

# Requirements Analysis Document

*Application: HomeToGo*

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# 1. Introduction

## 1.1 Purpose of the system

Everyone needs somewhere to live or to stay during holidays, and some people have extra houses from which they could get some money. The aim of this system is to relate hosts and guests in order to make easier the process of finding a place to live or stay.

We need a cross-platform application that allow users both to rent out and to hire houses for holidays or for living.

## 1.2 Scope of the system

The system must be able to let users search using different information, put on sale their offers and buy and reserve those offers.

## 1.3 Objectives and success criteria of the project

In order to work successfully, the system must have three kinds of users with different functionalities:

- An administrator which approves or denies the offers, so that we can be sure that everything is in order.
- The general, non-registered users, who can just search for offers based on the ZIP code, on a range of type and on the offer type. However, this users are not able to buy or reserve any kind of offer, they can't even see comments or ratings on the offers.
- Registered users, who extends non-registered users and can be:
  - Hosts, who can create and sell offers.
  - Guests, who, in addition to search using search using rating, and search reserved and bought offers, can also buy, reserve and rate offers.

## 1.4 Definitions, Acronyms, and abbreviations

Offer - A house for rent with a set of characteristics that describes it and a price. There are holidays offers, with start and end date, and living offers, which have just start date and can be rented for multiple months.

Guest - A registered user who can just search, rate, buy or reserve offers, but cannot create them.

Host - A registered user who can create offers and rent houses.

## 2. System Description

### 2.1 Functional Requirements

There are three different kind of users, administrator, registered and non-registered, and these registered users can have two roles, host and guest (including both at the same time).

#### 2.1.1 User

FR1 . Search using ZIP Code, a range of time, and the offer type.

#### 2.1.2 Registered user

They can be guest, host or both.

FR2 . Login

##### 2.1.2.1 Guest

FR3 . Make an offer reservation.

FR4 . Buy an offer.

FR5 . Search using a minimum comment rating.

FR6 . Search reserved and bought offers.

FR7 . See the available offers.

FR8 . See offer comments and marks.

FR9 . Comment an offer.

FR10 . Rate an offer.

FR11 . See his reserved/bought offers.

##### 2.1.1.2 Host

FR12 . Make offers of a house.

FR13 . Cancel an offer.

FR14 . Modify an offer.

FR15 . See all his offers.

#### 2.1.3 Administrator

FR.16 . Unblock user (modify user credit card).

FR.17 . Approve offer.

FR.18 . Ask for changes on an offer.

FR.19 . Deny an offer.

FR.20 . See the non-approved offers.

## 2.2 Non-functional Requirements

### 2.2.1 Implementation

As the response time is not important in this case, we will use Java so that the application can work properly on multiple platforms such as Windows, Mac and Linux, and so we will save time and money.

### 2.2.2 Usability

The user will interact with the system using a Graphic Interface and a mouse, with no keyboard commands, so that the UX is easier and intuitive.

This Graphic Interface is explained later in section 4.

### 2.2.3 Privacy and Security

All the user information, specially the password and credit card, must be securely encrypted.

### 2.2.4 Reliability

The application should store all the errors in a log file so that we can fix them as fast and easy as possible, showing friendly and simple messages to the user.

### 2.2.5 Performance

The application should be able to display dozens of search results without a problem and with an smooth Graphic Interface so that the user has the best possible experience.

### 2.2.5 Testability

We use JUnit in order to properly test the application.

