Designing A Mobile Application for The Housing Industry: Creating A Guarantor Request Platform for International Students - Student Nest

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Abstract- This paper presents the design and development of Student Nest, a mobile application tailored to address the housing challenges faced by international students. One of the primary hurdles for these students is securing a guarantor to support their rental applications, a requirement that often impedes access to accommodation. Student Nest offers a user-friendly platform where international students can connect with guarantors who meet housing industry standards. The application integrates key features such as a secure verification process, seamless communication between students and guarantors, and detailed guidelines on guarantor responsibilities. By streamlining the guarantor request process, this platform aims to alleviate one of the significant barriers to securing accommodation, contributing to a smoother transition for students relocating to new countries. The design process follows a user-centered approach, focusing on simplicity, security, and reliability, ensuring that both students and guarantors have a positive and efficient experience. The implications of this platform extend beyond solving housing challenges, potentially shaping more accessible rental practices within the broader housing industry.

I.   INTRODUCTION

As the world becomes increasingly interconnected, the number of international students seeking higher education opportunities abroad has surged dramatically in recent years. Studying in foreign countries not only offers students a chance to broaden their academic horizons but also provides invaluable cultural experiences. However, relocating to a new country comes with its share of challenges, and one of the most pressing concerns for international students is finding suitable and secure accommodation (Ike *et al.*, 2020).

The process of renting accommodation in a foreign land can be daunting, especially when considering factors such as language barriers, unfamiliar legal requirements, and potential exploitation by unscrupulous individuals or agencies. These obstacles often lead to unnecessary stress and can hinder the overall study abroad experience for students.

This paper presents a comprehensive study on the design and development of an innovative online platform aimed at streamlining the process of renting accommodation for international students. The platform is envisioned to serve as a centralized hub, bridging the gap between students and housing providers, thereby fostering transparency, safety, and convenience throughout the entire rental process(Ike *et al.*, 2020).

- The Global Surge in International Students

The number of international students pursuing higher education abroad has surged, driven by a desire for academic excellence, exposure to diverse cultures, and global competitiveness. According to UNESCO, 5.3 million international students were recorded in 2020, and this number is expected to grow. Despite the benefits of studying abroad, these students face significant challenges, particularly in securing suitable accommodation. The process is often complicated by language barriers, cultural differences, and limited local knowledge. Housing providers, in turn, face their own issues, such as concerns about payment security and legal complexities in leasing to foreign students.

- Accommodation Challenges for International Students

International students encounter numerous obstacles when seeking accommodation in foreign countries.

Language and cultural barriers, unfamiliar rental markets, and a lack of a reliable support system often leave students vulnerable to fraudulent listings and overpricing. These issues contribute to heightened anxiety and confusion during the housing search. Additionally, landlords are hesitant to rent to international students due to concerns over payment security and the legal complexities of dealing with tenants unfamiliar with local customs and laws.

- Existing Solutions and Their Limitations

Although governments, institutions, and non-profit organizations have initiated programs to assist international students in finding accommodation, these solutions are often fragmented and lack user-friendliness. The existing platforms do not sufficiently address the specific needs of international students, leaving gaps in the rental process that expose students to risks and stress.

- Proposed Solution: Design and Development of *Student Nest*

The research proposes the design and development of *Student Nest*, a mobile platform tailored to meet the accommodation needs of international students. The platform will offer features such as verified listings, transparent pricing, language support, and secure communication between students and housing providers. The aim is to create a one-stop destination where students can confidently navigate the rental market. By fostering transparency and security, *Student Nest* will enhance the study abroad experience.

- Key Features of *Student Nest*
- Verified Listings and Pricing: To prevent fraud, the platform will feature verified listings with transparent pricing, giving students confidence in their housing search.
- Language Support: The platform will offer translation services and culturally sensitive communication tools to bridge the gap between students and landlords.
- Safety Measures: Verified landlords and secure rental agreements will ensure that students are not vulnerable to exploitation.
- Guarantor Services: One of the major pain points for international students is the requirement for a local guarantor. The platform will provide access to guarantor services for a fee, helping students meet rental obligations and easing landlord concerns.

- Impact of *Student Nest* on International Education Mobility

The platform is expected to improve the international student experience by streamlining the rental process, alleviating housing-related stress, and enabling students to focus on their academic and cultural experiences. Additionally, by offering transparency and support, the platform will promote fairness in the housing market. The impact goes beyond students, as landlords will also benefit from a more reliable and secure system for renting to international students. This initiative is anticipated to enhance global education mobility by making housing more accessible for students.

