

# SRS - Group 2 - ESE 2014

*Software requirements specification document*

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## [1 Revision History](#)

## [2 Introduction](#)

### [2.1 Stakeholders](#)

### [2.2 Purpose](#)

### [2.3 Definitions](#)

### [2.4 System overview](#)

### [2.5 References](#)

## [3 Use Cases](#)

### [3.1 Overview Diagram](#)

### [3.2 General Preconditions](#)

### [3.3 Actor characteristics](#)

### [3.4 Advertiser use cases](#)

#### [3.4.1 Place an ad](#)

#### [3.4.2 Manage Ads](#)

#### [3.4.3 Edit ad](#)

#### [3.4.4 Delete ad](#)

#### [3.4.5 Manage applicants](#)

#### [3.4.6 Compare applicants](#)

#### [3.4.7 Find appointments](#)

### [3.5 Searcher use cases](#)

#### [3.5.1 Search for a room/roommate](#)

#### [3.5.2 Ask question to an ad](#)

#### [3.5.3 Bookmark ads](#)

[3.5.4 Manage bookmarks](#)

[3.5.5 Asking for an appointment](#)

[3.5.6 Specify possible timeslots for appointment](#)

[3.6 Other use cases](#)

[3.6.1 Register on the website](#)

[3.6.2 login on the website](#)

[3.6.3 Recover forgotten login credentials](#)

[4 Specific requirements](#)

[4.1 Functional requirements](#)

[4.2 Non-functional requirements](#)

[4.2.1 Performance](#)

[4.2.2 Safety](#)

[4.2.3 Reliability](#)

[4.2.4 Software Quality Attributes](#)

[4.2.5 Availability](#)

[4.2.6 Security](#)

[4.2.7 Usability](#)

[5 Logical Structure of the Data](#)

## 1 Revision History

## 2 Introduction

### 2.1 Stakeholders

The stakeholders of this project are as follows:

- For team two especially: Andrea Caracciolo
- ESE- 2014 Staff

## 2.2 Purpose

The purpose of this project is to create a website, where users can search for rooms and roommates, which improves the capabilities of existing websites of this type.

## 2.3 Definitions

**User:** Someone who uses the website for its intended purpose (and not as part of the development process).

**Registered User:** Extended case of a User; has already registered on the website and is logged in. He is able to do all the things a user can, but has access to services only available to registered users.

**Advertiser:** A registered user who wants, is in the process or has placed ads on the website.

**Searcher:** A user who wants, is in the process or has searched for ads on the website.

**Ad:** The specific site on the website where an advertiser can publish information about a room (which is for rent) or a person (who searches for a room).

## 2.4 System overview

This software system is bound to be a website, which helps users find a suitable apartment or a suitable member to join their housing commune. The system should be able to assist the users to find their optimal match, by offering them various options to filter their searches. Furthermore the website should offer the registered users a way to communicate and make appointments with each other.

## 2.5 References

The project should mainly iterate and improve upon existing software systems with similar purpose. Therefore it is necessary to get an overview of existing systems, to be able to fully understand the purpose of this project.

Other housing commune sites:

- [www.wgzimmer.ch](http://www.wgzimmer.ch)
- [www.students.ch/wohnen/](http://www.students.ch/wohnen/)
- [www.tutti.ch/ganze-schweiz/immobilien/wg-zimmer](http://www.tutti.ch/ganze-schweiz/immobilien/wg-zimmer)

Similar real estate websites:

