Requirements

Introduction

This section of the report will be focused on the requirements we have gathered and engineered taking into consideration the needs and interests of the problem provider and the target group. We will quickly analyze the information we have gathered from the aforementioned respective groups and engineer the requirements using in-depth requirements engineering procedure. The result of this whole process shall give an insight into the system that is being developed and support interested prospective developers who can further implement this project in the future in order to increase the satisfaction of the stakeholders from the final product

Analysis

After multiple discussion sections with the problem provider and many interviews with different patients, we managed to receive crucial information and insight into the needs of people that struggle with dementia. From the information we have gatehred, it was made clear that help is needed with securing the safety of people with dementia, preventing falls, combating loneliness, and providing reminders so that the users will be less likely to forget important activities of they are daily lives. In the end, we will be designing a system that will assist the users in their daily routines by prevention and reminders while combatting loneliness.This can be considered summarized information that was revealed in collaboration with our problem provider who was able to give us insight into the psychological effects and needs of people with dementia. After the interviews were conducted, the information we received was confirmed. Therefore, we structured requirements to fit these needs.

Requirements engineering:

The requirements will be divided in the four known different types of professional requirements – goal-level, domain-level, product-level and design-level.

Goal-Level Requirements:

Goal level requirements answer the question why the customer wants to spend money on the project. They are focused on what the goal of the system is from the business perspective of the stakeholders/company. For example, “our pre-calculations shall hit within 5%”

* The system shall be easy to use for 99% of the users
* The system shall reduce the manual work of the caregivers by at least 50%
* The system shall improve the safety of the patients
* The system shall improve the rememberance of the patients concerning daily tasks
* The system should provide a clear design model of the interior that is going to be used by the system
* The system shall avoid causing stigmatization of the patients

Domain-Level Requirements:

Domain level requirements answer the question what users` tasks are supported. For example, “The product shall support the tasks of cost recording and quotation with experience data”. Domain level covers what tasks will be supported.

- The system should support the users in their task of creating reminders

- The system should support the caregivers in their task of creating and managing reminders

- The system should support the users in improving their schedule management

- The system should support the users in entering descriptions and specific dates associated with reminders

- The system should support the users in their daily tasks by voice commands

- The system should support the users in bookkeeping of their reminders

Product-Level Requirements:

Product level requirements answer the question what functions are to be provided. For example, “The Product shall have recording and retrieval functions for experience data”. Product level requirements are explicit about the purpose of a feature/function

* The system should provide a feature for log in
* The system should provide a feature for registering
* The system should provide a feature to remember login details
* The system should provide a feature to detect falls in different rooms
* The system should provide a feature of an electronic system that prevents dangerous falls
* The system should provide a feature for keeping track of history of recent reminders
* The system should provide a feature to select specific dates in a calendar and display the reminders associated with them
* The system should provide a feature that allows password reset
* The system should provide a feature to set up reminders
* The system should have a feature that allows for multiple reminders to be added

Design-Level Requirements:

Design level requirements answer the question what are the details of the product interface. For example, “The system shall have screen pictures”. Design requirements cover features solely associated with the look and feel of the application.

-The sytem should be designed with warm colours in order to create an ambience of friendliness

- The system should have a persistent design pattern for the different subsections of the whole system

- The 3d model design should persistent throughout the different rooms

- The system should have different contrast colours for different reminders

- The system should have an intuitive design

Discussion:

The provided requirements above specify and clarify the system. They stem from the analysis we have drawn in collaboration mainly with the problem provider but also with the target group. The requirements can be prioritized into a formal list of requirements that will show the most important requirements that can be considered a must and the nice to have requirements that can be added in the end. The must have requirements are the majority of the domain and product level requirements because they really show the functionallity of the system that is being implemented and how it supports the users. Requirements like “The system should provide a feature of an electronic system that prevents dangerous falls”, “The system should provide a feature to set up reminders” and “ The system should support the users in entering descriptions and specific dates associated with reminders” show that a careful consideration in implementing a software system that will combat the forgetfulness of people with dementia has been taken. Furthermore, requirements like “The system shall avoid causing stigmatization to the patients” show that we have taken the advice of our problem provider in deep consideration when designing our product. Aside from that, we have considered a couple of nice to have requirements that we will work on if there is time left. We believe that these bonus requirements will not have a drastic effect on the usefulness of the app but they can slightly improve the user experience.

Nice to have requirements:

* The system shall have a social subsection that can be used by the patients to create networks and preserve relationships
* The system should support the users in preserving their social life
* The system should have a feature that allows the patients to add friends
* The system should make a clear destinction between friends and caregivers
* The system should have a feature to approve received friend/caregiver requests
* The system should have a feature that allows people to add a short description to their requests