**Authors and contributors**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Contact** | **Organization** | **Description** |
| Mouloud Diram | Up772885@myport.ac.uk | EduHome© | Author |
| Edward Bonsu | Up774490@myport.ac.uk | EduHome© | Author |
| Josh Bowen | Up760277@myport.ac.uk | EduHome© | Author |
| Matthew Hawkins | Up769535@myport.ac.uk | EduHome© | Author |
| Hong Hon Ping | Up752594@myport.ac.uk | EduHome© | Author |
| Guillaume Van de Sype | Up780088@myport.ac.uk | EduHome© | Author |

**Revision history**

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| **Version** | **Revision** | **Date** | **Description** | **Author** |
| 1 | 1 | 28/10/2016 | First version | Matthew Hawkins, Josh Bowen, Edward Bonsu, Hong Hon Ping |
| 1 | 2 | 29/10/2016 | Tasks assigned to group members | Guillaume Van de Sype |
| 1 | 3 | 07/11/2016 | Started on methods to elicit requirements | Matthew Hawkins |
| 1 | 4 | 16/11/2016 | Started interview questions | Josh Bowen |
| 1 | 5 | 16/11/2016 | Started user requirements definition | Matthew Hawkins |
| 1 | 6 | 17/11/2016 | System needs | Guillaume Van de Sype |
| 1 | 7 | 18/11/2016 | Added authors + contributors, multiple edits to methods, added dependencies | Mouloud Diram, Matthew Hawkins |
| 1 | 8 | 19/11/2016 | Finished collecting answers from interviews | Josh Bowen |
| 1 | 9 | 19/11/2016 | Added functional system requirements | Guillaume Van de Sype, Matthew Hawkins, Mouloud Diram, Josh Bowen |
| 1 | 10 | 20/11/2016 | Non functional requirements, other edits | Mouloud Diram, Guillaume Van de Sype, Matthew Hawkins, Edward Bonsu |
| 1 | 11 | 21/11/2016 | Non functional requirements formatted, other edits | Guillaume Van de Sype, Matthew Hawkins |

**1.0 Introduction**

The system is a web based search engine to allow users to find houses while renters and sellers will be able to upload information on vacancies.

**1.1 Purpose**

This system will be designed as an online platform with two purposes: landlords can advertise their vacant student homes to the students, and students will be able to browse through the local supply of houses. For landlords this is very useful to keep track of their advertised vacancies. Students will be able to easily search and compare many different types of student housing, ensuring they find the vacancy that suits them best.

**2.0 Methods**

We interviewed our users to get clear spoken feedback as well as being able to elaborate into more extensive questions. We used a variety of open and closed questions to get specific answers and vaguer answers that would allow us to see other issues that we may not have thought about. During the interviews, we had the users sit down and use housing websites that already exist. From this we were able to see just how the user goes about searching on these kind of sites, any issues they encountered as well as other useful information such as functions that made the user’s navigation through the site much smoother. This data has allowed us to create a clear set of User Requirements and from them System Requirements which are displayed below. Please refer to the questions used in the interview in section 5.0 Appendix.

**3.0 User Requirements Definition**

**3.1 User requirements**

**These are the requirements that the user will be expecting the system to do.**

There are many things the user will require when using the web application. The following is a list of the features users of the application will most need.

3.1.1 The users searching for houses do not need an account, however, the users that will be selling or renting houses will need an account.

3.1.2 Security is important for landlord's accounts but not for users as they do not need an account.

3.1.3 The users searching for houses need a variety of ways to contact the landlords including but not limited to; direct messaging, phone call, email.

3.1.4 The users searching for houses require a map that will allow them to view the location and the area of the properties.

3.1.5 The users will require the application to sort the properties by distance to the university.

3.1.6 The users searching for houses will require the web application to sort the student houses by price from low to high or high to low etc.

3.1.7 The users searching for houses need to be able to see the number of rooms and beds per property.

3.1.8 The users searching for houses will require a clear and detailed search page that allows them to search for a property using postcode or name of the area etc.

3.1.9 The users searching for houses will require a page that shows properties with reviews from other people that may have viewed or lived in the house previously.

3.1.10 Landlord's must be able to create a fully detailed page for advertising their vacancies which should include; price per month/week, water/gas/electricity arrangements, furniture and other objects in the house, images of each room, a brief description, a location on a map, the house address and the landlord’s contact details.

3.1.11 Landlord's must be able to create, edit and delete their user accounts.

3.1.12 Landlord's must be able to create, draft, publish, edit and delete house entries.

3.1.13 Landlord’s must have access to a control panel where they can view all their currently drafted and published entries.

