**Project Requirements**

Project Name: Flatfindr

Team: Team1

Customer: Andrea Caracciolo

Revision History

| Version | Date | Revision Description |
| --- | --- | --- |
| 0.01 | 7.10.2014 | First version after one client talk. |
| 0.02 | 14.10.2014 | Greatly redesigned use case scenarios. Now covers many more use cases. |
| 0.03 | 21.10.2014 | Updated diagram, introduction, specific requirements, and refined use cases according to the suggestions of the customer. |
| 0.04 | 28.10.2014 | Modified diagram, updated everything according to the state of development and the client talks. |
| 0.05 | 4.11.2014 | Updated SRS according to customer meeting and customer comments on the SRS itself. |
| 0.06 | 11.11.2014 | Added missing use cases and modified some others according to the state of development. |
| 0.07 | 18.11.2014 | Updated filter result use case. |
| 0.08 | 25.11.2014 | Minor changes in the message system. |
| 0.09 | 2.12.2014 | Adapted the visit enquiry and alert use cases. |
| 1.00 | 8.12.2014 | Reviewed the whole SRS and polished the document to v1.00 |

# Introduction

## Purpose

This project has the purpose of connecting people who are searching for a room in a shared apartment with people who want to rent out such a room. It aims to combine the advantages of classical apartment search platforms with those of platforms tailored to students.

Users can advertise a room and search for such a room.

Through extensive searching capabilities the user should be able to find fitting rooms quickly, while still making a fast search easily possible. With the help of messaging the users will be able to communicate and stay connected.

## Stakeholders

The stakeholders of this project are:

• The users, consisting of advertisers and searchers

• The customer. In our case our customer is Andrea Caracciolo

## Definitions

Terms defined for the scope of this project:

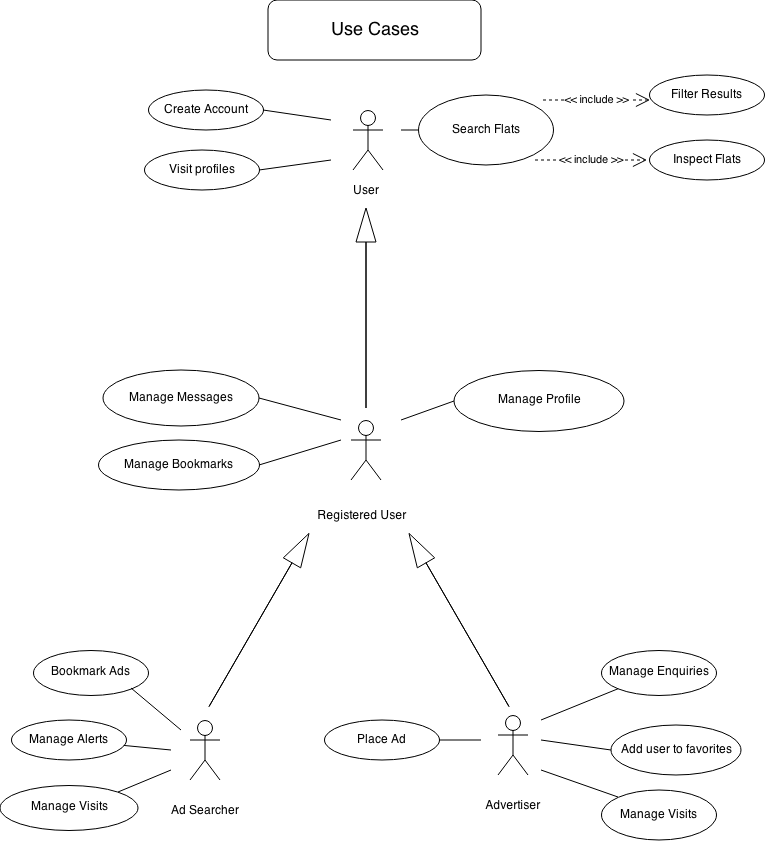
• The advertiser is the user who puts a room or an apartment on the platform.

• The searcher is the user who looks for a room or an apartment on the platform

# Overall description

## Use cases

### Diagram



### Use Cases

**Prolegomena**

Any user needs to be able to perform searches for flats, meaning that the fact whether they're logged in or not makes no difference. After creating an account, logged in users need to be able to manage their advertisements, calendar, alerts, messages, to advertise, edit their profile, change settings and to logout again.

