

Software Requirements Document (SRD)

Acronyms

UAB	Universitat Autònoma de Barcelona	SE	Software Engineering
UPF	Universitat Pompeu Fabra		
NA	Neighbourhood association	PA	Property Administrator
FR	Functional Requirements	NFR	Non-functional Requirements
EIR	External Interfaces Requirements	DO	Design Objectives

Revision History

Version	Date	Comments	Autor
0.1	1-Apr-2019	Initial Draft 1	ES Team

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1 Introduction

1.1 Purpose

The purpose of this System Requirement Document (SRD) is to build a software that will help property administrators to manage neighbourhoods association. The software will also enable an smooth communication between property administrators and the neighbourhood association, as well as communication between neighbours.

This document contains:

- The detailed description of the functional requirements.
- The detailed description of the non-functional requirements.

1.2 Scope

The purpose of the neighbourhood associaton management system is to ease property administrator management and also to create a useful application for neighbours, which they will be able to communicate between them, construct surveys and be aware of the new incidences.

1.3 App Usage

This software is for neighbour associations (NA), a group of neighbours and its property administrator. Therefore, the users of this application will be: a Property Administrator (PA), the neighbours and a neighbour manager that is called the President. Each of them will have different roles and activities in the app. It is important to say the President will be able to do the same as a normal neighbour but it will have some extra actions, such as the approval of budgets or the information about the community account, among others.

1.4 General View

The strucutre of the document is the following:

- Section 1 contains the introduction.
- Section 2 contains the functional requirements.
- Section 3 contains the non-functional requirements.
- Section 4 contains the verification matix.

In next section, we will work with next assumption:
In relation with the **Priorities**:

- **H** : High Priority.
- **M** : Medium Priority.

- **L** : Low Priority.

In relation with the **Verification**:

- **R** : Verification by revision.
- **T** : Verification by test.
- **D** : Verification by Design.

2 Functional Requeriments

2.1 Users

ID	REQ-F-1-01
Title	User Registration
Description	The system shall manage a user registration.
Priority	H
Verification	R,T
Parents	

ID	REQ-F-1-02
Title	User Information
Description	<p>User profile shall contain:</p> <ul style="list-style-type: none"> • Full Name: Alphanumeric string from 3 to 16 characters. • Username : Alphanumeric string from 3 to 8 characters. • Password: Alphanumeric string from 6 to 8 characters. • Phone Number: Integers of 9 characters. • Email • Optional Photography : 300x300 pixels in color
Priority	H
Verification	R,T
Parents	

ID	REQ-F-1-03
Title	User Name
Description	The system will allow the user to add a user name, if the user name already exists, the user will need to insert a new one.
Priority	M
Verification	
Parents	REQ-F-1-01, REQ-F-1-02

ID	REQ-F-1-04
Title	Verification Email
Description	The system will send a verification email to the user email, after registration.
Priority	M
Verification	
Parents	REQ-F-1-01

ID	REQ-F-1-05
Title	User Login
Description	The system shall manage a user login.
Priority	<p>The user can access with:</p> <ul style="list-style-type: none"> • Email or username • Password <p>In the future, the user will be logged automatically.</p>
Verification	H
Parents	

ID	REQ-F-1-06
Title	Wrong Login Password
Description	If the password has been introduced 3 times wrong, the user will be suspended during 1 hour.
Priority	M
Verification	
Parents	REQ-F-1-05

ID	REQ-F-1-07
Title	Recover Password
Description	The system will send an email if the user has forgotten the password with a new password. The user will need to introduce the email.
Priority	M
Verification	
Parents	

ID	REQ-F-1-08
Title	Add or enter to a NA
Description	A user shall be able to enter to a NA with a password. Once the user has introduced the password, it will specify the floor and the door he/she lives.
Priority	H
Verification	
Parents	

ID	REQ-F-1-09
Title	Wrong NA Password
Description	If the password has been introduced 3 times wrong, the user will be suspended during 1 hour.
Priority	M
Verification	
Parents	

