



Dublin City University - School of Computing

BSc in Enterprise Computing
4th year project proposal (CA472)
Idea Proposal
2020/2021

Updated October 2020

Student name	Student Number
Ryan Shannon	20374913
Jomi Kafi	20448764

Project Title: ScholarHomes

Date: 14/10/2023

ScholarHomes - Project Summary:

The goal of this project is to establish an all-encompassing online platform connecting students and landlords. To access the core features of the application, users must first create an account. Landlords can then list their available rooms/properties for rent, enabling students to connect with them and arrange accommodation. Students can browse the posted properties to find one that suits their requirements. We provide dedicated support at every stage of this process for both landlords and students. Our team thoroughly vets properties before they are listed on our platform, ensuring quality and authenticity. Additionally, students undergo verification to confirm their student status and eligibility for accommodation applications.

Figure 1.1; App dev image

We have developed our application to align seamlessly with ScholarHomes' fundamental objectives. Our primary aim is to enhance students' access to accommodation. Another pivotal goal for us is ensuring the safety and security of our users; both in handling sensitive data at a technical level and in personally vetting properties, landlords, and students. We also wish for our application to facilitate communication between users through additional features. By enabling students and landlords to interact, we provide them with a chance to build meaningful relationships. Cultivating positive connections is crucial as they significantly improve the likelihood of a smooth and trouble-free accommodation process. We hope to collaborate and work alongside colleges in Ireland to achieve these goals. The primary aim of our application is in line with the principles of colleges. Through collaboration, both parties can effectively contribute to locating accommodation for students. Our application will alleviate some of the pressures colleges face when trying to secure accommodation for students, this in turn will motivate them further to work alongside us.



Figure 1.2; Aspen Logo



Our application offers services that are extremely relevant as there is currently a major housing shortage making it incredibly difficult for students to find accommodation. As an example, Aspen, which provides student accommodation and offers a variety of different rooms to choose from, has a waiting list of up to 40 weeks (approximately 10 months). These circumstances

force international students to plan to study abroad nearly a year in advance, or wait a year before studying. Our application hopes to assist students by expanding the number of accommodation available by making it easier for Irish families or property owners to rent any spare rooms they may have. Another significant benefit is that it provides the landlord with an additional source of income. This is hugely relevant as Ireland is becoming an increasingly expensive country to live in. In 2021 the average cost of goods for consumers in Ireland was rated the second highest in Europe. In summary, Irish goods are 40% more expensive than the average cost of EU goods meaning Irish people will be actively seeking ways to maximise their income given the current state of the economy¹.

¹ RTE.ie, *Why are prices so high in Ireland*

Expected Technical Delivery - What we intend to deliver:

Our goal for the final year project is to produce a versatile student housing application that includes key elements and features that will be crucial for the technical delivery of our project all year long.

To give customers a seamless and practical experience, our student housing app will include a variety of crucial functions. First and foremost, user-friendly interfaces are essential because they make it simple for students to explore, search, and filter lodging options according to their needs, such as location, cost, and facilities. Students must be able to easily book their desired lodging thanks to real-time availability updates and booking features.

The app will also include strong security features to protect user data, including financial and personal information, helping to build user confidence. The option to set up automated rent payments and integration with digital payment methods helps simplify the financial side of student housing. Additionally, interactive maps with thorough property details, including images and virtual tours, are crucial for assisting students in making wise judgements.

While reviews and ratings assist students in evaluating the quality of housing alternatives, communication tools like chat and notifications are crucial for landlords and students to communicate and exchange information. The app's value as a complete student housing solution can be increased by including a resource area with advice on budgeting, legal rights, and nearby facilities. To satisfy the varied needs of the student housing market, our effective student housing app will integrate user-friendliness, security, real-time updates, and educational content.

An essential component of a student housing app is user authentication and authorization, which ensures the security and privacy of both users and the data stored within the programme. We'll be putting in place strong user authentication that prevents unauthorised access to sensitive data, such as personal information, financial information, or communication records. While administrators may manage the platform as a whole, landlords can maintain their listings, and students can search for available housing thanks to efficient authorisation methods. To deliver a seamless and reliable user experience, security and convenience must be balanced properly.

User testing will also be incorporated along the way as it entails a careful examination of the app's usability, functionality, and general user experience by actual students. A varied group of students are involved in this process to interact with the app and offer insightful input, representing the app's target population. This input is essential for identifying any problems that can limit user happiness, whether they relate to navigation, features, or design. Additionally, user testing aids the development team in adjusting the app's features and interface to better suit the unique requirements and preferences of students looking for housing. This iterative process guarantees that the finished product is not only user-friendly but also accurately meets the specific needs.

To maintain a fluid user experience and guarantee the app's compatibility with different devices and operating systems, regular updates and bug fixes are essential. Equally important is offering responsive and effective customer support. The operation, listings, or payments of the app may cause problems or raise questions for students, landlords, and administrators. It's crucial to have a strong support system that includes avenues for questions and help, including chat support, email, or a special hotline.

Market Rationale - Students and Landlords:

There are two major customer groups that ScholarHomes is tailored for. Our first customer group consists of students seeking accommodation relatively near their college for the duration of their studies. This market is mostly made up of 20 to 30 year old academics, a vast majority of which are international students. Our second customer group is made up of property owners seeking to rent a room they have available for a profit. This market is made up of businesses who wish to advertise vacancies in properties they own, as well as Irish residents who hope to rent out a spare room(s) they have available.