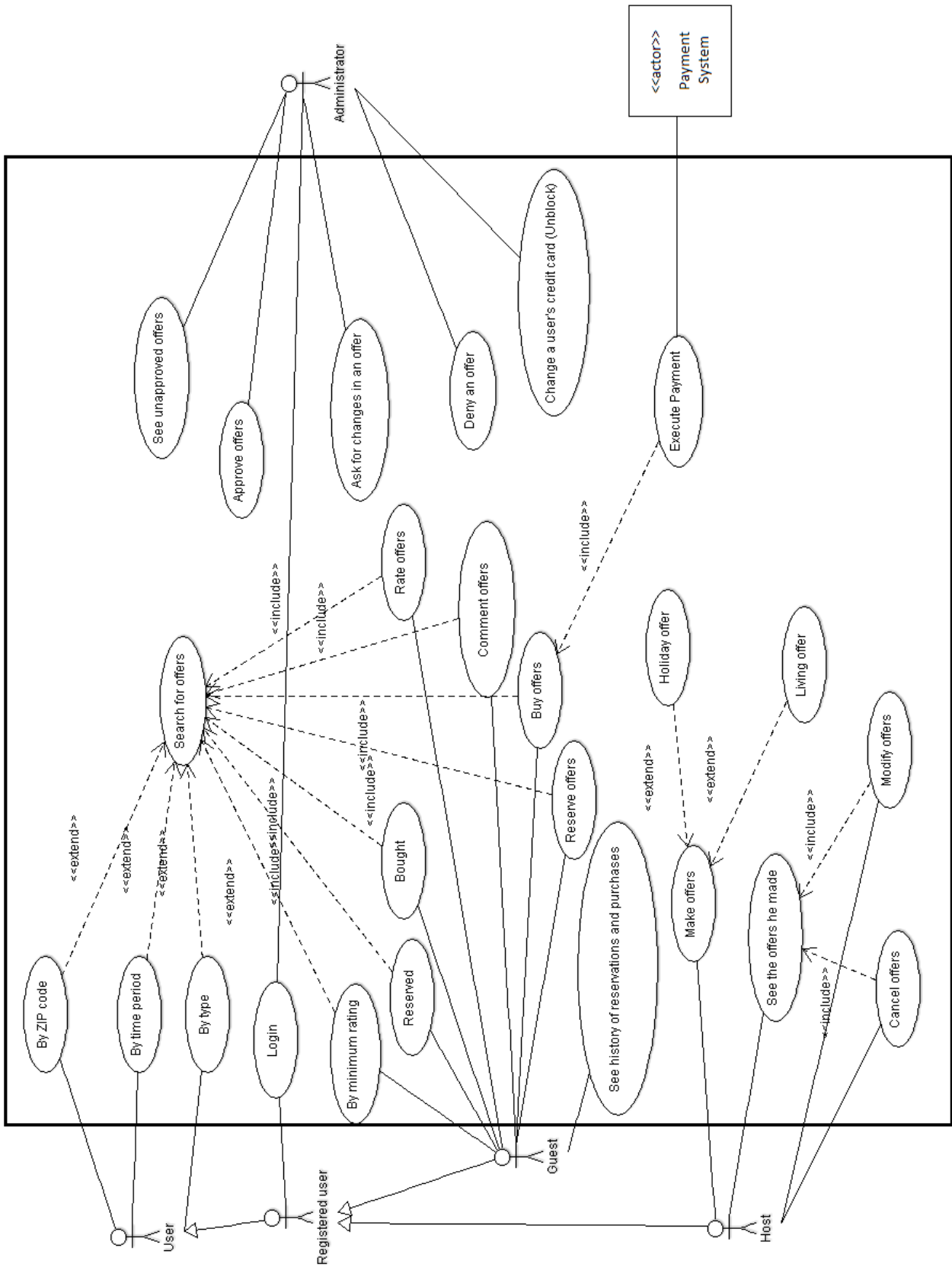
### 2.2.7 Documentation

All the code will be properly documented using *javadoc*, so that every programmer can easily understand it, and the application can be improved and updated with little effort.

## 3. Use Cases

### 3.1 Use Case diagram

All the use cases except searching by ZIP, by offer type and by time period (the actions that can be executed as a non-registered user) and the execute payment method (done by the Payment System), include login, as they require the host, guest or administrator to be logged in the application before being able to execute the action.



## 3.2 Use case descriptions

### 3.2.1 Use Case: Buy Offer

**Primary Actor:** Guest.

**Stakeholders and Goals:**

Guest: To purchase a specific offer that he has previously sought and maybe reserved.

Host: Wants his offer to be purchased.

**Preconditions:**

The user has logged in as a guest and has sought for the offer that he is to buy.

**Success guarantee (Post-conditions):**

The offer is modified in the system as “bought”, the needed data for the payment is sent to the payment system, the guest receives an invoice for its purchase in an e-mail with all the details and the host receives a notification that his offer has been purchased.

**Main Success Scenario:**

- 1.The guest user selects “Buy offer”.
- 2.The system checks that the offer is not already bought or reserved by another person.
- 3.The system checks whether the user data is correct or not.
- 4.The data is sent to the Payment System.
- 5.The invoice is sent via e-mail to the user as well as the details of the purchased offer.
- 6.The offer is modified by the system and is marked as “bought”.
- 7.The host receives a notification that his offer has been purchased.

