Fontys Hogescholen

User Requirements Specifications

Mobile Mobeye Application - Mobieye

S3_CB05_04
Supervisor:Kiavash Bahreini
Eindhoven, 15/09/2020

Document Change Record

Date	*Version*	*Author*	*Comments*
15/09/2020	1.0	S3_CB05_04	Initial version
19/09/2020	1.2	S3_CB05_04	Added use cases and additional requirements after confirming them with the client

Definitions, Acronyms and Abbreviations

Term	*Description*
GUI	Graphical User Interface
FR	Functional requirements
MoSCoW	Must,Should,Could,Won't
N-FR	Non-Functional requirements
UC	Use Case

Table of Contents

1 Introduction

1.1 Document Purpose

The purpose of the URS document is to serve as reference for the technical design and development of the software solution to the project. It describes the user needs and the interaction between the user and the system.

1.2 Document Overview

The document contains information about the functionality of the software solution that the group will create, as well as details regarding the stakeholders of the project, use cases of the application and user stories of the features. Initial version of the graphic interface of the mobile application will be also included in the document.

2 Background

[Describe the project briefly, include factors that affect the product and its requirements]

This project is created for the Dutch company Mobeye which specialize in innovative alarm and telemetry technology. The company was founded in 2008 with the idea to help people and organizations to make their life safer and easier by providing them with a meaningful way to secure, control and monitor their property and devices remotely.

Mobeye products have received multiple awards and are also used worldwide in various sectors, including police, the agricultural and medical industry, in building management and industry, by both professional users and consumers. Their in-house Research & Development team designs and develops customer-specific products on request as well.

The goal of this project is to design and develop a mobile application that would contribute to the Mobeye existing notification system.

2.1 Scope and Objectives

The scope of the project would be designing and developing a mobile application Mobeye's clients. Due to increasing demand, Mobeye has decided to create a mobile application that their customers can use as another way to receive any important alarm system messages.

The mobile application would also offer a more convenient way for the customers to access some basic control functions.

By logging into their personal account, the users would be able to control and monitor their devices. They would receive a push notification in case there is an emergency and they would also have the possibility to view relevant data concerning the alarm that has been forwarded to their device. The users would also have the possibility to access some basic control functions as for example to arm or disarm a device. Furthermore, there would be the option to go to the Mobeye's web portal from where their customers could acquire full control. The mobile application that would be developed for the Dutch company Mobeye would not only elevate their performance and answer their customers' needs, but also would offer a new modern way for their client to overview and control their devices.

3 Stakeholder and User Analysis

The stakeholder of this project would be the Dutch based company Mobeye which specialize in innovative alarm and telemetry technology. Mobeye's clients, who would use the mobile application as means to receive alarm messages and to control their devices remotely, would be the users of the application. The mobile application that would be created for Mobeye would not only answer their clients' demands for a mobile application but would also introduce a new way for controlling and monitoring of their devices. The user would be able to log into their personal account and be able to more easily overview their devices. When an alarm message pops up on their screen they would be able to view the alarm's details and to confirm the alarm, meaning that they are aware of the changes. The users would also be able to see all their registered devices, however if they need to change some settings or perhaps add a new device they would be redirected to Mobeye's portal where they could gain full control of their devices. The end users would also be able to use a "call key" through the mobile application to open automatic doors.

4 User Requirements

4.1 Functional Requirements

ID	*Name*	*Priority (MoSCoW)*
FR-01	Log-in (only for confirmed users)	M
FR-02	User should be automatically logged in Mobeye's web portal when redirected to it	M
FR-03	User should be able to receive alarm notifications	M
FR-04	User should be able to view the alarm message with the relevant information	M
FR-05	The alarm notifications should give differents sounds, depending on the alarm priority	M
FR-06	User should be able to confirm an alarm message to indicate that the alarm was received	M
FR-07	The mobile application should display if the alarm was already confirmed	M
FR-08	User should be able to use a "call key" to access automatic doors	M
FR-09	User should be able to access Mobeye's portal for additional functionality	M
FR-10	User should be able to create messages after confirming an alarm that could be viewed by the other contact users	M
FR-11	User logs out	M
FR-12	User should be able to redirect the confirmation responsibility to the other contact users	C
FR-13	User should be able to arm and/or disarm an alarm	C
FR-14	User should be able to change their language	C