Use cases:

**0. Account**

0a. Create Account

0b. Edit public profile

0c. Change Password

0d. Logout

**1. Searching and advertising**

1a. Search Flats

1b. Filter Results

1c. Inspect Flat

1d. Visit other user’s profile

1e. Place Ad

**2. Contacting users**

2a. Contact an advertiser

2b. Send new Message

**3. Alerts**

3a. Subscribe to Alerts

3b. Delete Alert

**4. Bookmarks**

4a. Bookmark Ads

4b. Add user to favorites

4c. Delete Bookmarks

**5. Visits**

5a. Send enquiry to advertiser

5b. Create new visit time slot

5c. Alter Visit

**0 Account**

**0a. Create Account**

0a.1 Actors

Users

0a.2 Description

Users - advertisers and searchers both - want to use the opportunities of our platform and create an account.

0a.3 Trigger

Visitor enters site and clicks on “create account”

0a.4 Pre-conditions

1. No account with the same e-mail or email address exists.

2. User has a valid email address.

0a.5 Post-conditions

1. New account has been created in the System.

0a.6 Main Scenario

1. User enters desired e-mail, real name, email address.

2. System checks validity of entered data.

3. The user enters all the other relevant information (general information about the person)

4. User gets redirected to start page, now logged in.

0a.7 Alternative Scenarios

0a’. E-mail already exists

1. User is prompted to enter another e-mail. Continue with step 3.

0a’’. Email address faulty or already taken

1. User is prompted to enter another email address, or to reset his/her password. Continue with step 3.

0a.8 Special Requirements

0a.9 Notes

Which characters are allowed in e-mails?

Which character types are required in passwords?

**0b. Edit public profile**

0b.1 Actors

User

0b.2 Description

The user wants to fill in missing information or change the information entered before in his private profile

0b.3 Trigger

User enters the private profile screen.

0b.4 Pre-conditions

The user is logged in.

The entered data is compliant with the input rules.

0b.5 Post-conditions

He will have updated his profile with the newly entered data.

0b.6 Main Scenario

1. Within the private profile screen the user enters or changes the information regarding his profile.

2. The user will save the altered information.

3. A confirmation will be shown to the user, that the information has been saved correctly.

0b.7 Alternative Scenarios

User enters wrong input in fields that are checking the input for correctness. The user will be given feedback, that the input is wrong and that it needs to be re-entered. Submitting the form with wrong input will not be possible

0b.8 Special Requirements

Checks for specific fields

0b.9 Notes

Checks for specific fields will need to be discussed.

**0c. Change Password**

0c.1 Actors

User

0c.2 Description

The user wants to change her password

0c.3 Trigger

User enters her personal settings screen where she has the option to change her password

0c.4 Pre-conditions

The user needs to be logged in as current user.

She needs to know her current password.

0c.5 Post-conditions

She will have changed her current password to a new one. It is immediately effective.

0c.6 Main Scenario

1. The user enters the screen where she can change her password.

2. She enters her current password

3. She enters her new password

4. Re-entering the new password is needed.

5. Screen appears with the feedback, that the password has been changed successfully.

0c.7 Alternative Scenarios

The user has forgotten her current password or typed it wrong.

0c.8 Special Requirements

The password must be changed immediately.

0c.9 Notes

If the password has been forgotten shall the user get the changed to reset it via email?

Is the user allowed to enter wrong passwords an infinite amount of times or will the account be blocked after 5 tries?

**0d. Logout**

0d.1 Actors

User

0d.2 Description

The user wants to log out of the current session.

0d.3 Trigger

User hits the logout icon/button.

0d.4 Pre-conditions

The user needs to be logged in as current user.

0d.5 Post-conditions

He will have terminated the current session.

0d.6 Main Scenario

1. After hitting the logout icon/button, the user will be shown a new page with the confirmation that he was logged out correctly.

0d.7 Alternative Scenarios

None

0d.8 Special Requirements

None

0d.9 Notes

It need to be defined where and how to get the Logout buttons / icons placed.

**1. Searching and Advertising**

**1a. Search Flats**

1a.1 Actors

Users

1.2 Description

Users enter some criteria of their choosing and are presented with all the flats in the System satisfying all criteria.

1a.3 Trigger

User clicks on “Search” in the top bar.

1a.4 Pre-conditions

1. User is on the website. Does not necessarily have to be logged in.

1a.5 Post-conditions

1. User now sees a (possibly empty) list of flats.
2. User is shown a list of parameters by which s/he can further filter the results. (see use case 1b).

