

University of Bern

# SRS - Team 4 ESE 2016

Software Requirements Specification Document

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**Version:** 5

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## Contents

## I.Revision History

Version	Date	Description
01	08.10.2016	Document initialized and structured.
02	18.10.2016	Added new Use Case
03	25.10.2016	Added different sell and propertytypes
04	08.11.2016	Release 2.0 Version
05	22.11.2016	Adapted SRS to newest changes for sell and propertytypes (especially the auction)

# 1. Introduction

## 1.1. Purpose

The purpose of this project is to create a website for users to search for properties and roommates. This SRS should give a detailed overview of all aspects of the whole project. It is intended to clarify and capture the requirements of the customer and to work as a contract between the customer and the ese-team 4.

## 1.2. Stakeholders

The stakeholders of this projects are the ESE 2016 staff, for team 4 especially „Manuel Leuenberger “.

## 1.3. Definitions

**Ad:** A specific site on the website where the advertiser can publish detailed information about a property which is for rent/sale/auction. The ad can be seen from any user.

**Advertiser:** A registered user that already has placed (or wants to place) one or multiple ad on the website

**Normal User:**

**Premium User:**

**Property:** A property is either a room, flat, house or studio.

**Registered User:** A person that is already registered on the website; this person uses the website for its intended purpose.

**Searcher:** Any user who is looking for ads on the website

**Selltypes:** different selltypes of an ad (auction, buy, rent)

**Unregistered User:** A person that uses the website for its intended purpose but is not yet registered.

## 1.4. System Overview

The software system is a website which helps users to find a property or a person to share an apartment with. The system should assist a user to find the optimal ad by matching various criteria of the user's preferences and the ads specifications. Furthermore, the system should provide the users a way to communicate with advertiser to arrange appointments.