**Extensions (Alternative paths):**

- 2a.The offer is already bought or reserved by another user.
  - 2a.1.The user gets the text “The offer is not available”.
  - 2a.2.The user returns to the search window.
- 3a.The user data is not correct.
  - 3a.1.The user gets the text “Your data is not correct. Please, contact with the administrator in order to fix it”.
- 4a.The Payment System does not connect correctly with our system.
  - 4a.1.The user gets the text “Sorry there was a connection problem, try again later”.
  - 4a.2.The user returns to the offer window.

**Special Requirements:** None

**Technology and Data Variations List:**

Option to share on social networks information about the offer.

**Frequency:**

Hundreds or thousands times a day, with multiple users at the same time.

**Open Issues:** None



## 3.2.2 Use Case: Create Offer

**Primary Actor:** Host

**Stakeholders and Goals:**

Host: To make an offer of a house of his property to gain some benefit.

Administrator: Wants to check the new offers to approve them, deny them or ask for some changes.

**Preconditions:**

The user has logged in as a host.

**Success guarantee (Post-conditions):**

The offer and all its data are stored in the system and the administrator receives a notification to check the new offer.

**Main Success Scenario:**

- 1.The host user selects “Create offer”.
- 2.The user introduces all the house specifications (location, size...).
- 3.The system checks whether the user data is correct or not.
- 4.The user selects if the offer is for holiday or for living and provides the offer specifications (starting date, duration, conditions...).
5. The user click “Create offer” button in order to finish the offer creation.
- 6.The offer is stored in the system as “Not yet approved”.
- 7.The host gets a notification that confirms that the offer has successfully been made.
- 8.The administrator receives a notification to check the new offer.

**Extensions (Alternative paths):**

- 3a.The user data is not correct.
  - 3a.1.The user gets the text “Your data is not correct. Please, contact with the administrator in order to fix it”.

**Special Requirements:** None

**Technology and Data Variations List:**

Option to pay in order to position your offer better on search results.

**Frequency:**

Hundreds times a day, with multiple users at the same time.

**Open Issues:** None

## 3.2.2 Use Case: Unblock user

**Primary Actor:** Administrator

**Stakeholders and Goals:**

Administrator: To unblock a given user so that he can use the application again.

User: Wants to be unblocked in order to be able to use the application again.

**Preconditions:**

The user has logged in as an administrator.

**Success guarantee (Post-conditions):**

The credit card number of the unblocked user is successfully changed, the user can enter the application and he gets a notification that he has been unblocked.

**Main Success Scenario:**

- 1.The administrator introduces the new user credit card number in the text box.
- 2.The administrator selects “Unblock user”.
- 3.The system checks that the new credit card number is correct.
- 4.The new credit card number is stored in the system.
- 5.The unblocked user is allowed to login into the application again.
- 6.The unblocked user gets a notification that he has been unblocked.

**Extensions (Alternative paths):**

- 3a.The introduced credit card is not correct.
  - 3a.1.The administrator gets the text “the number introduced is not correct.
  - 3a.2.The administrator returns to step 1.

**Special Requirements:**

The payment system must have a method that allow us to check the credit cards.

**Technology and Data Variations List:**

Option to share on social networks information about the offer.

**Frequency:**

Dozens times a day but just one by one.

**Open Issues:**

The administrator can't directly contact to the user to advise him.

## 4. Mockups

### 4.1 Main screen for non-registered users.

Here you can see the main screen with the three types of searches.

Once they login on the left panel, they go to 4.3 if they are guests, to 4.8 if they are hosts, or to 4.10 if the user is the administrator. Once they search, they go to 4.2.

User name

Password

Login

# LOGO

Search parameters

Buscar

Enter the ZIP Code

☒ ZIP Code ☐ Offer type ☐ Date

☐ Rating ☐ Reserved ☐ Booked

User name

Password

Login

# LOGO

Search parameters

Buscar

Living offers

☐ ZIP Code ☒ Offer type ☐ Date

☐ Rating ☐ Reserved ☐ Booked

# LOGO

Search parameters

Start date (dd/mm/yy)

End date (dd/mm/yy)

☐ ZIP Code

☐ Offer type

☒ Date

☐ Rating

☐ Reserved

☐ Booked

## 4.2 Search screen for non-registered users.

Once a non-registered user gets to this screen, they can't do anything but login.

If the user login, he is redirected to 4.4.

Note that the price or the information about the offer availability is not shown.