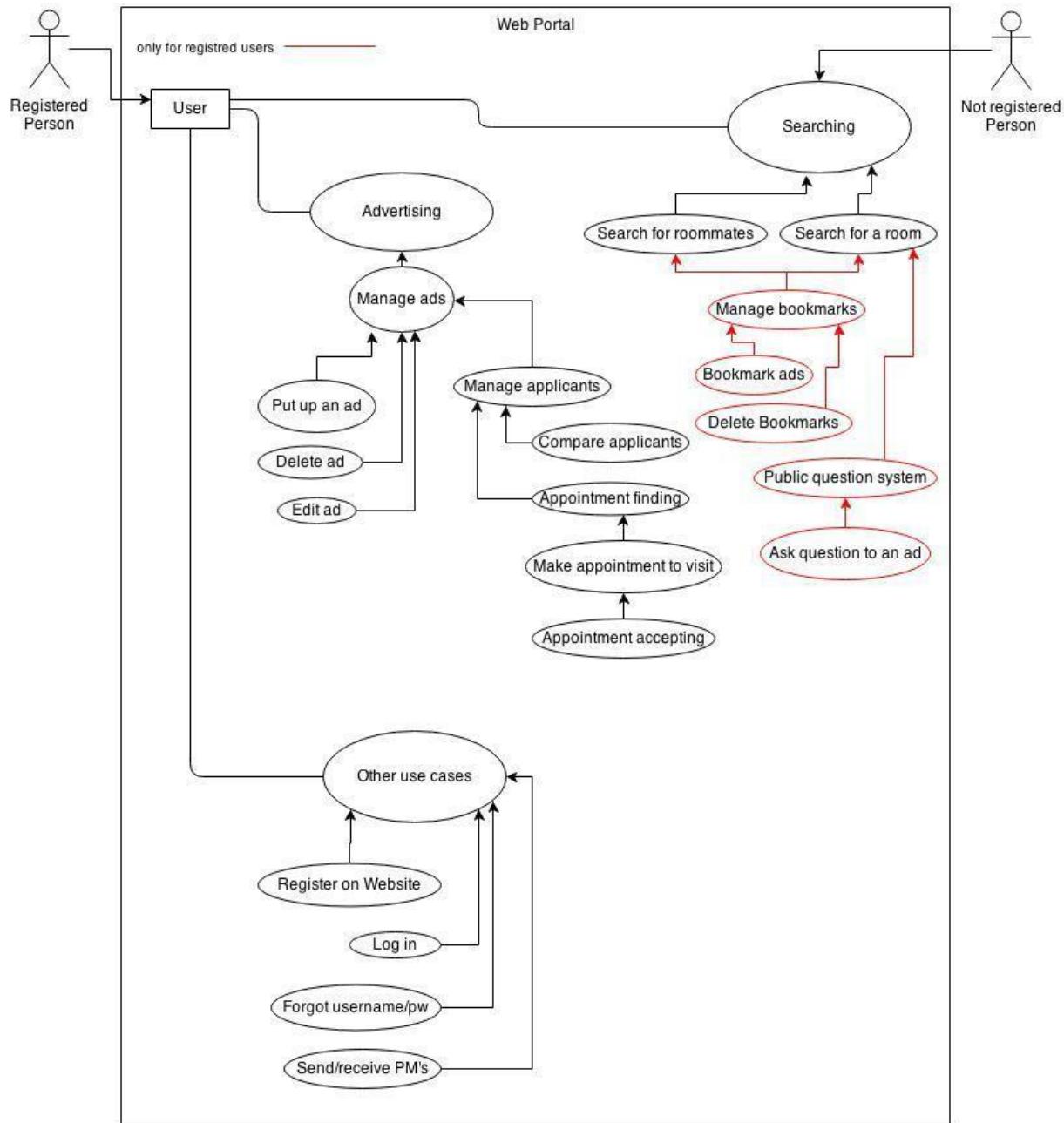
- [www.immoscout24.ch](http://www.immoscout24.ch)
- [www.homegate.ch](http://www.homegate.ch)

Furthermore the project description of the ese-2014 staff:

- <https://github.com/ese-unibe-ch/ese2014-wiki/wiki/Task-FirstApp>

## 3 Use Cases

### 3.1 Overview Diagram



### 3.2 General Preconditions

- Any user has access to the internet, and the capabilities (hardware, software, mental) to use the website.

### 3.3 Actor characteristics

Any actor is expected to be Internet literate, be able to register on a website and is capable of managing his e- mails.

The website administrators are expected to be Internet literate, be able to manage a user database, be capable of reading emails with attachments and use an internet search-engine, like Google.

### 3.4 Advertiser use cases

#### 3.4.1 Place an ad

##### Actors

Registered user

##### Description

User wants to place an ad.

##### Trigger

User reaches the "place new ad page" (eg. by clicking on a button)

##### Preconditions

None

##### Postconditions

- A new add is added to the system and can be searched for.
- The user is able to edit/ delete the ad.

##### Main Scenario

1. The user fills out the form with valid information about the room.
  - Basic information (Size, Price, Location)
  - Pictures
  - Written information about Room/Flat, Inhabitants
  - Binary information (e.g. checkboxes)
2. The user submits the ad.
3. The system saves the ad.
4. The user receives a confirmation.