## 1.5. References

## 1.6. Overview

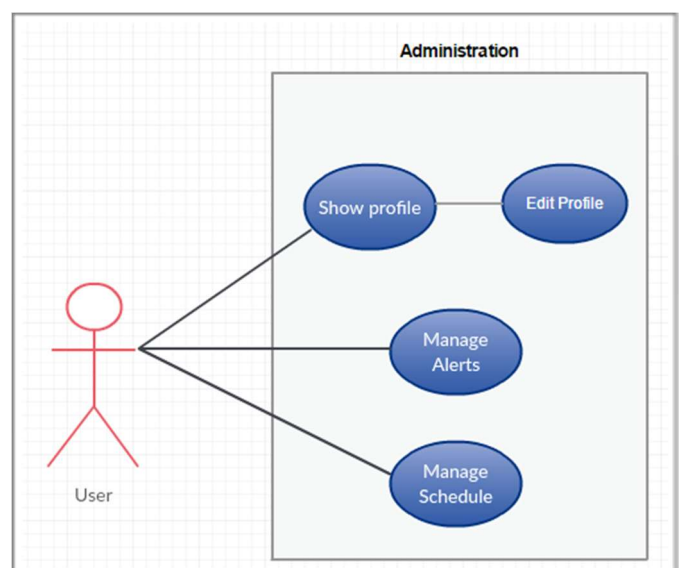
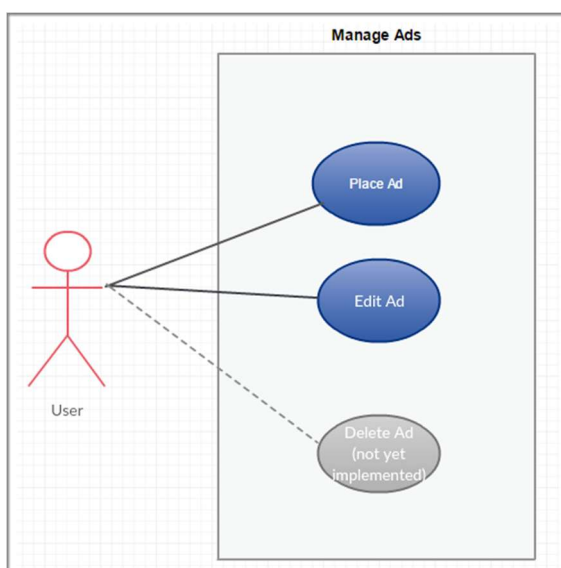
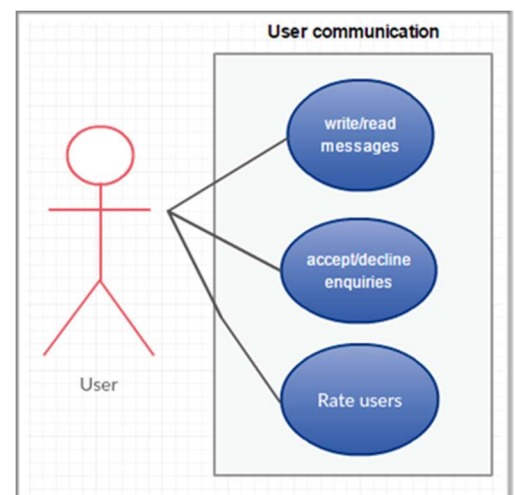
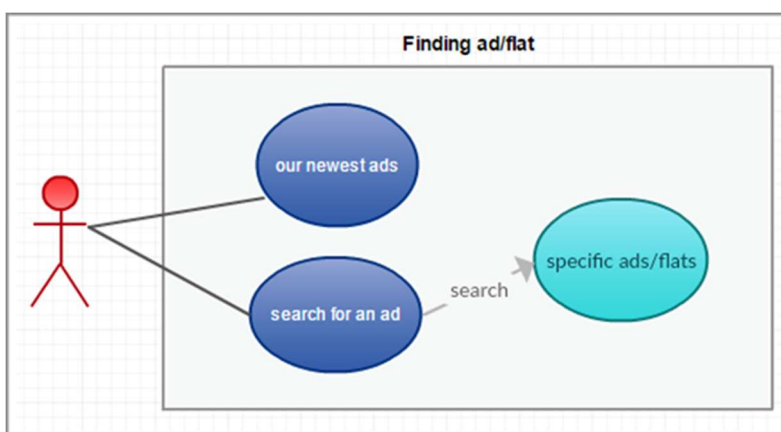
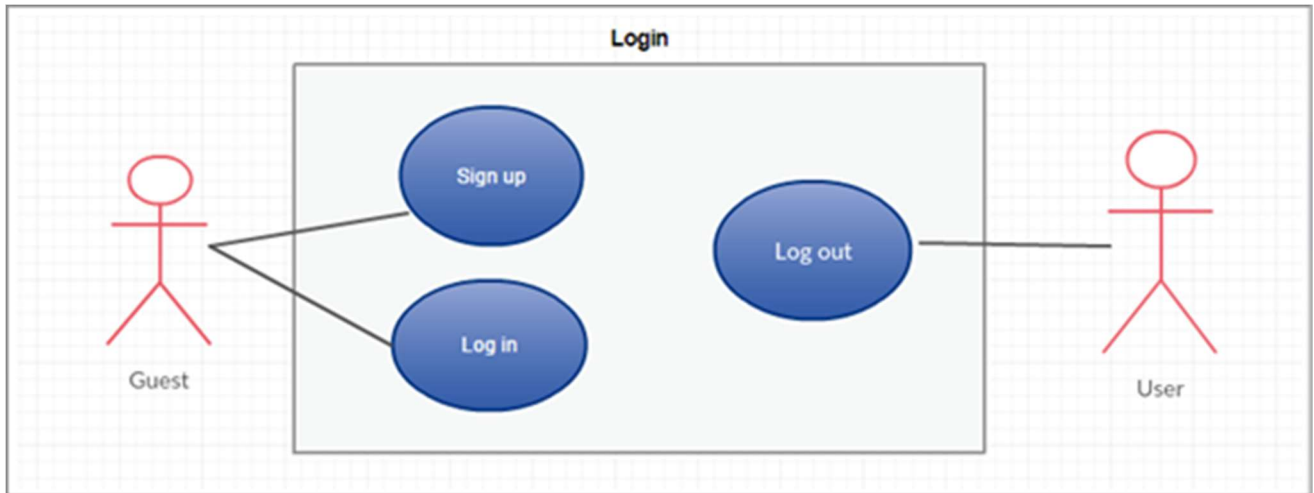
The rest of the SRS contains the overall description in section 2 as well as the specific requirements in section 3.