- Technology Implementation and Scalability

The technical aspect of *Student Nest* will involve creating a scalable and user-friendly interface that can accommodate various international markets. The design will adhere to W3C accessibility guidelines to ensure inclusivity. The platform's architecture will be built to handle user growth while maintaining a seamless user experience. Scalability will allow the platform to expand to various study destinations without compromising performance.

- Conclusion: Significance and Future Outlook

Student Nest holds great potential for solving the accommodation challenges faced by international students. By providing a secure, transparent, and supportive platform, this initiative will improve the overall study abroad experience, reduce housing-related stress, and contribute to the advancement of global education mobility. The platform also represents an innovative application of technology within the education sector, setting a precedent for how student needs can be addressed through digital solutions. Future development could involve collaboration with educational institutions, housing agencies, and local authorities to further enhance the platform's reach and effectiveness.

II. LITERATURE REVIEW

Empathize

Understanding and connecting with the user's needs, emotions and experiences is a part of the design thinking process. This stage is, about laying the groundwork, for creating solutions that genuinely tackle user's challenges and aspirations. The following steps highlight how I was able to use the empathize stage to gain deep insights into the users' perspectives which informed the subsequent stages of my design process.

User-centric problem statement

Creating a clear and focused problem statement is a part of the design process. This step involves combining the insights gathered from user research and empathy activities. The problem statement plays a role, in framing the problem from the user's perspective. Serves as a basis, for generating innovative solutions. During your designprocess, your POV should inform the rest of your work (Dam & Siang, 2020).

Here is the breakdown of the elements of the problem statement for Student Nest:

1. User: An international student that is interested in securing accommodationeasily.
2. Needs: Doesn't have a UK-based guarantor and wants to avoid falling victim offraudulent house listings.
3. To: To secure an accommodation.
4. Because: The user is an international student without familiarity with the processes and potential risks associated with navigating the UK housing market.

- User research

To create user centred solutions; user research entails an empathetic approach by collecting insights comprehending the needs, behaviours and challenges of users and developing an understanding of the individuals you are designing for. It serves as a step that guides the development of solutions in a user-centric approach.

A variety of techniques are used in user research to learn more about the needs, issues,and preferences of users. Different approaches are appropriate for various study situations and purposes.

User research can be broadly divided into two methods:
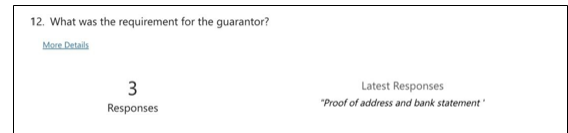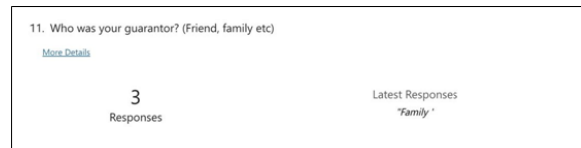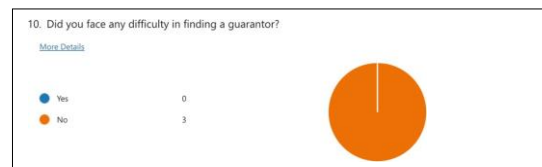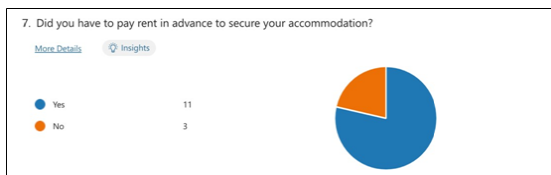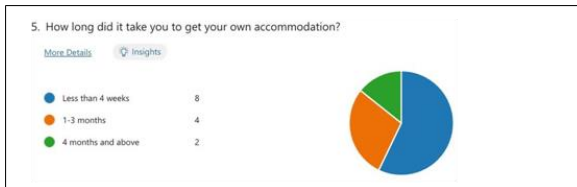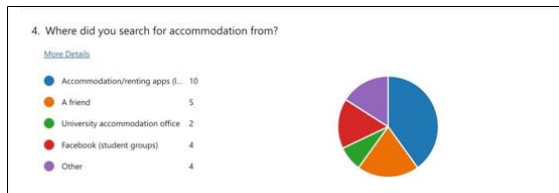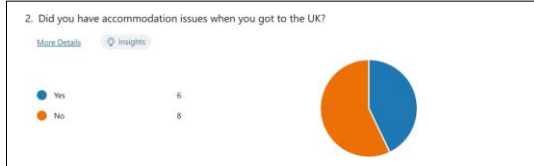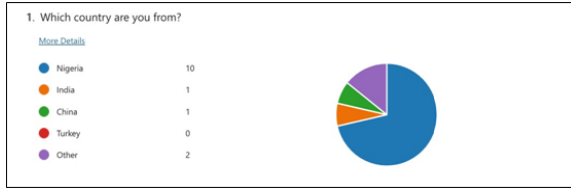
- Quantitative research
- Qualitative research