1a.6 Main Scenario

1. User clicks “Search”
2. User enters basic criteria. Basic criteria are: type of rental (room or studio, or both), location, radius around the location, and a maximum price.
3. System returns matching entries in a list.

1a.7 Alternative Scenarios

1a’ User enters incomplete data. (All fields are mandatory)

1. System shows errors corresponding to the fields not filled out.

1a.8 Special Requirements

Displaying a list of 30 or less flats with thumbnails and text must not take more than 5 seconds.

1a.9 Notes

**1b. Filter Results**

1b.1 Actors

Searchers

1b.2 Description

A user has performed a search via the limited parameters of the raw search function (type of rental, location and radius and max. price). Typically, such a search yields a lot of results. The searcher now wants to narrow the results down.

1b.3 Trigger

1. User enters some parameters into the “Filter results” interface, e. g. square meters, date of availability, furnished/non-furnished etc.
2. User clicks “Filter”

1b.4 Pre-conditions

1. User has performed a basic flat search before.

1b.5 Post-conditions

1. User is in a very similar environment than before. She is still looking at a list of flats matching some criteria.
2. The list is not longer than the one which has been filtered.

1b.6 Main Scenario

1. User finds herself on the “Results” page of a search.
2. User enters desired specifications, e.g. if it’s a smoker flat, square meters, etc.
3. User clicks “Filter”.

1b.7 Alternative Scenarios

1b’ Database error

1. System returns error message and redirects user to the page she was on before, i.e. the results page of the first search.

1b.8 Special requirements

For the alternative scenario, the previous search must be stored somewhere, in order to be able to return to it quickly.

1b.9 Notes

**1c. Inspect Flat**

1c.1 Actors

Ad searcher

1c.2 Description

An ad searcher has found a flat with a compelling enough title and basic information and wants to find out more about it.

1c.3 Trigger

Ad searcher clicks on an ad in a non-empty search list.

1c.4 Pre-conditions

Ad searcher has either performed a flat search before or has clicked on a link directing her directly to the flat in question.

1c.5 Post-conditions

The ad searcher is now looking at the ad page of one individual flat.

1c.6 Main Scenario

1. Ad searcher clicks on a flat in a flat search results list
2. System shows user the page of the individual flat/room.
3. All information about the property is shown, including date of creation (of the ad), visiting times, and a link to the ad placer.

1c.7 Alternative Scenarios

1c’. Database error

1. Retrieving information from System is not possible.
2. System shows user an error message and directs her back to the “Search” page.

1c.8 Special Requirements

The flat page including all pictures must load in no more than 3 seconds.

1c.9 Notes

**1d. Visit other User’s Profile**

1d.1 Actors

Users (both searchers and placers)

1d.2 Description

A searcher wants to know more about her future roommate(s). And an advertiser wants to know more about people applying for visits in the flat. So they have a look at the other one’s profile.

1d.3 Trigger

1. Searcher is inspecting a flat (see use case 1c) and clicks on the placer’s e-mail under “Placer”
2. Any user is in the message inbox and clicks on the e-mail on one of the messages in the inbox.

1d.4 Pre-conditions

1. Either the user is viewing at the detail view of one flat/studio, or
2. User is in message in- or outbox.

1d.5 Post-conditions

1. User is now on someone’s public profile site. User picture, name, and “about me” text are shown.

1d.6 Main Scenario

1. User is on detail view of flat/studio or in message in-/outbox.
2. User clicks on the e-mail of some other user.

1d.7 Alternative Scenarios

1d’ Database error

1. System shows error message, returns to the detail view of the flat or to the message inbox.

1d’’. Nothing to display

1. This can’t happen, because in order to write messages or advertise flats, you need to be registered.

1d.8 Special Requirements

1c.9

It is yet unclear how to secure that kind of storage space.

**1e. Place Ad**

1e.1 Actors

Advertisers

1e.2 Description

A user wants to place an ad for advertising a room in a shared apartment.

1e.3 Trigger

A registered user clicks on "Place an ad"

1e.4 Pre-conditions

1. User needs to be logged in, visitors can't place ads

1e.5 Post-conditions

1. New ad has been created in the System.
2. Alerts must be updated.

1e.6 Main Scenario

1. User clicks on "Place an ad"
2. User fills out the form consisting of duration (starting point and an optional end point), price per month, Region (necessary for the short description for search-results), room description, pictures, preferences (e.g. a girl apartment looking for girls only), square footage, roommates (gender, age or even user profile), animals, smokers etc.
3. User clicks on "Submit"
4. System checks validity of entered data
5. User is shown a confirmation that his ad has been placed and he is redirected to the ad description page where he sees his newly placed ad.