##### Alternative Scenarios

- The user is not providing valid information:
  - a. The system informs user about the fact that information is missing.
  - b. The user is prompted to correct the form.
  - c. [See main scenario 1. ff.]

### Special Requirements

None

### Notes

None

## 3.4.2 Manage Ads

### Actors

Registered user

### Description

User wants to manage his ads.

### Trigger

User reaches the “my ads” page.

### Preconditions

### Postconditions

- User has a overview of his ads.
- User can select Manage-Options(eg. edit/delete/manage applicants) for each ad.

### Main Scenario

1. System prompts the user with an overview (list) over all his ads.
2. Below each ad the system gives the user Manage-Options for the ad.

### Alternative Scenarios

- The user has no ads:
  - a. The system informs the user that he has no ads.

### Special Requirements

None

### Notes

None

## 3.4.3 Edit ad

### Actors

Registered user

### Description

User wants to edit one of his ads.



Trigger

Select the "edit ad" option for one of his ads.

Preconditions

- The user has already put up an ad on the website.
- The user has completed the manage ads use-case.

Postconditions

- The edited ad is saved and updated in the system (changes are visible for Searcher).

Main Scenario

1. The system redirects the user to the edit page for the ad.
2. The user adjusts the ad the way he wants and submits it.
3. The system saves the ad.
4. The user receives a confirmation.

Alternative Scenarios

- Cancel the editing of the ad:
  - a. The user doesn't want to save the changes he made. So he selects the abort-option

Special Requirements

None

Notes

The "edit ad" page will probably be similar to the "place ad" page

### 3.4.4 Delete ad

Actors

Registered user

Description

User wants to delete one of his ads.

Trigger

Select the "delete ad" option.

Preconditions

- The user has already put up an ad on the website.
- The user has completed the manage ads use-case.

Postconditions

- The ad is deleted and not shown anymore (can not be searched for anymore).

Main Scenario

1. System asks the user if he really wants to delete the ad.
2. The user confirms that he really wants to delete the ad.
3. The system will delete the ad.
4. User receives a confirmation.

Alternative Scenarios

None

Special Requirements

None

Notes

None

### 3.4.5 Manage applicants

Actors

Registered user

Description

User wants to manage all the applicants for one of his ads.

Trigger

Select the "manage applicants" option.

Preconditions

- The user has already put up an ad on the website.
- The user has completed the manage ads use-case.

Postconditions

- User has an overview of the applicants and was able (if he wants) to compile a list of favorites.

Main Scenario

1. The system prompts the user with a list of all his applicants.
2. The user can, read the messages (associated with each applicant), delete applicants and add them to his favorites.

Alternative Scenarios

- There are no applicants for this ad:
  - a. The system informs the user about this fact.
- View favourites:
  - a. chose to view favourites.
- Compare applicants:

- a. chose to compare applicants.
- Find appointment:
  - a. chose to find appointments.

### Special Requirements

None

### Notes

There will probably be options (e.g. buttons) on the "manage applicants" page where the user can select to view his favourites or compare applicants.

## **3.4.6 Compare applicants**

### Actors

Registered user

### Description

User wants to compare different applicants.

### Trigger

Select the "compare applicants" option.

### Preconditions

- The user has completed the manage ads use-case and selected the "manage applicants" option.

### Postconditions

- The user has compiled a list containing one or more applicants.

### Main Scenario

1. User selects the applicants he wants to compare.
2. System shows the user a table containing the selected applicants.
3. User can compare the applicants.
  - Add notes
  - Add criterias
  - Sort by criterias

### Alternative Scenarios

None

### Special Requirements

None

### Notes

The "compare applicants" page will probably work like some sort of table-calculation-tool (excel) with very limited capabilities.

### **3.4.7 Find appointments**

#### Actors

Registered user

#### Description

User wants to find a suitable appointment with a number of applicants.

#### Trigger

User chooses the "find appointment" option.

#### Preconditions

- The user has completed the manage ads use-case and selected the "manage applicants" option.

#### Postconditions

- The user has assigned a number of applicants a timeslot to come and view the flat/room.
- The applicants were asked when they have time to view the flat/room.
- The applicants get informed about the timeslot they received.

#### Main Scenario

1. System shows the user a list of his applicants.
2. User selects the applicants he wants to notify.
3. User specifies inquiry:
  - Time frame (all possible timeslots).
  - Single/group visits (size of group)
  - Length of a timeslot.
  - Maximum time given to respond.
4. User chooses to send out the inquiries
5. System sends out the inquiries to all the applicants.
6. After all the applicants answered or the time specified by the user the system presents the user with the results.
7. User assigns the applicants to the timeslots.
8. User chooses to send out the invitations.
9. The system informs the applicants about their timeslots.