4.2 Non-Functional Requirements

ID	*Name*	*Priority (MoSCoW)*
N-FR-01	First time logging in the mobile application, user should log in with a special code, that would be send to him via SMS or email	M
N-FR-02	Mobile application should not be able to register new users	M
N-FR-03	Mobile application should work on all OS	M
N-FR-04	Only necessary information should be required and exposed	M
N-FR-05	Mobile application should work without delay	S
N-FR-06	Every unsuccessful attempt by a user to log in shall be recorded	C

5 Assumptions/Constraints

[Describe all constraints/assumptions for the project that the specific requirements; for example as the number of users, reliability of online interaction]

The main constraint for the project would be designing and developing a mobile application without having prior knowledge in this field. Working with mobile development technologies is completely different than for example web development. Having a deep understanding of the technologies and tools needed for the creation of a mobile application would take a lot of effort and time, which leads to the second constraint that the team would face.

The time to analyse the client's problem, research and come up with a working and innovative solution is limited. The final product should be delivered by the end of Semester 3, which would mean that the developers have less than 5 months to create a user-friendly mobile application with technologies they have never used. However, if the team plans and divides the work evenly, and organizes everything carefully at the beginning, the final product could be delivered on time.

Another constraint would be the integration of the mobile application with the current web portal of Mobeye. The mobile application should follow their already existing architecture and conventions, so that it could work smoothly with their current systems.

6 Use Case Models

1. UC: User logs in the application

Use case:	User logs in (FR-01)
Actor:	Application user
Pre-condition:	First time opening the mobile application, logged out, an existing account from Mobeye WebService.
Trigger:	Confirmed checkout is triggered
Main Success Scenario:	1. Enter username and password 2. Confirm inputted information 3. Service checks for matching existing account 4. Allowed access to the application and a new session started
Extensions:	3a) Service doesn't find matching credentials .1: Application displays incorrect information .2:User needs to input new credentials .3: End of use case

2. UC: Redirecting user to the Mobeye's web portal

Use case:	Redirecting to the Mobeye WebPortal (FR-02)
Actor:	Logged in user
Pre-condition:	Already logged in to application
Trigger:	Needed access to the web portal triggered
Main Success Scenario:	1. Reaching a feature which needs a redirection to Mobeye WebPortal 2. System redirects user to the portal via a web browser 3. A web browser pops up with access to the portal 4. User gets access to the portal with information form the user's session
Extensions:	N/A

3. UC: User logs out of the mobile application

Use case:	Logging out (FR-11)
Actor:	Logged in user
Pre-condition:	Already logged in to application
Trigger:	Confirm logout triggered
Main Success Scenario:	Enter account setting panel Pressing log-out option Confirming log-out Systems logs-out user and ends user's session
Extensions:	3a) Decline logout option .1: User gets send to the previous panel .2: End of use case

4. UC: Access Mobeye's portal for additional functionality

Use case:	Access Mobeye's portal for additional functionality. (FR-09)
Actor:	User, Portal, mobile application.
Pre-condition:	User needs to be logged in.
Trigger:	None
Main Success Scenario:	Opens the mobile application. Logs in to their account. User needs to access additional functionality User opens the portal through a link in the mobile application. The system sends the user credentials to the portal. The portal authenticates the user The system redirects the user to the portal User access the portal along with the desired additional functionality.
Extensions:	

5. UC: Open door with a "call key"

Use case:	Open door with a call key (FR-08)
Actor:	User, System, Portal
Pre-condition:	The user has the mobeye app installed on their phone and is authorized to use the call key.
Trigger:	None
Main Success Scenario:	1. The user goes close to door 2. The user opens the mobeye application 3. The user selects the required call key and presses the "open" button 4. The system sends the user ID, command ID and the current date and time to the portal 5. The portal checks if the user is authorized to enter during the time and date of the request 6. The portal authorizes the request and sends the command to the door 7. The door opens
Extensions:	