1e.7 Alternative Scenarios

4e. Mandatory fields were left blank / filled with invalid input.

1. User is prompted with red font to enter valid input.

Continue with step 2.

1e.8 Special Requirements

1e.9 Notes

**2. Contact other Users**

**2a. Contact an advertiser**

2a.1 Actors

Users (searchers)

2a.2 Description

A user has found a flat and wants to contact the advertiser.

2a.3 Trigger

1. Searcher clicks on “contact advertiser” in a displayed ad.

2a.4 Pre-conditions

1. User is currently looking at an active ad.

2a.5 Post-conditions

1. A copy of the sent message text is saved in the receiver’s “inbox” folder.

2a.6 Main Scenario

1. User clicks on an ad for a flat.

2. User clicks on “contact advertiser”.

3. User enters a subject line and a text message.

4. User clicks “send”.

5. System validates input (non-empty message, non-empty subject line).

6. System saves the message and displays it for the receiver as soon as he checks his inbox.

2a.7 Alternative Scenarios

3a: User doesn’t enter any text in message or subject field.

1. System prompts user to enter text in message or subject field. Continue with step 4.

3a/4a’: User clicks on cancel.

1. The user is redirected back to the ad description page.

2a.8 Special Requirements

Cannot contain images or files. Every message and every reply must be connected to exactly two users.

2a.9 Notes

Divided original message use case in two new ones.

**2b. Send new Message**

2b.1 Actors

Users

2b.2 Description

A user wants to send a message to another user.

2b.3 Trigger

1. The user is in the message system and clicks on "New".

2b.4 Pre-conditions

2b.5 Post-conditions

1. A copy of the sent message text is saved in the receiver’s “inbox” folder.
2. This message must have state "unread".

2b.6 Main Scenario

1. User hovers over his account and clicks on "Messages" in the drop down.

1. User clicks on "New".

3. User fills in the receiver’s e-mail, the subject-line and the Message text.

4. User clicks on "Send".

5. System validates all three fields.

6. System saves the message and displays it for the receiver as soon as he checks his inbox.

2b.7 Alternative Scenarios

3a: User enters an e-mail which doesn't belong to a registered user.

1. System prompts user to enter the e-mail of another user.

2b.8 Special Requirements

Cannot contain images or files. Every message and every reply must be connected to exactly two users.

2b.9 Notes

**3 Alerts**

**3a. Subscribe to Alerts**

3a.1 Actors

Searchers

3a.2 Description

Users searching for a flat don’t want to visit the site every day to see if there’s a new ad fitting their criteria. They might want to save those criteria and be notified automatically when a new ad matching them is entered.

3a.3 Trigger

1. A logged in searcher clicks on “Account”, then “Alerts”, then fills out the information and subscribes.

3a.4 Pre-conditions

1. User is logged in.

2. User has entered a valid email address beforehand.

3a.5 Post-conditions

1. System shows a confirmation that the searcher is now subscribed to an alert.

1. User is now subscribed to an alert.

3a.6 Main Scenario

1. User clicks on “Account”, then “Alerts”.
2. A box with some parameters is waiting to be filled out.
3. As soon as the user has filled out all desired criteria, she clicks “Create”.

3a.7 Alternative Scenarios

3a’. User enters invalid data in mask

1. See error handling in use case 1a (“searching for flats”)

3a.8 Special Requirements

Performance: Whenever a new flat is entered into the database, all alert patterns must be checked and, if the criteria therein are met, emails must be sent out.

3a.9 Notes

It may be a performance issue if we have 1000s of subcribers listening to every single new entry. May be we generate a list according to the specs and send it daily to the user?

**3b. Delete Alert**

3b.1 Actors

Searchers

3b.2 Description

A searcher has either found a flat or changed his criteria (or other reason). Thus, he no longer wants to subscribe to an alert and deletes it.

3b.3 Trigger

1. A logged in user with at least one subscribed alert clicks on “Account”, then “Alerts” and clicks “Delete” next to one alert.

3b.4 Pre-conditions

1. User is logged in.
2. User has previously subscribed to at least one alert.
3. User does not want to receive alerts anymore.

3b.5 Post-conditions

1. User is now unsubscribed from alert.
2. The data about the alert (criteria, user) are not saved anywhere.

3b.6 Main Scenario

1. Logged in user clicks on “Account”, then “Alerts”
2. User chooses one of the alerts and clicks “Delete” right next to it.
3. System looks up the alert list and deletes the corresponding entry.
4. System notifies user that she is now unsubscribed from that particular alert.