#### Alternative Scenarios

None.

Special Requirements

None

Notes

To which extend the system assists the user in assigning the applicants to the timeslots is still open for debate.

There may be alternative scenarios we have not considered yet.

### 3.5 Searcher use cases

#### 3.5.1 Search for a room/roommate

Actors

User

Description

User wants to be able to search for a room/roommate using filters to narrow down the search.

Trigger

User reaches the "search for room/roommate" page.

Preconditions

None

Postconditions

- User gets presented with a list of ads.

Main Scenario

1. The user can check, and fill out various filters, for example (rooms):
  - price range
  - location
  - room size
2. The user selects the "apply filters" option.
3. The user is presented by a list of ads, where he can select to see the detailed description.

Alternative Scenarios

- No ads that match the users given filter:
  - a. The results page will be empty and state, that there were no matching ads.

Special Requirements

None

Notes

The filters are subject to change.

### 3.5.2 Ask question to an ad

Actors

Registered user

Description

User wants to be able to ask questions concerning an ad.

Trigger

User chooses the "ask question to ad" option.

Preconditions

- The user is on the "ad" page of the ad he wants to ask a question about.

Postconditions

- The user sent out a question inquiry
- If the question is answered he will be able to see the answer.

Main Scenario

1. The user is prompted to formulate his question.
2. The user choses to send the question.
3. The system notifies the ad owner of the ad that there is a new question.
4. The user will receive the answer from the owner of the ad in his inbox.

Alternative Scenarios

- The ad owner doesn't answer the question:
  - a. The use case stops at point three of the main scenario.

Special Requirements

None

Notes

None

### 3.5.3 Bookmark ads

Actors

Registered user

Description

A User wants to bookmark ads in order to easily find them again.

Trigger

User chooses the "bookmark ad" option.

Preconditions

- The user is on the ad page of the ad he wants to bookmark.

Postconditions

- System added the ad to his bookmarks.

Main Scenario

1. The System adds the ad to the user bookmarks.
2. The user gets a confirmation.

Alternative Scenarios

- The ad is already bookmarked:
  - a. When the user selects the "ad bookmark" option, the system removes the bookmark instead.

Special Requirements

None

Notes

None

### 3.5.4 Manage bookmarks

Actors

Registered user

Description

User wants to get an overview over his bookmarks and manage them.

Trigger

User reaches the "my bookmarks" page.

Preconditions

None

Postconditions

- User gets an overview (list) of his bookmarks.
- User was able to choose to delete a bookmark or go to the bookmarked "ad" page.

### Main Scenario

1. The system presents the user with a list of all his bookmarks.

### Alternative Scenarios

- The user has no bookmarks:
  - a. The system informs the user about this fact.
- The user wants to delete a bookmark:
  - a. User chooses the "delete bookmark" option for a certain bookmark.
  - b. The system removes the bookmark.
  - c. User gets confirmation.
- User wants to see the "ad" page of a bookmarked ad:
  - a. User chooses the "go to ad page" option.
  - b. The system redirects the user to the ad page.

### Special Requirements

None

### Notes

The "delete bookmark" and "go to ad page" options can be presented to the user in several ways. Maybe as an "trash" and "forward" icon next to each bookmark.

## **3.5.5 Asking for an appointment**

### Actors

Registered user

### Description

User is interested and wants to ask the advertiser for an appointment to come and see the flat/room.

### Trigger

User chooses the "find appointment" option.

### Preconditions

- The user is on the "ad" page of the ad he wants to ask about an appointment.

### Postconditions

- The advertiser receives a message stating, that the user wishes to see the room.

### Main Scenario

1. The system prompts the user to write down his motivation for wanting to see the room.
2. User fills out the form.
3. User submits the form.



4. System sends the message.
5. User receives confirmation.

#### Alternative Scenarios

None

#### Special Requirements

None

#### Notes

None

### 3.5.6 Specify possible timeslots for appointment

#### Actors

Registered user

#### Description

In order to find an appointment the user should be able to tell the advertiser when he has time to see the flat/room.

#### Trigger

User receives an invoice from the advertiser.