ID	REQ-F-1-10
Title	Choose NA
Description	The user shall have a list of its NA and be able to select one of the NA
Priority	H
Verification	
Parents	

ID	REQ-F-1-10
Title	User log out
Description	The system shall allow users log out
Priority	After the login, the user should be able to log out.
Verification	H
Parents	

ID	REQ-F-1-11
Title	User timeout
Description	The system should log out the user if there is a period of inactivity.
Priority	M
Verification	
Parents	

2.1.1 Neighbour

ID	REQ-F-1-12
Title	Send Message
Description	The system shall use a instant messaging system to send messages to all the neighbours.
Priority	H
Verification	
Parents	

ID	REQ-F-1-13
Title	Send Attachments
Description	<p>The user should be able to send images, audio and video. File size must not exceed 4MB per message.</p> <ul style="list-style-type: none"> • Audio formats that the software should support : mp3 and wav • Video formats that the software should support : mp4 • Image formats that the software should support: jpg and png <p>This is also specified in the non-functional requirements.</p>
Priority	M
Verification	
Parents	REQ-F-1-13, REQ-F-1-14

ID	REQ-F-1-14
Title	Message Status
Description	The system shall be able to show if the message has been seen for other users.
Priority	L
Verification	
Parents	REQ-F-1-13,REQ-F-1-14, REQ-F-1-15

ID	REQ-F-1-15
Title	Notification System
Description	The system shall be able to notificate a user when a message is received.
Priority	M
Verification	
Parents	

ID	REQ-F-1-16
Title	Clear NA Chat
Description	The user can clear the chat history.It will be removed only for the user.
Priority	M
Verification	
Parents	

ID	REQ-F-1-17
Title	Search in the chat
Description	The user shall be able to search strings in the chat
Priority	L
Verification	
Parents	

ID	REQ-F-1-18
Title	Warnings
Description	<p>The user shall be able to add warnings. For example:</p> <ul style="list-style-type: none"> • broken glass • lift breakdown <p>This warning will be saved automically.</p>
Priority	H
Verification	
Parents	

ID	REQ-F-1-19
Title	Warnings History
Description	The user shall be able to see a history of the incidents and who has written it.
Priority	M
Verification	
Parents	REQ-F-1-19

ID	REQ-F-1-20
Title	Remove Warnings
Description	A user shall be able to remove an incident that has written itself.
Priority	
Verification	
Parents	

ID	REQ-F-1-21
Title	Warning Notification
Description	The system should send a notification to the users, when a warning has been added.
Priority	M
Verification	
Parents	REQ-F-1-19

ID	REQ-F-1-22
Title	Warning Status
Description	A user shall be able to update the status of the incident. Pending, in progress and solved
Priority	M
Verification	
Parents	

ID	REQ-F-1-23
Title	Calendar
Description	The system shall manage a calendar.
Priority	H
Verification	
Parents	

ID	REQ-F-1-24
Title	Add Meetings
Description	The user shall be able to introduce meetings or activities in the calendar.
Priority	H
Verification	
Parents	REQ-F-1-24

ID	REQ-F-1-25
Title	Remove Meetings
Description	The user shall be able to delete meetings or activities of the calendar that he or she has introduced.
Priority	M
Verification	
Parents	REQ-F-1-24

ID	REQ-F-1-26
Title	Calendar Notification
Description	The system will send a notification when a meeting or activity has been introduced.
Priority	
Verification	
Parents	REQ-F-1-24

ID	REQ-F-1-27
Title	Attachment of files in Calendar
Description	The user shall be able to attach files in the appointment day
Priority	M
Verification	
Parents	REQ-F-1-24, REQ-F-1-25

ID	REQ-F-1-28
Title	Attendance to the Meeting
Description	The user shall be able to approve or discard its attendance to the meeting.
Priority	
Verification	
Parents	