3.1.14 Landlord’s must be able to change the publicity of entries to be able to hide entries but keep them saved for the future.

3.1.15 Landlord’s must be able to display a message on an vacancy that tells a user searching for houses that the house is currently being rented for this current year or for next year.

3.1.16 Landlord's must be able to complete their intended purpose when they login, quickly and easily, meaning that the system should be efficient in terms of navigation and should be easily usable.

**4.0 System Requirements Specification**

**4.1 System Requirements**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | Filtering system used to search vacancies | | |
| **Type** | Functional | **Priority** | High |
| **Description** | A system which enables a student to filter out vacancies by selecting and entering various conditions. | | |

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| **Name** | Sorting of search results | | |
| **Type** | Functional | **Priority** | Medium |
| **Description** | Allows a user to sort search results by certain conditions: price (low to high etc.), newest vacancies, number of rooms... | | |

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| **Name** | Creating new accounts for landlords | | |
| **Type** | Functional | **Priority** | High |
| **Description** | Landlords need to be able to create an account in order for them to add and manage their available vacancies. | | |

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| --- | --- | --- | --- |
| **Name** | A control panel for landlords to manage their vacancies | | |
| **Type** | Functional | **Priority** | High |
| **Description** | A panel where landlords can add, remove or alter vacancies. | | |

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| **Name** | An embedded map showing the location of a property | | |
| **Type** | Functional | **Priority** | Medium |
| **Description** | A map should display the location of a currently viewed property.  Could be expanded to a map with multiple properties displayed. | | |

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| **Name** | Creating accounts for users | | |
| **Type** | Functional | **Priority** | Low |
| **Description** | Giving users an account on which they could save properties for later reference | | |

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| **Name** | Good accessibility | | |
| **Type** | Non-Functional | **Priority** | Medium |
| **Description** | The content on the web app for example images, buttons and written content should be of a good colour and good font size making the the website visible to the user. | | |

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| **Name** | Good web navigation | | |
| **Type** | Non-Functional | **Priority** | High |
| **Description** | The navigation buttons should be responsive and functional, the navigation buttons should lead the user to the right page. | | |

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| **Name** | Ensuring responsiveness of the web app | | |
| **Type** | Non-Functional | **Priority** | High |
| **Description** | Web pages should be very responsive and loading times have to be limited. This can be ensured by cropping down images to smaller thumbnails. | | |

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| **Name** | Multi language option | | |
| **Type** | Non-Functional | **Priority** | Low |
| **Description** | The application should include multiple languages for people of different origins. | | |

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| **Name** | Good user capacity | | |
| **Type** | Non-Functional | **Priority** | High |
| **Description** | The webapp should allow multiple viewing at the same time without creating any downtime on the website. | | |

**5.0 Appendix**

Interview Questions:

Questions for Users Searching for Houses

* Is it important for users just looking for a property to have an account?
* How important is security for you?
* How should users be able to contact landlords to ask questions about a property?
  + Anonymous message board
  + Message board with accounts
  + Direct message with accounts
  + Email address/Phone number/other external methods listed
  + Other method
* How important is an embedded map showing the location of the property?
* How important is it to be able to sort properties by distance to the university?
* How important is being able to sort by price?
* What other methods of sorting properties might be useful?

(Had users look at similar existing websites rightmove.co.uk and accommodationforstudents.com)

* How clear was the search page on rightmove.co.uk?
* How clear was the properties page on rightmove.co.uk?
* How visually appealing was rightmove.co.uk overall?
* How could it be improved?
* Were there any features you thought were missing from rightmove.co.uk?
* How clear was the search page on Accommodationforstudents.com?
* How clear was the properties page on Accommodationforstudents.com?
* How visually appealing was Accommodationforstudents.com overall?
* How could it be improved?
* Were there any features you thought were missing from Accommodationforstudents.com?

Questions for Landlords

* How important is keeping your account safe and secure from potential risks?
* Would you like a main screen or similar control panel where you can control everything to do with your account and your vacancies?
* What information would you like to include within each vacancies advertisement?
* Would you need to be able to make an account and edit it, to store information and manage your current vacancies as well as possibly be to delete it?
* What would you like to be able to do with each house vacancy, i.e. create, edit, publish?
* Would you like to be able to hide entries to keep them saved for the future, e.g. so that they can be used again the following year?
* Would a feature that allows you to show if the house is currently occupied for the this year and/or the next year be beneficial?
* In terms of navigation and functionality, how quickly and easily do you want to be able to use the system?