#### Preconditions

- User has completed the "ask for an appointment" use case.
- Advertiser has chosen this user in the "Find appointments" use case and sent out the invoices.

#### Postconditions

- The advertiser gets informed about the possible timeslots for this user.

#### Main Scenario

1. System informs the user, that he has an invoice.
2. User navigates to the invoice and opens it.
3. User selects those timeslots from the possible timeslots where he has time to visit the flat/room.
4. User submits the form.
5. System saves his answers.
6. User gets confirmation.

#### Alternative Scenarios

- None of the timeslots are possible (user has no time):
  - a. User selects the "no time" option.
  - b. User submits the form.

- c. System saves his answers.
  - d. User gets confirmation.
- User is not interested in the flat/room anymore:
  - a. User selects the "not interested" option.
  - b. User submits the form.
  - c. System saves his answers.
  - d. User gets confirmation.

### Special Requirements

None

### Notes

None

## **3.6 Other use cases**

### **3.6.1 Register on the website**

#### Actors

User

#### Description

User wants to register on the website.

#### Trigger

User reaches the "register" page on the website.

#### Preconditions

- The user owns a valid e-mail account.

#### Postconditions

- The user is now registered on the website.
- The user is able to login into the website.
- The user receives a confirmation.

#### Main Scenario

1. The system prompts the user to put in registration information such as:
  - E-Mail address
  - Password
2. The user submits the form.
3. The system saves the information (registers the user).
4. User gets confirmation.

#### Alternative Scenarios

- The user is not providing valid information:

- a. System informs the user about the missing/invalid information.
- b. User returns to point one of the mail scenario.

#### Special Requirements

None

#### Notes

None

### 3.6.2 login on the website

#### Actors

Registered user (not already logged in)

#### Description

User wants to log into the website in order to get access to the service only available to registered users.

#### Trigger

User reaches the "login" page.

#### Preconditions

- The user remembers his login credentials.

#### Postconditions

- The user is logged in to the website.
- User has access to the service only available to registered users.

#### Main Scenario

1. System prompts the user to enter his login credentials.
2. User submits the form.
3. System changes the users status to logged in.
4. User receives a confirmation.

#### Alternative Scenarios

- The user is not entering a valid login credentials:
  - a. System informs the user, that the login credentials are not valid.
  - b. User is prompted to start again point one of the main scenario.
- The user has forgotten his login credentials:
  - a. User chooses the "password forgotten" option.
  - b. System redirects the user to the "recover password" use case.

#### Special Requirements

None

## Notes

None

### 3.6.3 Recover forgotten login credentials

#### Actors

Registered user

#### Description

User has forgotten some of his login credentials and wants to recover them.

#### Trigger

User reaches the “recover login credentials” page on the website.

#### Preconditions

- User remembers his e-mail address.

#### Postconditions

- User was able to recover/reset the lost login credentials.

#### Main Scenario

1. System prompts the user to enter his e-mail address.
2. User submits the form.
3. User receives an e-mail with further instructions.
4. User follows these instructions.
5. User receives confirmation.

#### Alternative Scenarios

- The user forgot his e-mail:
  - a. User will not be able to recover his other login credentials.

#### Special Requirements

None

## Notes

None

## 4 Specific requirements

### 4.1 Functional requirements

The Users of the Application should be able to:

- create an Account and log into their account
  - recover their account/pw.
  - An account is required for all actions except searching the ads.

- Creating an account is easy and fast
- create ads for Rooms and Persons
  - can ask questions concerning the ad
  - apply attributes to the add (some of which can be searched for)
- search the adds using filters
  - bookmark ads
  - manage/view their bookmarks
- communicate with other users
  - manage their sent and received messages
  - make appointments with other users

## 4.2 Non-functional requirements

### 4.2.1 Performance

The application will run on a Server. The software will require the user of Apache Server to connect the Program to a MySQL database.

### 4.2.2 Safety

Information transmission should be securely transmitted to server without any changes in information.

### 4.2.3 Reliability

To be specified. DO not lose data.

### 4.2.4 Software Quality Attributes

To be specified.

### 4.2.5 Availability

24/7 98%

### 4.2.6 Security

The main security concern is for users account hence proper login mechanism should be used to avoid hacking. The tablet id registration is way to spam check for increasing the security. Hence, security is provided from unwanted use of recognition software.

### 4.2.7 Usability

- The system will be intuitive and easy to use.
- The language of the system will be English.

## 5 Logical Structure of the Data

In revision...