3b.7 Alternative Scenarios

3b' System error.

1. System warns user that System connection was faulty and that she is still subscribed to the alert.
2. Return to “Alerts” view.

3b.8 Special Requirements

(See above). With a large user database, performance issues will be very important.

3b.9 Notes

**4. Bookmarks**

**4a. Bookmark Ads**

4a.1 Actors

Ad searcher

4a.2 Description

User wants to bookmark interesting ads

4a.3 Trigger

In the detailed description of an ad, user clicks on "safe for later"

4a.4 Pre-conditions

1. User is logged in
2. The flat search has yielded at least one result

4a.5 Post-conditions

1. The advertisement has been correctly added to the ad searchers' bookmarks

4a.6 Main Scenario

1. Ad searcher visits detailed description page of an advertisement (typically via a list of a search result)
2. Ad searcher clicks on "safe for later"
3. System ads ad for this user to the System
4. (In case we display the ads somewhere in the current site: System updates the rendering of the ads)

4a.7 Alternative Scenarios

3a. Ad has been deleted meanwhile

1. System shows error message
2. System redirects the user to last window before Main Scenario

4a.8 Special Requirements

1. Limit ads?

4a.9 Notes

1. 4a.3: Should there also be a "bookmark ad" button in the list of a search-result next to the corresponding ad?
2. Precondition 1: If user is not logged in, we would have to save these information about the bookmarks in his browser, correct? (probably complicated)

**4b. Add user to favorites**

4b.1 Actors

Users (advertisers)

4b.2 Description

The advertiser wants to compile a list of his most promising candidates.

4b.3 Trigger

User clicks on "Add user to favorites".

This can be done in the internal message system, at the page of his current advertisements or at the profile page of the prospected user.

4b.4 Pre-conditions

a1. User is logged in

a4/b1. User has at least one advertisement

4b.5 Post-conditions

The list must be properly extended by the added candidate

4b.6 Main Scenario

a1. User visits internal message system or profile page of prospected user.

a2. User clicks on "Add user to favorites"

a3. User selects one of his current advertisements

a4. User clicks on "add candidate"

a5. System adds the candidate to the appropriate table in the System

b1. User visits one of his advertisements and browses to the list of favorite candidates

b2. User clicks on "add candidate"

b3. User chooses one of his contacts

b4. User clicks on "add candidate"

b5. System adds the candidate to the appropriate table in the System

4b.7 Alternative Scenarios

a3: User has no advertisements.

1. Button "add candidate" isn't clickable, only the "cancel" button is.

a5/b5: User has been deleted meanwhile

1. System shows error message

2. User clicks "back"

3. Flow continues a1/b1

b3: User has neither added contacts nor at least one conversation.

1. Button "add candidate" isn't clickable, only the "cancel" button is.

4b.8 Special Requirements

Nonfunctional requirements:

1. The list is limited to 20 candidates.

4b.9 Notes

**4c. Delete Bookmarks**

4c.1 Actors

User

4c.2 Description

The user wants to delete one or several bookmarked ads.

4c.3 Trigger

In the overview of all bookmarked ads, the user calls the function to delete a/several bookmark/s.

4c.4 Pre-conditions

The user is logged in as valid user.

The user has bookmarked ads in his System.

4c.5 Post-conditions

She will get her bookmarks reduced/updated in her System

4c.6 Main Scenario

1. The user selects one or more bookmarked ads.

2. She calls the function to delete the bookmark/s.

3. The view with all the bookmarks will be updated immediately giving her the correct feedback.

4c.7 Alternative Scenarios

User does not select any bookmarked ads and tries to delete.

4c.8 Special Requirements

None

4c.9 Notes

Possible solution to alternative scenario could be greyed out button or an error message popping up informing the user.

Maybe a warning should be considered.

**5. Visits for Searchers**

**5a. Create new Visit (for Searcher)**

5a.1 Actors

Searcher

5a.2 Description

An ad searcher has found a flat she likes and would like to visit it.

5a.3 Trigger

Searcher clicks on “Send enquiry to advertiser” on the detailed flat view page

5a.4 Pre-conditions

1.Searcher is looking at a detailed flat view page.