# LOGO

Search results

Offer one name : Living offer

Start date: 21/02/2018

4,2 ★★★★★ (10)

Characteristics

Size: 150m<sup>2</sup> Swimmingpool: small Number of rooms: 4 Number of bathrooms: 2

Offer two name : Holidays offer

Start date: 28/04/2018  
End date: 15/05/2018

4,1 ★★★★★ (515)

Characteristics

Size: 50m<sup>2</sup> Swimmingpool: not available Number of rooms: 2 Number of bathrooms: 1 Garden: 100m<sup>2</sup>

Offer three name : Holidays offer

Start date: 27/02/2018  
End date: 07/03/2018

3,5 ★★★★★ (20)

Characteristics

Size: 250m<sup>2</sup> Swimmingpool: olympic Number of rooms: 3 Number of bathrooms: 3 GYM: Available

### 4.3 Main screen for registered users.

Once the user login, he can use more types of searches as the ones shown here as a example.

Note that there is a history button on the left panel that redirects the guest to 4.5.



The image shows a web interface for registered users. On the left, there is a vertical panel with a placeholder for a profile picture (100 x 100) and a label 'Name'. At the bottom of this panel is a 'History' button. The main area features a large 'LOGO' at the top. Below it is a search section with a 'Search parameters' input field, a 'Buscar' button, and a sub-input field labeled 'Enter the minimum mark you want (0/5)'. Underneath are six radio buttons for search criteria: ZIP Code, Offer type, Date, Rating (selected), Reserved, and Booked.




This image shows the same web interface as above, but with a different search state. The 'Search parameters' input field now contains the text 'Search for previously reserved offers'. The 'Rating' radio button remains selected, but the 'Reserved' radio button is also selected, indicating a change in the search criteria.

#### 4.4 Search screen for registered users.

Once a registered user search something, he gets to this screen.

If he clicks in any of the offers, he is redirected to a screen like the one on 4.6.


Note that the price and the information about the offer availability is now shown.

 Name	<h1>LOGO</h1>
Search results	
<b>Offer one name : Living offer (Available)</b> 4,2 ★★★★★ (10)	
<b>Characteristics</b> Size: 150m <sup>2</sup> Swimmingpool: small   Number of rooms: 4   Number of bathrooms: 2	
<b>Start date:</b> 21/02/2018 <b>Deposit:</b> 120€ <b>Price per month:</b> 400€	
<b>Offer two name : Holidays offer (Available)</b> 4,1 ★★★★★ (515)	
<b>Characteristics</b> Size: 50m <sup>2</sup> Swimmingpool: not available   Number of rooms: 2   Number of bathrooms: 1   Garden: 100m <sup>2</sup>	
<b>Start date:</b> 28/04/2018 <b>End date:</b> 15/05/2018 <b>Deposit:</b> 80€ <b>Price:</b> 300€	
<b>Offer three name : Holidays offer (Not available)</b> 3,5 ★★★★★ (20)	
<b>Characteristics</b> Size: 250m <sup>2</sup> Swimmingpool: olympic   Number of rooms: 3   Number of bathrooms: 3   GYM: Available	
<b>Start date:</b> 27/02/2018 <b>End date:</b> 07/03/2018 <b>Deposit:</b> 150€ <b>Price:</b> 800€	
<a href="#">History</a>	

#### 4.5 Guest history.

Once the guest clicks the history button on the left panel, he gets here, where he can see all his bought and reserved offers.

Note that the guest has a button to pay the reservation.

 Name	<h1>LOGO</h1>
<b>Reserved / bought</b>	
<b>Offer two name : Holidays offer</b> 4,1 ★★★★★ (515)	
<b>Characteristics</b> Size: 50m <sup>2</sup> Swimmingpool: not available   Number of rooms: 2   Number of bathrooms: 1   Garden: 100m <sup>2</sup>	
<b>Start date:</b> 28/04/2018 <b>End date:</b> 15/05/2018 <b>Deposit:</b> 80€ <b>Price:</b> 300€	
<a href="#">Pay reservation</a>	
<b>Previous offers</b>	
<b>Offer one name : Living offer</b> 4,2 ★★★★★ (10)	
<b>Characteristics</b> Size: 150m <sup>2</sup> Swimmingpool: small   Number of rooms: 4   Number of bathrooms: 2	
<b>Start date:</b> 14/05/2017 <b>End date:</b> 21/02/2018 <b>Deposit:</b> 120€ <b>Price per month:</b> 400€	
<b>Offer three name : Holidays offer</b> 3,5 ★★★★★ (20)	
<b>Characteristics</b> Size: 250m <sup>2</sup> Swimmingpool: olympic   Number of rooms: 3   Number of bathrooms: 3   GYM: Available	
<b>Start date:</b> 27/02/2018 <b>End date:</b> 07/03/2018 <b>Deposit:</b> 150€ <b>Price:</b> 800€	
<a href="#">History</a>	

## 4.6 Offer preview

Here the guest can see all the information and comments on an offer. He can also rate the offer himself.

