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| Universität Bern |
| SRS – Group 2 – ESE 2014 |
| Software requirements specification document |

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# I. Revision History

Revision History

| **Version** | **Date** | **Revision Description** |
| --- | --- | --- |
| .01 |  |  |
| .02 |  |  |
| .. |  |  |
| 1.0 |  |  |
|  |  |  |
|  |  |  |

# 1. Introduction

## 1.2 Stakeholders

The stakeholders of this project are as follows:

* For team two especially: Andrea Caracciolo
* Ese- 2014 Staff

## 1.1. Purpose

The purpose of this document is to present a detailed description of the Web Publishing System. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be proposed to the Regional Historical Society for its approval.

## 1.3 Definitions

To come

## 1.4 System overview

This software system will be a webpage which helps users find their desired apartment and/or set up an ad to find a suitable member to join their housing commune.   
The system will be designed to assist the ad placer’s to find their optimal housing mate match, by offering them various options to filter Users.   
On the other hand the system will offer various filter options for Users who are looking for an apartment, so that they are offered a good overview over places which might be suitable for them.

The system will be built around flexibility, to fit every user’s needs. Therefore it will be possible to put up/ edit/ watch ads, without having to have an account on the website. However it will be possible to register accounts, which adds a lot of functionality to make the managing of different ads/ applicants even easier.

## 1.5 References

The project should mainly improve existing Software systems with the same purpose. Therefore it is necessary to get an overview of other 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.wgzimmer.ch/)
* [www.homegate.ch](http://www.students.ch/wohnen/)

Furthermore the project description of the ese-2014 staff:

* [https://github.com/ese-unibe-ch/ese2014-wiki/wiki/Task-FirstApp](http://www.students.ch/wohnen/)

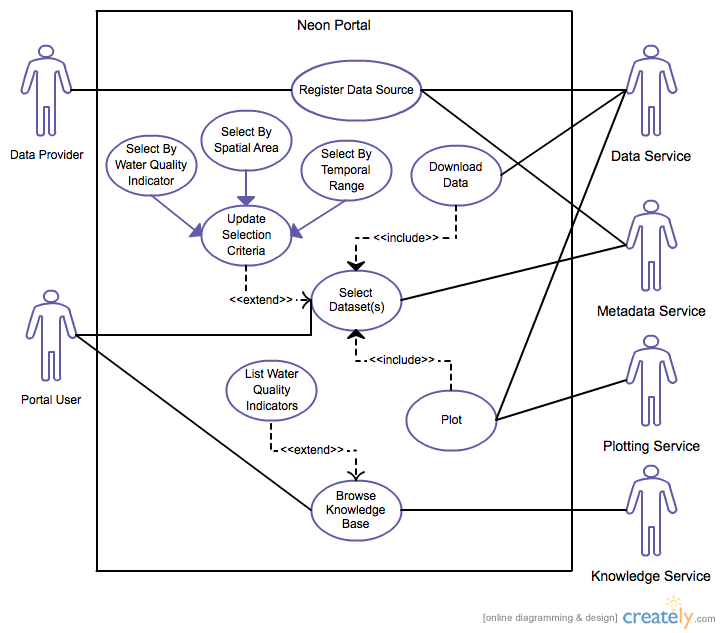
# 2. Overall description

## 2.1 Use Cases

### 2.1.1 Overview Diagram

We recommend using the following authoring tool: www.draw.io

***EXAMPLE***



### 2.1.2 the use cases

#### 0. Register on the website

##### **0.1 Actors**

User

##### **0.2 Description**

As a user I want to be able to register on the website and get my personal account, with my own login.

##### **0.3 Trigger**

Click on the “register” button on the website, and filling out the required form.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user owns a valid e-mail account.   
 2. The user is willing to give his correct name and first name.   
 3. The user provides a username and a password.

##### **0.5 Post-conditions**

1. The user receives the confirmation of the registration in an e-mail.  
 2. The user is able to login into the website, using the given username and password.

##### **0.6 Main Scenario**

1. The user clicks on the “register” button on the website  
 2. The user fills out the form with valid credentials  
 3. The user clicks “submit” to submit the information and register his account

##### **0.7 Alternative Scenarios**

A) the user is not providing valid information  
 1. Print out error: “ information not valid”.   
 2. Fill out form again with valid information.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

Link facebook account?   
 The user is responsible for keeping his username, and password.