ID	REQ-F-1-29
Title	Free-text search
Description	The system shall have free-text search, a text box where the user can introduce an string.
Priority	M
Verification	
Parents	

ID	REQ-F-1-30
Title	Free-text search
Description	If no search term is entered, all records will be returned.
Priority	M
Verification	
Parents	REQ-F-1-30

ID	REQ-F-1-31
Title	Advanced Search
Description	The system shall have an advanced search where the user can search by user-name, by floor or by supplier
Priority	M
Verification	
Parents	REQ-F-1-30

ID	REQ-F-1-32
Title	Create a Survey
Description	A user shall be able to create surveys for the other users. A survey should contain: <ul style="list-style-type: none"> • Questions and answers option • Images and videos • PDFs files
Priority	H
Verification	
Parents	

ID	REQ-F-1-33
Title	Survey management
Description	The user that creates the survey shall be able to add questions, answers and images. The images should be in jpg and png (non-functional)
Priority	H
Verification	
Parents	

ID	REQ-F-1-34
Title	History of the surveys
Description	The user shall be able to see all the surveys from the last year.
Priority	H
Verification	
Parents	REQ-F-1-33

ID	REQ-F-1-35
Title	Survey Results
Description	The user that creates the survey will be able to see the answers of the other users. The other users will see the result ...
Priority	H
Verification	
Parents	REQ-F-1-33

ID	REQ-F-1-36
Title	Contacts
Description	The user shall be able to see the phone numbers of the neighbours, the property administrator or the suppliers
Priority	H
Verification	
Parents	REQ-F-1-02

2.1.2 Property Administrator

ID	REQ-F-2-01
Title	Property Administrator Registration
Description	The system shall manage a property administrator registration
Priority	H
Verification	
Parents	

ID	REQ-F-2-02
Title	Property Administrator Information
Description	<p>The property administrator information should have:</p> <ul style="list-style-type: none"> • Name • Surname • Company Name • Email • Phone Number
Priority	H
Verification	
Parents	

ID	REQ-F-2-03
Title	PA Login
Description	<p>The system shall manage a login system for the PA. The user can access with:</p> <ul style="list-style-type: none"> • Email or username • Password <p>In the future, the user will be logged automatically.</p>
Priority	H
Verification	
Parents	

ID	REQ-F-2-04
Title	Verification Email
Description	The system will send a verification email to the PA email, after registration.
Priority	M
Verification	
Parents	REQ-F-2-01

ID	REQ-F-2-05
Title	Wrong Password
Description	If the password is introduced 3 times wrong the system will send a warning to PA email.
Priority	H
Verification	
Parents	

ID	REQ-F-2-06
Title	Recover Password
Description	The system will send an email if the PA has forgotten the password with a new password. The PA will need to introduce the email
Priority	M
Verification	
Parents	

ID	REQ-F-2-07
Title	Add a neighbour association
Description	<p>The system shall allow the PA to add a new NA. It will have to register it with the following information:</p> <ul style="list-style-type: none"> • Name: Alphanumeric string from 3 to 16 characters. • Address: Alphanumeric string from 3 to 16 characters. • Password: Alphanumeric string from 3 to 16 characters. • Number of floors: Integer from 1 to 2 characters • Number of doors per floor: Integer from 1 to 2 characters
Priority	H
Verification	
Parents	

ID	REQ-F-2-08
Title	Manage different NAs
Description	The PA should be able to manage different NAs
Priority	H
Verification	
Parents	

ID	REQ-F-2-09
Title	Select a NA
Description	The system shall allow the PA to select one NA. Once the property administrator has selected, it will enter to the specific neighbour association.
Priority	H
Verification	
Parents	

ID	REQ-F-2-10
Title	Summon a meeting
Description	The system shall allow the PA to summon a meeting in the calendar.
Priority	H
Verification	
Parents	