Once he clicks Comment/Rate button he goes to 4.7.

100 x 100

Name

History

LOGO

Offer one name : Living offer (Available)

4,2 ★★★★★ (10)

Characteristics  
Size: 150m² Swimmingpool: small Number of rooms: 4 Number of bathrooms: 2

Pay offer directly

Reserve offer

Start date: 21/02/201

Deposit: 120€

Price per month: 400€

Comments / Ratings

Comment / Rate

User125

Really good offer. I lived in this house for two years and it was perfect. It is really cheap for what it offers.

User332

4,2 ★★★★★ (10)

User332

4,2 ★★★★★ (10)

Very very recommended

## 4.7 Comment window

Here the guest can comment and rate an offer.

100 x 100

Name

History

LOGO

Offer one name : Living offer (Available)

4,2 ★★★★★ (10)

Characteristics  
Size: 150m² Swimmingpool: sm

Pay offer directly

Reserve offer

Start date: 21/02/20

Deposit: 120€

Price per month: 400€

Comments / Ratings

Comment / Rate

User125

Really good offer. I lived in this house fo

User332

4,2 ★★★★★ (10)

User332

4,2 ★★★★★ (10)

Very very recommended

Post your opinion about the offer

Rating

Enter a numeric value from 1 to 5

Comment


Cancel

Post

## 4.8 Host control panel

Here the host can see all his approved or not approved current and previous offers, and the changes he needs to do. By clicking on “Create offer” he goes to 4.9 and he can create new offers.

Note that the host can see why the administrator dismissed his offer, and as the offer is not approved yet, the host can still cancel it. Also, the left bar button now allows him to create a new offer.

  
Name

LOGO

**To be approved**

**Offer two name : Holidays offer**

**Characteristics**  
**To change:**  
Please, add some characteristics if you want your offer to be approved  
10/04/2018

Start date: 28/04/2018  
End date: 15/05/2018  
Deposit: 80€  
Price: 300€

Cancel offer

**Previous offers**

**Offer one name : Living offer (Sold)**

**Characteristics**  
Size: 150m<sup>2</sup>   Swimmingpool: small   Number of rooms: 4   Number of bathrooms: 2

Start date: 14/05/2017  
Deposit: 120€  
Price per month: 400€

**Offer three name : Holidays offer (Expired, not sold)**

**Characteristics**  
Size: 250m<sup>2</sup>   Swimmingpool: olympic   Number of rooms: 3   Number of bathrooms: 3   GYM: Available

Start date: 27/02/2018  
End date: 07/03/2018  
Deposit: 150€  
Price: 800€

**Offer four name : Holidays offer (Denied by the administrator)**


**Characteristics**  
**Reason:** Not enough characteristics

Start date: 27/02/2018  
End date: 07/03/2018  
Deposit: 150€  
Price: 800€

Create offer

## 4.9 Host offer creation

Here the host can create new offers.

  
Name

LOGO

**Create new offer**

General information:

Offer name

Holiday offer

Prices:

Start date (dd/mm/yy)

End date (dd/mm/yy)

Dates:

Deposit

Price

Characteristics:

Swimming pool: Yes

Bedrooms: 4

Characteristic

Value

Enter

Control panel

Create offer



## 4.10 Administrator control panel

Here the system administrator can approve, deny or ask for changes the different offers. He can also unblock banned users by changing his credit card number.

100 x 100

Name

Control panel

LOGO

To be approved

Offer two name : Holidays offer

Start date: 28/04/2018  
End date: 15/05/2018  
Deposit: 80€  
Price: 300€

Characteristics

Approve offer

Ask for changes

Deny offer

Offer one name : Living offer

Start date: 14/05/2017  
Deposit: 120€  
Price per month: 400€

Characteristics

Size: 150m<sup>2</sup>   Swimmingpool: small   Number of rooms: 4   Number of bathrooms: 2

Approve offer

Ask for changes

Deny offer

Banned users

User123    New credit card

User299    New credit card

User975    New credit card