#### 1. login on the website as a registered user

##### **0.1 Actors**

Registered user

##### **0.2 Description**

As a user I want to be able to log in to my personal account.

##### **0.3 Trigger**

Click on the “login” button on the website.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
 1. The user still owns his login credentials.

##### **0.5 Post-conditions**

1. The user is logged in to the website and has access to his personal profile

##### **0.6 Main Scenario**

1. The user enters his password and username on the website.   
2. System prompts the user to the login successful page.

##### **0.7 Alternative Scenarios**

A) the user is not entering a valid username and/ or password  
 1. Print out error: “ password/ username not valid”.   
 2. Ask if he wants to reset password.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

None

#### 2. put up an ad without registering

##### **0.1 Actors**

User

##### **0.2 Description**

As a user I want to be able to quickly put up an ad without having to go through the process of registering an account.

##### **0.3 Trigger**

Click on the “put up ad” button on the website, and filling out the required form.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user owns a valid e-mail account.   
 2. The user is willing to give his correct name and first name, and flat address. For contact purposes.  
 3. The user is willing to share information about the apartment in question.

##### **0.5 Post-conditions**

1. The user receives the confirmation of the ad in an email, and with it a link to edit the ad.  
 2. The ad placer gets notified if someone is interested in the ad.

##### **0.6 Main Scenario**

1. The user clicks on the “put up ad” button on the website  
 2. The user fills out the form with valid credentials  
 3. The user clicks “submit” to submit the ad.

##### **0.7 Alternative Scenarios**

A) The user is not providing valid information  
 1. Print out error: “information not valid”.   
 2. Fill out form again with valid information.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

The user is responsible for keeping the edit link and the password to edit the ad.

#### 3. edit ad as non-registered user

##### **0.1 Actors**

User

##### **0.2 Description**

As a User I want to be able to edit the ad, I put on the website without registering an account.

##### **0.3 Trigger**

open the link, which was in the ad confirmation e-mail.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user registered an ad successfully, without owning an account.   
 2. The user still owns the link, and the password given to him.

##### **0.5 Post-conditions**

1. The user recieves a confirmation e-mail, that the ad was edited.

##### **0.6 Main Scenario**

1. The user opens the given link, and enters the given edit password.  
2. The user gets prompted to his ad.  
 3. The user edits the desired fields in his ad.  
 4. The user clicks “submit” and the ad will get saved.  
5. A confirmation e-mail will be sent to the user.

##### **0.7 Alternative Scenarios**

A) The user forgot his password/ lost his link to the ad.  
 1. See “16. forgot password/ link as non-registered user” Use-case.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

None

#### 4. delete ad as a non-registered user

##### **0.1 Actors**

User

##### **0.2 Description**

As a user I want to be able to delete the ad I put up on the website.

##### **0.3 Trigger**

Open the link, which was in the ad confirmation e-mail.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user registered an ad successfully, without owning an account.   
 2. The user still owns the link, and the password given to him.

##### **0.5 Post-conditions**

1. The user receives a confirmation e-mail, that the ad was deleted.

##### **0.6 Main Scenario**

1. The user opens the given link, and enters the given edit password.  
2. System prompts user to his ad page.  
 3. The user clicks “delete ad.  
4. System display a pop up, which asks the user if he really wants to delete the ad.  
5. User clicks on yes, I really want to delete the ad.  
6. System prompts user to confirmation page.  
7. A confirmation e-mail will be sent to the user.

##### **0.7 Alternative Scenarios**

A) The user forgot his password/ lost his link to the ad.  
 1. See “16. forgot password/ link as non-registered user” Use-case.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

None

#### 5. Put up an ad as a registered user

##### **0.1 Actors**

Registered user

##### **0.2 Description**

As a user I want to be able to log into my account, and put up an ad.

##### **0.3 Trigger**

Login to the personal user account, and click on “ads” tab, and then click on the “create new ad” button.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user owns an account on the website.   
 2. The user still owns his login credentials.

##### **0.5 Post-conditions**

1. The user now has a new add under his “ads” tab in his personal account.  
2. The user is able to edit/ delete the ad at any time.