2. Both users must not have another visit scheduled at the same date and time.

5a.5 Post-conditions

1. Both users now have a visit scheduled in their respective calendars at the same date and time.

5a.6 Main Scenario

1. Searcher clicks on “Send enquiry to advertiser” on the detail view page of a flat.
2. System checks both users’ schedules, validates date.
3. System sends an enquiry to advertiser concerning the visit.
4. Advertiser accepts the suggested visit specs by a single click.
5. System adds a visit into both users’ respective schedules.

5a.7 Alternative Scenarios

4a’. Advertiser denies the enquiry

1. System doesn't create a visit for the two users.

5a.8 Special Requirements

1. A graphical calendar is not needed, since users typically won’t have to manage a great deal of visits. We will implement a maximum of 20 visits scheduled at any one time for one user, that should easily suffice.

5a.9 Notes

**5b. Create new visit time slot**

5b.1 Actors

Advertiser

5b.2 Description

An advertiser wants to add visiting time slots for his advertisement.

5b.3 Trigger

In the create advertisement form, the advertiser creates a valid timeslot and adds this by clicking on the small plus button.

5b.4 Pre-conditions

The time slot must be valid, that means the ending time must be bigger than the starting time due to logic reasons.

5b.5 Post-conditions

1. The time slot must be added to the advertisement.

5b.6 Main Scenario

1. Advertiser adds a new time slot when creating a new ad.
2. Advertiser clicks on "Submit" to place the ad.

5b.7 Alternative Scenarios

5b.8 Special Requirements

5b.9 Notes

**5c. Alter Visit**

5c.1 Actors

Users

5c.2 Description

Due to some complication, a searcher cannot make it to a visit previously agreed upon (see use case 5a/b). The visit will take place some other time.

5c.3 Trigger

User clicks on “Account”, then “Calendar”, selects a visit and clicks “Alter”.

5c.4 Pre-conditions

1. User is logged in.
2. User has at least one visit scheduled in the calendar.

5c.5 Post-conditions

1. Exactly one of the visits has altered date and time specifications.

2. This is the case in both the searcher’s and in the placer’s calendar.

5c.6 Main Scenario

1. User clicks on “Account”, then “Calendar”.
2. User selects one of the visits he has scheduled and clicks “Edit”.
3. System prompts user to enter a new date, time and duration.
4. User enters new date, time and duration.
5. System checks the other user’s availability at that point (see use case 5a/b).
6. Other user is available. System sends him a confirmation window with the new date and time.
7. Other user agrees to new date and time (with a single click).
8. System alters the visit in both the placer’s as also the searcher’s calendar to the newly specified date, time, and duration.

5c.7 Alternative Scenarios

5c’. Database error

1. System issues a warning stating that the alteration of the visit was not possible.
2. User is redirected to the “Calendar” page.

5c’’. Other user is not available.

1. System sends first user a message stating that the other user won’t be available.
2. User is redirected to the “Calendar” page.

5c.8 Special Requirements

Loading times for the calendar must be reasonably quick (less than 2 seconds for 100 or less calendar events).

5c.9 Notes

## Actor characteristics

The typical users of this platform can be divided into two groups:

* Searchers: searchers will probably be mostly students or young adults doing apprenticeships. They cannot spend too much money on an apartment and therefore look for a room in a shared apartment. Most of them will be rather young and thus quite proficient in using the internet. Because of that, an online platform for searching for these rooms is a good fit for this target audience.
* Advertisers: the advertisers can again be split up into two groups:
  + Users looking for a roommate: these users are similar to those from the first group, with the exception that they already have a room or an apartment and are looking for one or several roommates to complete the group
  + Apartment owners: these users are owners of (small) apartments which they want to rent to someone. They will not live in the apartments themselves

1. Specific requirements
   1. Functional requirements

Overview of the functions that should be implemented throughout the course of this project (see the use cases for more detail):

• Search available flats/rooms: the user should be able to search through the available advertisements

• Messaging: send private messages to other users to allow communication with them

• Manage on-site visits: both searchers and advertisers need to manage on-site-visits

• Bookmarking: searchers have the possibility of bookmarking interesting advertisements for later

• Alerts: users should be able to subscribe to alerts which result in notifications

• Placing an ad: advertisers can place an ad on the platform

• Enquiries: searchers should be able to send enquiries to the advertiser, while the advertisers can manage these enquiries

• Candidate list: advertisers can keep a list of the promising candidates for an advertisement

* 1. Non-functional requirements

• A user new to the platform should be able to start using it within 5 minutes

• If a searcher tries to find an apartment, the initial search should be very easy. There should not be a lot of properties that are mandatory to be entered. Only then can the user, if desired, filter the apartments further.