ID	REQ-F-2-11
Title	Delete a meeting
Description	The system shall allow the PA to delete a meeting in the calendar.
Priority	H
Verification	
Parents	

ID	REQ-F-2-12
Title	Meeting Information
Description	<p>The PA can add:</p> <ul style="list-style-type: none"> • Day of the meeting • Hour of the meeting • Day's order list • Place of the meeting
Priority	H
Verification	
Parents	REQ-F-2-10

ID	REQ-F-2-13
Title	Add budget/invoice
Description	The system shall allow the PA to upload a pdf file with the budget or invoice.
Priority	H
Verification	
Parents	

ID	REQ-F-2-14
Title	Remove budget/invoice
Description	The system shall allow the PA to remove a pdf file with the budget or invoice.
Priority	H
Verification	
Parents	

ID	REQ-F-2-15
Title	Send budgets and invoices
Description	The PA should be able to send budgets and invoices to the president
Priority	H
Verification	
Parents	REQ-F-2-13

ID	REQ-F-2-16
Title	Notification of acceptance or rejection
Description	The PA will receive a notification of the acceptance/rejection of a budget/invoice
Priority	H
Verification	
Parents	

ID	REQ-F-2-17
Title	History of the budgets and invoices
Description	The system shall allow the PA to see the history of budges or invoices up-loaded/approved/not approved
Priority	M
Verification	
Parents	

ID	REQ-F-2-19
Title	Classify budgets and invoices
Description	The system shall allow the PA to classify between budgets or invoices.
Priority	L
Verification	
Parents	

ID	REQ-F-2-20
Title	Classify budgets and invoices
Description	The system shall classify a budget/invoice by its approval.
Priority	L
Verification	
Parents	

ID	REQ-F-2-21
Title	President Assignment
Description	The system shall allow the PA the assignment of a president of the NA. The president will have access to some actions that the other neighbour will not.
Priority	H
Verification	
Parents	REQ-F-1-02

ID	REQ-F-2-22
Title	Change President Assignment
Description	Once the president is assigned, the system will not be able to assign another president, after one year or the permission of the PA.
Priority	H
Verification	
Parents	REQ-F-1-02

ID	REQ-F-1-23
Title	NA Contacts
Description	The system shall allow the PA to have a phone list of the neighbours of each community and the suppliers.
Priority	
Verification	
Parents	

ID	REQ-F-2-24
Title	Payments
Description	The system shall manage a page where the PA can check the payments of the community
Priority	H
Verification	
Parents	

ID	REQ-F-2-25
Title	Checking account
Description	The PA shall be able to access the checking account of the community.
Priority	H
Verification	
Parents	REQ-F-2-24

ID	REQ-F-2-26
Title	Finance payment
Description	The PA shall be able to finance the payments of the community.
Priority	H
Verification	
Parents	REQ-F-2-24

2.1.3 President

ID	REQ-F-3-01
Title	Notification
Description	The system shall send a notification to the president, when a PA has sent a budget or invoice.
Priority	H
Verification	
Parents	REQ-F-2-15

ID	REQ-F-3-02
Title	Acceptance or rejection of the budgets/invoices
Description	The president should be able to authorize the budgets or invoices to the PA.
Priority	H
Verification	
Parents	REQ-F-2-15

ID	REQ-F-3-04
Title	Electronic Sign
Description	The system shall allow the president to sign electronically a file.
Priority	H
Verification	
Parents	REQ-F-2-15

ID	REQ-F-3-05
Title	Download Files
Description	The system shall allow the president to download the budget or invoice that the PA has sent.
Priority	M
Verification	
Parents	REQ-F-2-15

ID	REQ-F-3-06
Title	
Description	The president will be able to see the statement of the account
Priority	H
Verification	
Parents	

ID	REQ-F-3-07
Title	History of the budgets and invoices
Description	The system shall allow the President to see the history of budges or invoices uploaded/approved/not approved
Priority	H
Verification	
Parents	