##### **0.6 Main Scenario**

1. The user logs into his account, with his login credentials. (See use case: “1. login on the website as a registered user”).  
2. The user clicks on “ads” tab.   
 3. System prompts user to the “my ads” page  
4. The user clicks on “create new ad”  
5. System prompts user to the “create ad” page.  
 6. The user fills out the form with valid information about the room/flat.   
7. The user clicks on “submit” button.  
8. System prompts user to “success” page.  
9. The ad will be added to his “ads” tab, in his personal account.   
10. A confirmation e-mail will be sent to the user.

##### **0.7 Alternative Scenarios**

A) The user is not providing valid information  
 1. Print out error: “information not valid”.   
 2. Fill out form again with valid information.

B) The user can’t log in to his account anymore

1. User clicks on forgot username/ password (See use case 17. Forgot username/password as a registered user)

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 6. edit ad as a registered user

##### **0.1 Actors**

Registered user

##### **0.2 Description**

As a user I want to be able to log into my account, and edit my ads.

##### **0.3 Trigger**

Login to the personal user account, and click on “edit ad” in the “ads” tab.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user owns an account on the website.   
 2. The user still owns his login credentials.   
3. The user has already put up an ad.

##### **0.5 Post-conditions**

1. The user now has the edited ad under his “ads” tab.

##### **0.6 Main Scenario**

1. The user logs into his account, with his login credentials.  
2. The user clicks on “my account”  
3. System prompts the user to the “my account” tab.  
 4. The user clicks on “ads”  
5. System prompts the user to the “ads” tab.  
6. The user clicks on “edit ad”, beside the desired ad.  
7. System prompts the user to the corresponding ad page.  
 8. The user changes the information he wants to edit.   
9. The user clicks on submit.  
10. System prompts the user to the “submitted” page.  
11. The ad will be updated in his “ads” tab, in his personal account.   
12. A confirmation e-mail will be sent to the user.

##### **0.7 Alternative Scenarios**

A) The user can’t log in to his account anymore  
 1. The user forgot his username/ password.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 7. Delete ad as a registered user

##### **0.1 Actors**

Registered user

##### **0.2 Description**

As a user I want to be able to delete my ad whenever I want.

##### **0.3 Trigger**

Login to the personal user account, and click on “delete ad” in the “ads” tab.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user owns an account on the website.   
 2. The user still owns his login credentials.   
3. The user has already put up an ad.

##### **0.5 Post-conditions**

1. The ad gets deleted.

##### **0.6 Main Scenario**

1. The user logs into his account, with his login credentials.  
2. The user clicks on “my account”  
3. System prompts the user to the “my account” tab.  
 4. The user clicks on “ads”  
5. System prompts the user to the “ads” tab.  
6. The user clicks on “delete ad”, beside the desired ad.  
7. System asks the user if he really wants to delete the ad..  
 8. User clicks “yes I do”. Button.   
9. System prompts user to the “successfully deleted” page.  
10. Ad will be deleted from the “ads” page.  
11. User receives a confirmation e-mail.

##### **0.7 Alternative Scenarios**

A) The user can’t log in to his account anymore  
 1. The user forgot his username/ password.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

None

#### 8. Filter ads when searching for a room

##### **0.1 Actors**

User

##### **0.2 Description**

As a user I want to be able to search for a room using predefined filters.

##### **0.3 Trigger**

Click on the “search for a room”button.

##### **0.4 Pre-conditions**

0. The user has access to the internet.

##### **0.5 Post-conditions**

1. User gets presented with the filtered ads.

##### **0.6 Main Scenario**

1. The user clicks on “search for a room” on the website.  
2. System prompts the user to the “room ads” site.  
3. The user can check, and fill out various filters, like price range, location, how many people he wants to have, the type of people(e.g. calm, party etc.), the gender of the people, age of the people, room size.  
 4. The user clicks on “filter now”  
5. System prompts the user to the “results” page.  
6. The user gets presented with all ads, that match his filter criteria.

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

What filters in detail?

#### 9. Filter ads when searching for roommates

##### **0.1 Actors**

User

##### **0.2 Description**

As a user I want to be able to search for a roommate using desired filters.

##### **0.3 Trigger**

Click on “search for roommates” button.

##### **0.4 Pre-conditions**

0. The user has access to the internet.

##### **0.5 Post-conditions**

1. User gets presented with the filtered flatmates.

##### **0.6 Main Scenario**

1. The user clicks on “search for a roommate” button on the website.  
2. System prompts the user to the “looking for roommate” site.  
3. The user can check, and fill out various filters, like budget the contestants are willing to pay, the type of people(e.g. calm, party etc.), the gender of the people, age of the people, the minimum time someone wants to live in the room.   
 4. The user clicks on “filter”  
5. System prompts the user to the “results” page.  
6. The user gets presented with all ads, that match his filter criteria.