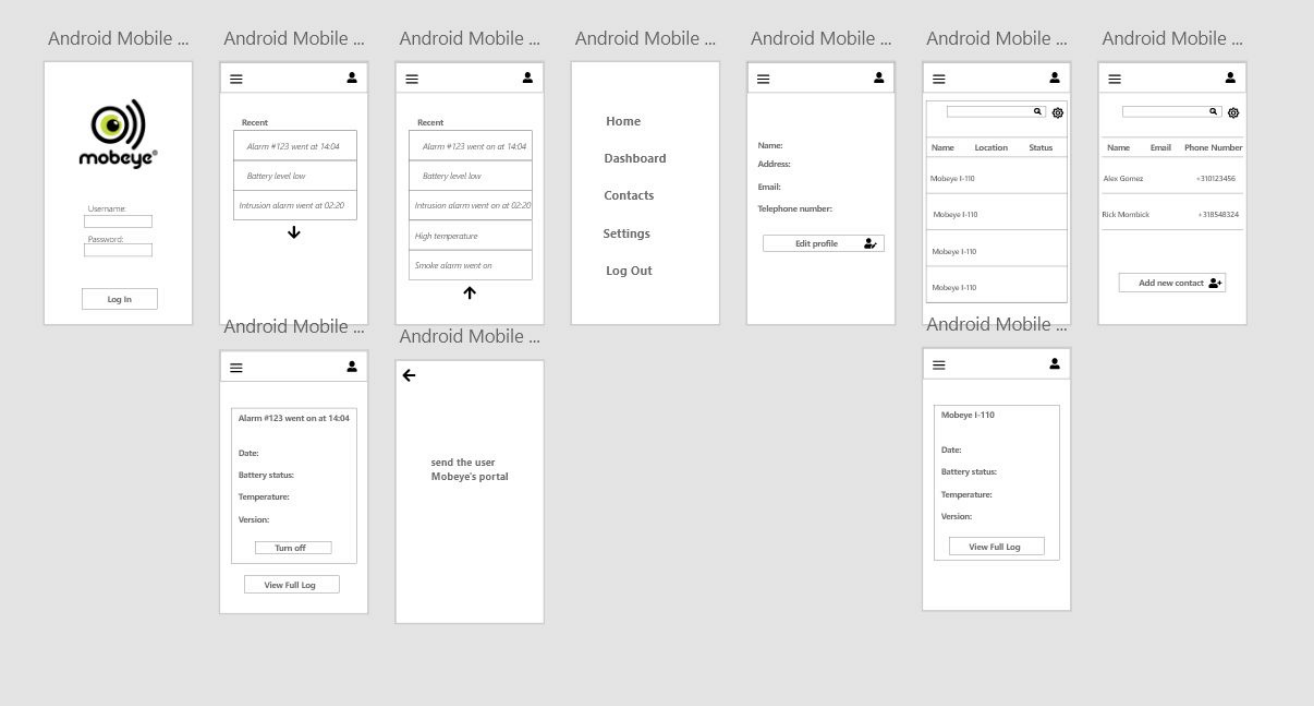
6. UC: Show the alarm message with the relevant information, disarm the alarm

Use case:	Show the alarm message with the relevant information, disarm the alarm (FR-06,FR-07)
Actor:	User, System, Portal
Pre-condition:	The sensors are set up properly and the user has mobeye app installed on their phone
Trigger:	None
Main Success Scenario:	1. Sensor picks up some data 2. The data triggers the alarm 3. Assigned person is notified about the alarm on their phone (Depending on the emergency level of the alarm (HIGH/LOW) application will know who it has to notify) 4. Assigned person can enter the application to see the details about the sensor 5. Assigned person can snooze the alarm / redirect it to the next person on the list 6. Assigned person can arm/disarm the sensor depending if they still want to receive an alarm from the application.
Extensions:	None

7. UC: User should be able to receive alarm messages as notifications

Use case:	User should be able to receive alarm messages as notifications and to view the relevant data (FR-03, FR-04)
Actor:	User
Pre-condition:	User is logged in the application
Trigger:	None
Main Success Scenario:	1. User receives message notification 2. User opens up the notification 3. User views the relevant data for the alarm
Extensions:	1a) User does not receive an alarm .1: End of use case

7 GUI



A full overview of the initial design prototype could be view by following this link:

https://youtu.be/Xckc4Km_xw8