2.2 More functional requirements

ID	REQ-F-4-01
Title	Modify account
Description	The system shall have a user profile page, where the user can edit its profile.
Priority	
Verification	
Parents	

ID	REQ-F-4-02
Title	Settings
Description	<p>The system shall manage a settings section. The setting page should contain:</p> <ul style="list-style-type: none"> • Log out • Change language • Turn notifications on/off • About the APP • Help • See terms and privacy
Priority	
Verification	
Parents	

ID	REQ-F-4-03
Title	Turn notifications on/off
Description	The system shall allow the user or the PA to turn notifications on or off
Priority	M
Verification	
Parents	REQ-F-4-02

ID	REQ-F-4-04
Title	Change Language
Description	The system shall allow to the users or to the PAs to change the language
Priority	M
Verification	
Parents	REQ-F-4-02

ID	REQ-F-4-05
Title	Help
Description	The system should manage a help section
Priority	L
Verification	
Parents	

ID	REQ-F-4-06
Title	Terms and privacy
Description	The system should manage a terms and privacy section
Priority	L
Verification	
Parents	REQ-F-4-02

ID	REQ-F-4-05
Title	About the APP
Description	The system should manage a information about the app and show it to the users.
Priority	L
Verification	
Parents	REQ-F-4-02

ID	REQ-NF-4-06
Title	Language
Description	The app should be available in: <ul style="list-style-type: none">• Catalan• Chinese• Arabic• French• Russian• Spanish
Priority	H
Verification	
Parents	REQ-F-4-04

3 Non Functional Requeriments

3.1 Related with Performance

ID	REQ-NF-1-01
Title	Number of registered users
Description	The number of registered users is 2000000.
Priority	H
Verification	R,T
Parents	

ID	REQ-NF-1-02
Title	Memory used
Description	The memory used for this application is 3 GB.
Priority	H
Verification	
Parents	

ID	REQ-NF-1-03
Title	Number of registered neighbourhood associations
Description	The number of registered NAs is 2000000.
Priority	H
Verification	R,T
Parents	

ID	REQ-NF-1-04
Title	Time Response
Description	The time response will be optimized within the range of 1 to 5 seconds.
Priority	M
Verification	R,T
Parents	

ID	REQ-NF-1-05
Title	Connected Users Capacity
Description	The number of connected users is 300000.
Priority	H
Verification	R,T
Parents	

3.2 Related with Design

ID	REQ-NF-2-01
Title	Hardware Portability
Description	The application can run only hardware that supports iOS and Android Operating Systems.
Priority	M
Verification	R,T
Parents	

ID	REQ-NF-2-02
Title	Data Storage
Description	The data must be stored in a recognized database structure.
Priority	H
Verification	
Parents	

ID	REQ-NF-2-03
Title	DB
Description	The database must be capable of export to a commonly format, such as XML or CSV.
Priority	H
Verification	
Parents	

ID	REQ-NF-2-04
Title	File formats
Description	<p>The application will only support:</p> <ul style="list-style-type: none"> • Audio formats: mp3 and m4a • Video formats: mp4, wav and avi • Image formats: jpg and png • File formats: pdf
Priority	M
Verification	R,T
Parents	

ID	REQ-NF-2-05
Title	Back-end
Description	The application shall have a back-end.
Priority	H
Verification	
Parents	

ID	REQ-NF-2-06
Title	Front-end
Description	The application shall have a front-end.
Priority	H
Verification	
Parents	

ID	REQ-NF-2-07
Title	Availability
Description	The application shall be connected to the internet when being used.
Priority	H
Verification	R,T
Parents	

ID	REQ-NF-2-08
Title	System Dependability
Description	If the application loses connection to the internet,the user should be informed.
Priority	M
Verification	R,T
Parents	

ID	REQ-NF-2-09
Title	Errors Management
Description	The errors shall be managed by sending messages to the app administrator in order to notify it and provide a solution for it.
Priority	H
Verification	R,T
Parents	