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

What are the exact filter criterias?

#### 10. Send PM to an user( as a registered user)

##### **0.1 Actors**

Registered user

##### **0.2 Description**

As a user I might have questions about a room/ person. The question is not answered by the public question system ( See use-case 11.)

##### **0.3 Trigger**

Click on the “ask question” button.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user clicked on an ad.  
2. The user is logged in to the webpage

##### **0.5 Post-conditions**

1. The user was able to send a message to the owner of the ad.

##### **0.6 Main Scenario**

1. The user clicked on an ad/ or a user.  
2. The user clicks on “send PM” button  
3. System prompts the user to “send message” page.  
3. The user can freely write his question to the owner of the ad. The user can choose if he wants a copy of the message to his email or not.  
4. The user clicks on “send” button.  
5. System prompts the user to “message successfully sent” page.

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 11. Ask question to an ad (as a registered user)

##### **0.1 Actors**

User

##### **0.2 Description**

As a user I want to ask a specific question to an ad.

##### **0.3 Trigger**

Click on an ad.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user clicked on an ad.

##### **0.5 Post-conditions**

1. The user asked a question to the ad placer.

##### **0.6 Main Scenario**

1. The user clicks on “search for a room” and/or “search for a person” on the website.  
2. System prompts the user to the “room ads”/ “person ads” site.  
3. The user clicks the “ask question” button.  
4. System prompts the user to the question form.  
5. The user writes his question. And clicks on “submit question” button.  
6. System prompts the user to the “submitted question” page.  
7. The question will be displayed under the “already asked questions” tab.

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 12. Public question system

##### **0.1 Actors**

User

##### **0.2 Description**

As a user I might have questions about a room/ person. I want that questions that have already been asked, are displayed publicly.

##### **0.3 Trigger**

Click on an ad.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user clicked on an ad.

##### **0.5 Post-conditions**

The user can read the questions that have already been asked. If the owner of the ad wants it ( See Use case 11.)

##### **0.6 Main Scenario**

1. The user clicks on “search for a room” and/or “search for a person” on the website.  
2. System prompts the user to the “room ads”/ “person ads” site.  
3. The user scrolls down, and can read the question who have already been asked.

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 13. Bookmark/ favorite ads (registered users only)

##### **0.1 Actors**

Registered user

##### **0.2 Description**

As a registered user I want to be able to bookmark my favorite ads and review them later.

##### **0.3 Trigger**

Click on the “add to favs” button.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user clicked on an ad.  
2. The user is logged in to the webpage

##### **0.5 Post-conditions**

1. The user finds the ad under his “favorite” tab.

##### **0.6 Main Scenario**

1. The user logged in to his account  
2. The user found an ad that he likes  
3. The user clicks on the “add to favs” button in the add  
4. The system will prompt him to the “successfully added” page  
5. The user clicks on his “favorite” tab.  
6. The user now sees every ad, that he added to favorites.

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 14. Appointment finding ( for registered users)

##### **0.1 Actors**

Registered user who put an ad for a room

##### **0.2 Description**

As a user I want to be able to find a suitable appointment with all the applicants.

##### **0.3 Trigger**

Click on the “find suitable date” button.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user found suitable candidates for his room.   
2. The user is logged in to the webpage

##### **0.5 Post-conditions**

1. A message will be sent out to all the applicants, to choose the time, when they can visit the flat and take a look at the room.

##### **0.6 Main Scenario**

1. The user logs in to the website  
2. The user goes to his “ads” tab.  
3. System prompts the user to his “ads” website  
4. The user can click “find suitable date” beside the ad.  
5. System prompts the user to “find appointment “ site for the ad.  
6. The user can choose all the dates, when it is possible for him / or doodle  
7. User clicks on “send out dates” button.   
8. System prompts user to “successfully sent” page.  
9. All the applicants will receive a PM/ E-Mail with the possible dates and they can chose

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 15. Appointment accepting ( for registered users)

##### **0.1 Actors**

Registered user, who is interested in a room

##### **0.2 Description**

As a user I want to be informed, when the owner of a flat/room wants to make an appointment with everybody who is interested. And I want to be able to choose a date.