Figure 1.3; Student Protest

There is a clear market for students who are seeking accommodation. This is evident by the current lack of available student accommodation in Ireland. There have been numerous attempts by students to get the government to invest in accommodation for students. This can be seen in a protest held in Dublin city centre on the 4th of October which approximately 300 students attended. These students demanded the government lower the student contribution fee and build student accommodation. This is a clear sign that there is a current need in the market for additional accommodation specifically for students. We believe our application fits this niche.²



We are confident that Irish residents will be eager to welcome students into their homes. Currently, the average rent in Ireland surpasses the peak of the Celtic Tiger era by more than 50%. This presents a lucrative opportunity for landlords, as they can profit significantly by renting a single room to a student for the duration of an academic year, spanning 7 to 8 months. This is particularly noteworthy given that Ireland is currently one of the most expensive countries to reside in within Europe. To illustrate, Irish goods are 40% pricier than the average cost of goods in the EU³.

We intend on reaching out to students within DCU currently residing in student accommodation to gather the accounts of their first hand experiences. Students who are unable to physically participate in an interview, we intend to reach by having them complete a Google Forms survey. This will provide us with insight of their honest experience with the student accommodation process. By doing this we can identify the prevalent issues of the student accommodation process and take steps to remedy these issues when building our application. We can also ask them what platforms they interact with most often, this will be useful when deciding what platforms to advertise on during the marketing campaign.

We also plan on taking this approach with landlords. We will reach out to people we know who have previously rented accommodation to students and note their insights of the process. We will continue to use the methods we have previously used, Interviews and Google Forms. This demographic is more broad compared to the student demographic, because of this we must gather data from landlords who are a variety of different ages and who live in different types of properties to ensure we have a full scope of our full demographic.

² RTE.ie, Students protest in Dublin over accommodation crisis

³ Joe.ie, Average rent in Ireland is now 50% higher than Celtic Tiger levels

Proposed Timeline:

We will hope to keep to the following timeline below because it will allow us to keep track on what needs to be done as a group and also so we know where we should be at as we go along creating our application.

1. Submit Proposal for Feedback and Ethical Approval: We are both in charge of this. Together, we will work on the proposal, breaking it down into its component elements. We will both have to agree on which ethics are appropriate for our project before we can complete the ethical approval process.
2. Present the Project Proposal to the Approval Panel: This will be addressed by both of us as we will both need to present our idea to the panel.
3. Architecture and designing: After Our idea has been approved we will have to now look at the app's architecture, including the data model, system components, and the user interface. Create wireframes and prototypes to visualise the app's design. Also Choose the appropriate technology stack based on your requirements, including the programming languages, frameworks, and databases.
4. Development: Implement the app's features and functionalities, following best practices and coding standards.
5. Mid Term Delivery: We will be hoping to have a good amount of work done and documented before this point so we are ready for the mid term delivery.
6. Testing: After development is done and we are happy with the outcome we will begin Conduct thorough testing, including unit testing, integration testing, and user acceptance testing. Identify and fix bugs and issues.
7. Deployment: Deploy the app to a reliable hosting environment.
8. Monitoring: This where we will be seeing how the application is progressing in the hosting environment.
9. Final Project Delivery: By this point we should be happy with the application performing in the hosting environment and be ready to present our finished product

Workload Distribution:

How will the workload be distributed? Technical and Commercial components? Bullet point listing is adequate.

- Backend Design - Split
- FrontEnd Design - Ryan
- Advertising marketing for students - Ryan
- Advertising marketing for landlords - Jomi
- Database management will be split into different models and diagrams will be looked at by both of us. - Jomi
- The Oracle database will be handled by both of us. - Jomi
- Presentation - split
- written proposal for our project - both
- Time keeper - Ryan
- Trello boards keep track of progress. -jomi
- Ethics checklist - Jomi

- Researching General Data Protection Regulation - Ryan
- Landlord market research - Jomi
- Researching the student market -Ryan
- Researching competitors - Jomi

Staff Consulted:

Who did you consult in the preparation of this document? If any staff member agreed to act as the project advisor, please add their name here.

Mark Humphry	Supervisor	Mark.Humphrys@dcu.ie
--------------	------------	----------------------

References:

1. McNena, S. (2022) *Why are prices in Ireland so high?*, RTE.ie.
Available at:
<https://www.rte.ie/brainstorm/2022/0718/1310885-ireland-prices-goods-services-eurostat/>
(Accessed: 15 October 2023).
2. Sullivan, C. (2023) *Students protest in Dublin over accommodation crisis*, RTE.ie.
Available at:
<https://www.rte.ie/news/ireland/2023/1004/1408964-student-protest/>
(Accessed: 15 October 2023).
3. Hughcarrhere (2022) *Average rent in Ireland is now 50% higher than Celtic Tiger Levels*, JOE.ie.
Available at:
<https://www.joe.ie/news/average-rent-ireland-2022-747992>
(Accessed: 15 October 2023).

Figure sources:

- 1.1.) <https://somalameda.org/wp-content/uploads/2021/01/App-Development-4.jpg>
- 1.2.) <https://aspenstudentlife.com/> (Logo was obtained by using snipping tool on homepage)