ID	REQ-NF-2-10
Title	Fault tolerance
Description	The system shall have a fault-tolerance design if the system fails, the application shall continue to function in a reduced level
Priority	M
Verification	
Parents	

3.2.1 Privacy and Security

ID	REQ-NF-2-11
Title	Profile privacy
Description	<ul style="list-style-type: none"> • All personal information shall be kept in the application and not shared with other companies. • According to the law of personal data protection, users have the access rights, cancellation, and consented retrieve for your personal details.
Priority	H
Verification	
Parents	

ID	REQ-NF-2-12
Title	Information management
Description	The system shall manage independently the information from each user and NAs.
Priority	H
Verification	R,T
Parents	

ID	REQ-NF-2-13
Title	Security
Description	<ul style="list-style-type: none"> • The app shall ensure the user's information used in this app are securely configured and managed. • Updates and configuration changes shall be implemented as soon as practicable. • Access to application configurations shall be restricted to administrators only. • A full review of applications and licences shall be completed as least annually, as part of the regular application reviews. • No modifications should be made to the application without confirmation of the App Administrator.
Priority	H
Verification	R,T
Parents	

3.3 Related with EIR and DO

ID	REQ-NF-3-01
Title	User friendly
Description	System shall be user friendly.
Priority	H
Verification	
Parents	

ID	REQ-NF-3-02
Title	Maintainability
Description	<ul style="list-style-type: none">• The application should be easy to expand. The code should be written in a way that it favours implementation of new functions.• Test environments should be built for the application to allow testing of the application's different functions
Priority	M
Verification	
Parents	

ID	REQ-NF-3-04
Title	Color Design
Description	The application shall have two color modes: <ul style="list-style-type: none">• Night mode• Day mode
Priority	H
Verification	R,T
Parents	

ID	REQ-NF-3-05
Title	Installability
Description	The user shall download the software and the system should notify new updates
Priority	M
Verification	
Parents	

ID	REQ-NF-3-06
Title	Auditing
Description	Notifications from the application shall be sent once the user has been given permission.
Priority	H
Verification	
Parents	

ID	REQ-NF-3-07
Title	Payment service
Description	The system shall be connected with a VISA payment service.
Priority	H
Verification	
Parents	

ID	REQ-NF-3-08
Title	Signature
Description	The president should be able to sign the budget or the invoice with an electronic signature system.
Priority	M
Verification	
Parents	

ID	REQ-NF-3-09
Title	Color blinded design
Description	The system shall be accessible by people who are color blind.
Priority	M
Verification	
Parents	

3.4 More non-functional requirements

The next requirements involves the Chat system the application has.

ID	REQ-NF-4-01
Title	Chat capacity
Description	The chat shall have 6,000 number of users.
Priority	H
Verification	R,T
Parents	REQ-NF-1-02

ID	REQ-NF-4-02
Title	Message capacity
Description	The messages shall maximum have 1000 characters.
Priority	M
Verification	
Parents	

ID	REQ-NF-4-03
Title	Chat Scalability
Description	The application should be able to provide instant messaging services to all users at all times.
Priority	H
Verification	
Parents	REQ-NF-1-03

ID	REQ-NF-4-05
Title	Audio and Photo Capacity
Description	Audios and photos uploaded to the application shall have 4 MB capacity as a maximum.
Priority	M
Verification	
Parents	

ID	REQ-NF-4-06
Title	Privacy Messages
Description	Messages shared between users shall be encrypted to maintain privacy
Priority	H
Verification	
Parents	

ID	REQ-NF-4-07
Title	Chat's old messages
Description	Old messages send within the application can be seen until a year has passed from the sending.
Priority	L
Verification	R,T
Parents	

4 Verification Matrix

Requeriment	Use Case	Test
REQ-F-1-01	CU-USER-01	TP-U-01

Table 1: Verification Matrix