Section 2 is most important to the customers and potential users since it describes the system from the user perspective. This is mostly done by describing different use cases and typical user scenarios.

Section 3 is most important to the developers since this section describes the functionality of the system. That means, this section covers all aspects that are needed to fulfil the scenarios described in section 2. Furthermore, all additional requirements are specified in this section.

## 2. Overall Description

### 2.1. Overview Diagrams



## 2.2. Advertiser Use Cases

### 1. Place an ad

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to be able to place an ad
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. User has access to the internet</li><li>2. The user owns an account on the website</li><li>3. The user knows his e-mail address and password to be able to log in</li><li>4. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user navigates to the „place an ad“ page</li><li>2. The user fills in the form</li><li>3. The user submits the ad</li><li>4. The ad will be placed on the „My advertisements“ list</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. The user provides invalid information<ul style="list-style-type: none"><li>• The user will have to fill in the form again</li></ul></li><li>2. The user loses access to the internet while filling in the form<ul style="list-style-type: none"><li>• The user has to start from beginning</li></ul></li></ol>
<b>Specific Requirements</b>	none
<b>Notes</b>	There are 3 different selltypes and 4 different propertytypes

## 2. Edit ad

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to be able to edit my ads
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. User has access to the internet</li><li>2. The user owns an account on the website</li><li>3. The user knows his e-mail address and password to be able to log in</li><li>4. The user is logged in</li><li>5. The user has already placed an ad</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the „My properties“ site</li><li>2. The user gets an abstract of all his ads</li><li>3. The user selects the ad he wants to edit</li><li>4. The user clicks on the „Edit ad“ shortcut</li><li>5. The system redirects the user to the „Edit ad“ site</li><li>6. The user changes the information he wants to change</li><li>7. The user submits the changes</li><li>8. The system saves the adjusted ad</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. The user loses access to the internet as he adjusts the ad<ol style="list-style-type: none"><li>a. The user has to start from beginning</li></ol></li></ol>
<b>Specific Requirements</b>	none
<b>Notes</b>	none



### 3. Delete ad (not yet implemented)

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to be able to delete my ads
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. User has access to the internet</li><li>2. The user owns an account on the website</li><li>3. The user knows his e-mail address and password to be able to log in</li><li>4. The user is logged in</li><li>5. The user has already placed an ad</li></ol>
<b>Basic Flow</b>	
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	Where should the shortcut „Delete ad“ be placed? Should the user confirm that he really wants to delete the ad? Should it be possible to delete several ads at once?

## 4. Manage enquiries

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user who placed at least one ad I want to be able to see an overview of all my enquiries, as well as being able to accept or decline them.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. User has access to the Internet</li><li>2. The user owns an account on the website</li><li>3. The user knows his e-mail address and password to be able to log in</li><li>4. The user is logged in</li><li>5. The user has already placed an ad</li><li>6. To be able to manage them, the user needs to have at least one enquiry</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the „Enquiries“ site</li><li>2. The user gets an overview of all his enquiries</li><li>3. The user either accepts or declines the new enquiries</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. The user neither accepts nor declines an enquiry before its scheduled date<ol style="list-style-type: none"><li>a. Nothing happens</li></ol></li></ol>
<b>Specific Requirements</b>	none
<b>Notes</b>	What should happen if the advertiser doesn't accept or decline an enquiry before it's due?

## 5. Manage schedule

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to see a schedule of all my presentations (visitors of my flat) and all the visits I've realized in the past. The schedule must provide an overview that contains the address of the concerning flat, the date and time of the visit and a link to the ad-website. In the schedule of my presentations I want an additional link to see a list of all the visitors of a flat.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. User moves to the schedule page</li><li>2. The user gets an overview of the scheduled presentations as well as of the scheduled visits of the past.</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	none
<b>Notes</b>	Are visits shown only from the past, or from the future as well?

