, what measure do he/she eventually enter into Mijnnierinzicht?	Elvan	2 Hours	2 Hours	Yes	
	- Do patient follow up advice given my Mijnnierinzicht?	Hans	2 Hours	4 Hours	Yes	To check if patients contacted the hospital within a few days time filtering was implemented
	- What are the conditions under which people start deviating from their normal measurement routine?	Remi	4 Hours	4 Hours	Yes	
		Remi	4 Hours	4 Hours	Yes	

	- What are the conditions under which people overwrite their initial data entered in Mijnnierinzicht? - Find cases where there is a difference between device measurement and what is entered in Mijnnierinzicht - Find cases where Mijnnierinzicht advice to contact the hospital - How well do patients follow up advice of Mijnnierinzicht to re-measure again? - Do external factors, such as holidays, have an effect on the patient's measurement routine? (partially answered by graphs) - Is the value of creatinine, blood pressure, HR affecting the patient's measurement routine? (partially answered by graphs)	Matthijs Hans Elvan Elvan Elvan	2 Hours 2 Hours 2 Hours 3 Hours 3 Hours	2 Hours 2 Hours 2 Hours 3 Hours 3 Hours	Yes Yes Yes Yes Yes	To find external factors the conversion to phased was implemented
The user wants to know how to use the program so that he can easily use it	- Add tooltips to the help pages. - Create a file that describes how to use the program for a few examples - Write some script examples and explanations for the operations in the user manual	Remi Remi Everyone	1 Hour 2 Hours 1 Hour p.p.	1 Hour 2 Hours 1 Hour	Yes Yes Yes	A 'Getting Started' file was made and import script files for each question

The user wants to visualize the final graphs with a state transition matrix and Markov Chain graphs to have an overview of the data	- Create a state transition matrix - Implement Markov Chain graphs - Show multiple graphs, per chunk.	Matthijs Matthijs Matthijs	3 Hours 3 Hours 4 hours	3 Hours - 4 Hours	Yes No Yes	Because of its complexity we left the markov chain graphs. This is needed for the last two questions (to show value differences)
The user wants to have a timeline (time series) that visualises all the events happened during a period of time to explore the data visually	- Let the user specify a particular period of time - Create a timeline that shows all the events that happened during that period of time	Sven Sven	2 Hours 3 Hours	2 Hours 3 Hours	Yes Yes	
The user wants the GUI to be user-friendly and complete	- Syntax highlighting for all constructs. - Add COL() to the parsing of a column name	Remi Elvan	2 Hours 2 Hours	2 Hours 2 Hours	Yes Yes	Highlighting is also extended for the question scripts
The user wants a functional software application that is easy to use	- Testing and improving important features - Perform usability testing with at least five people	Everyone Sven	5 Hours p.p. 5 Hours	5 Hours -	Yes No	Test coverage increased to 84% This is planned for next week.

SIG and the user want the code to be clean, documented and well tested so it can easily be extended for future use.	- Refactor the codebase - Make long methods shorter. - Check PMD, Checkstyle and FindBugs and fix it. - Write tests to improve coverage. (Import controller, and such)	Everyone Everyone Sven Everyone	2 H.p.p. 1 H.p.p. 2 Hours 3 H.p.p.	2 H.p.p. 1 H.p.p. 2 Hours 3 H.p.p.	Yes Yes Yes Yes	We also fixed some InCode problems.
The client wants a finished emergent architecture document	- Finish the architecture document (by adding design patterns, updating the subsystem decomposition and UML)	Elvan	3 Hours	3 Hours	Yes	
The client wants a draft of the final report.	- 1. Introduction, including a brief problem description and end-user's requirements - 2. Overview of the developed and implemented software product - 3. Reflection on the product and process from a software engineering perspective - 4. Description of the developed functionalities	Elvan (evaluation by Sven) Elvan (evaluation by Sven) Sven (evaluation by Matthijs) Hans (evaluation by Elvan)	2 Hours 2 Hours 4 Hours 4 Hours	2 Hours 2 Hours 4 Hours 4 Hours	Yes Yes Yes Yes	

	- 5. Special section on interaction design (development of the HCI module) - 6. Evaluation of the functional modules and the product in its entirety, including the failure analysis - 7. Outlook	Matthijs (evaluation by Remi) Remi (evaluation by Hans) Remi (evaluation by Hans)	3 Hours 3 Hours 1 Hour	3 Hours 3 Hours 1 Hour	Yes Yes Yes	
The client wants to have a nice presentation that we can perform to the clients	- Create a presentation concept. - (optional) Create an initial powerpoint presentation.	Everyone Remi	1 H.p.p 1 Hour	1 H.p.p. -	Yes No	PP will be created next week.

Main problems encountered

Problem 1: The code still had to be refactored

Description: To present our last demo to Wenxin this week, we made sure that all the questions from the requirements document could be answered. Since a few questions and the last two visualizations were finished at the last moment before the demo, this quickly had to be merged with the master branch without proper testing. Because of the last-minute hassle there was no time left to check whether the pull requests for the demo actually met the software engineering requirements.

Reaction: This caused a drop in our test coverage and required some code refactoring after the demo. We solved this quickly by letting everyone test their lastly added code and check it with the tools in a separate refactoring branch. After this we even increased our test coverage to 84% by also adding extra tests on the GUI controllers. We also decreased the complexity of the ImportController by splitting longer methods into smaller ones. So this incident actually helped by making us take another look on the code.

Adjustments for the next Sprint Plan

The last week went well! We finished all of our tasks and we finished all the questions that the user wants to answer. We also put the finishing touch on the user interface and we are really content with the way the program turned out to be.

Since this is the last sprint, there will be no next sprint splan. A reflection on our experencies with the SCRUM methodology and software engineering process can be found in the final report.