##### **0.3 Trigger**

Click on the link in pm / email.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user got invited to make an appointment by the owner of the ad.   
2. The user is logged in to the webpage

##### **0.5 Post-conditions**

1. The user will be listed with his available times, for the owner of the ad to see.

##### **0.6 Main Scenario**

1. The user logs in to the website  
2. Discuss how to do it.

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 16. Appointment accepting ( for registered users)

##### **0.1 Actors**

Registered user, who is interested in a room

##### **0.2 Description**

As a user I want to be informed, when the owner of a flat/room wants to make an appointment with everybody who is interested. And I want to be able to choose a date.

##### **0.3 Trigger**

Click on the link in pm / email.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user got invited to make an appointment by the owner of the ad.   
2. The user is logged in to the webpage

##### **0.5 Post-conditions**

1. The user will be listed with his available times, for the owner of the ad to see.

##### **0.6 Main Scenario**

1. The user logs in to the website  
2. Discuss how to do it.

##### **0.7 Alternative Scenarios**

None

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

How should the form look exactly?

#### 17. forgot password/ link as non-registered user

##### **0.1 Actors**

User

##### **0.2 Description**

As a user I want to be able to retrieve a new password to edit my ad, if I forgot it, and/or retrieve the link to the ad, if I forgot it.

##### **0.3 Trigger**

Click on the “forgot information about my ad” button on the website.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user registered an ad successfully, without owning an account.   
 2. User forgot his password/link to the ad.   
3. The User HAS TO HAVE his e-mail address.

##### **0.5 Post-conditions**

1. The user receives an e-mail with the link to his ad, and the password to edit it.

##### **0.6 Main Scenario**

1. The user clicks on the “forgot information about my ad” button.  
2. System prompts user to the information retrieval page.  
3. User enters his e-mail address.  
4. User clicks on the “get information” button.  
5. System prompts user to “success” page.  
6. User receives an email with the desired information.

##### **0.7 Alternative Scenarios**

A) The user forgot his e-mail  
 1. Not the problem of this website.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

None

#### 18. forgot username/password as a-registered user

##### **0.1 Actors**

Registered user

##### **0.2 Description**

As a user I want to be able to retrieve my password/ username to my account.

##### **0.3 Trigger**

Click on the “forgot username/password” button on the website.

##### **0.4 Pre-conditions**

0. The user has access to the internet.  
1. The user registered an account on the website.   
 2. User forgot his password/username   
3. The User HAS TO HAVE his e-mail address.

##### **0.5 Post-conditions**

1. The user receives an e-mail with the information to his account.

##### **0.6 Main Scenario**

1. The user clicks on the “forgot username/password” button.  
2. System prompts user to the password/username retrieval page.  
3. User enters his e-mail address.  
4. User clicks on the “get information” button.  
5. System prompts user to “success” page.  
6. User receives an email with the desired information.

##### **0.7 Alternative Scenarios**

A) The user forgot his e-mail  
 1. Not the problem of this website.

##### **0.8 Special Requirements**

None

##### **0.9 Notes**

None

## 2.2 Actor characteristics

The User 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. Specific requirements

## 3.1 Functional requirements

## 3.2 Non-functional requirements

### 3.2.1 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.   
The application has to run ASK CARACCCHIOLO.

### 3.2.2 Safety

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

### 3.2.3 Reliability

To be specified

### 3.2.4 Software Quality Attributes

### 3.2.5 Availability

TO be asked

### 3.2.6 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.

### 3.2.7 Usability

* The system will be intuitive und easy to use.
* The language of the system will be English.

### 3.2.8. Logical Structure of the Data

The data descriptions of each of these data entities is as follows:

#### 3.2.8.1 Ad Entity

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| ID | Int | ID | Key / not nullable |
| Header | Varchar |  |  |
| Price | Currency |  |  |
| Size |  |  |  |
| ZIP Code | Integer |  |  |
| City | Varchar |  |  |
| Roommates | Set |  |  |
| Timestamp | Timestamp |  |  |

#### 3.2.8.2 User Entity

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| UserId | Int |  |  |
| UserName | Varchar |  |  |
| Email Address | Varchar |  | Unique/not nullable |
| Hobbies | Varchar |  |  |
| Profession | Varchar |  |  |
| Photo | BLOB |  |  |
| Timestamp | Timestamp |  |  |
|  |  |  |  |