## 6. Compile a list of the most promising candidates

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to create a visitable list of the most promising properties to get a better overview. Therefore, I want the possibility to bookmark the ad I'm visiting to add it to this list.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. User has access to the Internet</li><li>2. The user owns an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user searches a promising ad on the Home page or through the Search page by filling in the form</li><li>2. On the ads site the user can bookmark the ad with the bookmark button on the top right if it is not his own.</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	The list is found on the My room page and the bookmarks can be reversed with the same button as they were added.

## 7. Edit Profile

<b>Actor</b>	Registered user
<b>Description</b>	After creating a profile, I want to be able to edit it
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user opens his public profile and clicks on „Edit Profile“</li><li>2. The user gets all the information regarding his profile and is able to edit everything</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. The user deletes crucial information from his profile, such as his Username or First name<ul style="list-style-type: none"><li>• An error occurs and the changes won't be saved</li></ul></li></ol>
<b>Specific Requirements</b>	
<b>Notes</b>	

## 8. Sell properties directly in an ad (new)

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to sell properties directly in an ad.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the "Place an ad" page</li><li>2. The user fills out the presented form and specifies a buy-out price</li><li>3. The user submits the ad</li><li>4. The ad will be placed on the „My advertisements“ list on the My rooms page</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	The form gets automatically adapted for direct sales.

## 9. Sell properties through an auction in an ad (new)

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to sell properties as an auction in an ad.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the "Place an ad" page</li><li>2. The user fills out the presented form and specifies an auction duration and a starting price with the option for an additional buyout price.</li><li>3. The user submits the ad</li><li>4. The ad will be placed on the „My advertisements“ list on the My rooms page</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	The form gets automatically adapted for auctions.

## 2.3. Searcher Use Cases

### 10. Contact advertiser

<b>Actor</b>	Registered User
<b>Description</b>	A registered user should be able to contact an advertiser to ask for more information about the ad or to enquire a meeting.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user searches a promising ad on the Home page or through the Search page by filling in the form</li><li>2. On the ads site the user can contact the advertiser on the bottom of the ad's page in the Advertiser frame</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	



## 11. Send an enquiry

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to enquire a meeting with the advertiser of an ad I'm interested in.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>4. The user has access to the internet</li><li>5. The user has an account on the website</li><li>6. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>3. The user searches a promising ad on the Home page or through the Search page by filling in the form</li><li>4. On the ads site the user can send a timely fixed enquiry to the advertiser by clicking on the "Send enquiry to advertiser" button in the Visiting times frame.</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. The user searches a promising ad on the Home page or through the Search page by filling in the form</li><li>2. On the ads site the user can contact the advertiser on the bottom of the ad's page in the Advertiser frame to enquire an meeting.</li></ol>
<b>Specific Requirements</b>	
<b>Notes</b>	

## 12. Bookmark an ad

<b>Actor</b>	
<b>Description</b>	
<b>Trigger</b>	
<b>Precondition</b>	
<b>Basic Flow</b>	
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	Included in Compile a list of the most promising candidates?

### 13. Subscribe to alerts

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to subscribe alerts for specific search filter criteria. So I will receive alerts if a new ad fulfills my search criteria.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the "Alerts" page</li><li>2. The users fills in the search form and clicks on the Subscribe button below the search form</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	The active alerts are shown on the alerts page

## 14. Expanded Search Form (new)

<b>Actor</b>	Anyone
<b>Description</b>	Added new search criteria.
<b>Trigger</b>	Click the search button on the homepage.
<b>Precondition</b>	1. The user has access to the internet
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user opens the search menu and fills out all the required search criteria</li><li>2. After confirmation the results are displayed, with the option to search again</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. Some information was left blank<ul style="list-style-type: none"><li>• An error occurs with the request to fill out the missing elements</li></ul></li></ol>
<b>Specific Requirements</b>	-
<b>Notes</b>	-

## 15. Create search alert (new)

<b>Actor</b>	
<b>Description</b>	
<b>Trigger</b>	
<b>Precondition</b>	
<b>Basic Flow</b>	
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	Which differences compared to subscribe to alerts ?

## 16. Search for properties of all selltypes (new)

<b>Actor</b>	Anyone
<b>Description</b>	Anyone should be able to search advertised properties for sale. Multiple search criteria can be used to narrow the search results
<b>Trigger</b>	
<b>Precondition</b>	1. The user has access to the internet
<b>Basic Flow</b>	1. The user opens the search menu and fills out all the search criteria, including the different selltypes 2. After confirmation the results are displayed
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	The search form must be adjusted for this search.

## 17. Place a bid (new)

<b>Actor</b>	Registered User
<b>Description</b>	A user should be able to place a bid on an auction
<b>Trigger</b>	1. Click the button „Place Bid“
<b>Precondition</b>	1. The user is logged in 2. The user isn't owner of the auction 3. The user isn't already highest bidder 4. The auction is still running
<b>Basic Flow</b>	1. The user opens a property of the type auction 2. The user puts a price into the place bid field 3. The user clicks the button “place bid” 4. The page is refreshed and he is the highest bidder
<b>Alternative Flow</b>	1. The user doesn't meet one or more preconditions 2. The page refreshes without changing anything
<b>Specific Requirements</b>	
<b>Notes</b>	

## 2.4. Other Use Cases

### 17. Register on the website

<b>Actor</b>	Unregisterd User
<b>Description</b>	Anyone should be able to register himself on the page to access the full features.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an email account</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the "Login" page.</li><li>2. The user clicks on "sign up" to reach the "sign up" page</li><li>3. The user fills in the form to sign up and clicks on the "Sign up" button below the form.</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	Currently the email address must not be confirmed. So any address could be used for the login.



## 18. Login on the website

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want log in on the website to access all features.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The users moves to the "Login" page</li><li>2. The user fills in his Email and Password and clicks on the "Login" button</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. Visit the advertiser's profile, where his email address is denoted</li><li>2. Write an email to the advertiser with any email client</li></ol>
<b>Specific Requirements</b>	
<b>Notes</b>	

## 19. Visit profile

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to visit the profile of an advertiser to find out more about him.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user searches a promising ad on the Home page or through the Search page by filling in the form</li><li>2. On the ads site the user can visit the advertiser's profile</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to "Enquiries" page</li><li>2. The user can click on the usernames listed in the enquiries</li></ol>
<b>Specific Requirements</b>	
<b>Notes</b>	

## 20. Write Message

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to write messages to other registered users especially to advertisers.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user visits the profile of the desired user and clicks on the "Message button" and the message window opens</li><li>2. The user adds a subject and a message and clicks on "Send"</li></ol>
<b>Alternative Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the "Messages" page and clicks on "New" on the left</li><li>2. The user adds a subject and a message and clicks on "Send"</li></ol>
<b>Specific Requirements</b>	
<b>Notes</b>	This Basic Flow chosen because it seems to be the common way to send messages compared to the Alternative Flow

## 21. Read Message

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to read the messages other users sent me.
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the "Messages" page and lands directly in the inbox to read and access received messages</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	

## 22. Rate User

<b>Actor</b>	Registered User
<b>Description</b>	As a registered user I want to rate users I met as a decision guidance
<b>Trigger</b>	
<b>Precondition</b>	<ol style="list-style-type: none"><li>1. The user has access to the internet</li><li>2. The user has an account on the website</li><li>3. The user is logged in</li><li>4. The user had presentations</li></ol>
<b>Basic Flow</b>	<ol style="list-style-type: none"><li>1. The user moves to the "Schedule" page</li><li>2. The user clicks on the "See List" button in the Visitors column Below "Your Presentations"</li><li>3. The user can rate users in the Rating column</li></ol>
<b>Alternative Flow</b>	
<b>Specific Requirements</b>	
<b>Notes</b>	





## 2.5. Actor characteristics



### **3. Specific requirements**

#### 3.1. Functional Requirements

#### 3.2. Non-Functional Requirements

#### 3.3. Performance

#### 3.4. Safety

#### 3.5. Reliability

#### 3.6. Availability

#### 3.7. Security

#### 3.8. Usability

#### 3.9. Logical Structure of the Data