Choosing the right method (or combination of methods) depends on your research goals, resources, and the nature of the problem you're addressing. A well-rounded approach often involves using multiple methods to gather comprehensive insights.
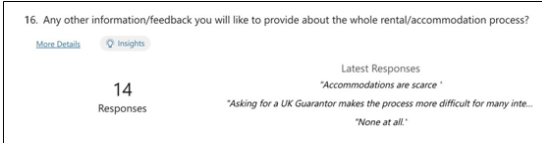
Quantitative research analysis

For quantitative research, an online questionnaire using Microsoft form was shared with international students at University of Brighton. International students were the target audience of the survey for several reasons such as:

- Direct relevance: International students, in the UK are impacted directly by the matter of needing a guarantor, for accommodation. These students have personal experience dealing with these challenges, which makes them a valuable and knowledgeable group to survey.
- In-depth insights: International students have a wealth of experiences to share when it comes to dealing with the difficulties and obstacles they face, in securing guarantors or finding accommodations in a foreign country.
- Diverse perspectives: International students represent a diverse range of cultures and nations, creating a fascinating tapestry of viewpoints. This diversity highlights challenges faced by different student groups and aids in developing solutions that are sensitive to cultural nuances.
- User-centred approach: Understanding the needs and perspectives of the target users is an aspect of design thinking and user centred design. In this case actively involving them in the research process is a way to align with this approach.
- Advocacy potential: International students have the potential to become catalysts, for change when they witness their perspectives being recognized and their difficulties being addressed.

The following points highlight the results from my questionnaire.

1. Which country are you from?

More Details

●	Nigeria	10
●	India	1
●	China	1
●	Turkey	0
●	Other	2

2. Did you have accommodation issues when you got to the UK?

More Details   💡 Insights

●	Yes	6
●	No	8

3. What type of accommodation did you stay when you arrived in the UK?

More Details   💡 Insights

●	With family/friends	5
●	Hotel	2
●	AirBnB	2
●	School accommodation	1
●	Private accommodation	4

4. Where did you search for accommodation from?

More Details

●	Accommodation/renting apps (I...	10
●	A friend	5
●	University accommodation office	2
●	Facebook (student groups)	4
●	Other	4

5. How long did it take you to get your own accommodation?

More Details   💡 Insights

●	Less than 4 weeks	8
●	1-3 months	4
●	4 months and above	2

6. Were you able to rent a place/accommodation before you arrived in the UK?

More Details   💡 Insights

●	Yes	6
●	No	8

7. Did you have to pay rent in advance to secure your accommodation?

More Details   💡 Insights

●	Yes	11
●	No	3

8. What documents/requirements did you provide when applying for an accommodation?

More Details

●	Student visa/proof of residency	10
●	University introduction letter	3
●	UK guarantor	3
●	References	1
●	Security deposit	8
●	Right to rent	0
●	International police clearance	1
●	Bank statement	5
●	Other	1

9. Did you need a guarantor to secure the accommodation?

More Details

●	Yes	3
●	No	11

10. Did you face any difficulty in finding a guarantor?

More Details

●	Yes	0
●	No	3

11. Who was your guarantor? (Friend, family etc)

More Details

3
Responses

Latest Responses
"Family "

12. What was the requirement for the guarantor?

More Details

3
Responses

Latest Responses
"Proof of address and bank statement "

13. Was there an option to rent an accommodation without a guarantor or reference

More Details

●	Yes	0
●	No	3

15. On a scale of 1 to 5, how satisfied are you with the rental process as an international student?

More Details   💡 Insights

2.93
Average Rating

16. Any other information/feedback you will like to provide about the whole rental/accommodation process?

More Details   Insights

Latest Responses

14
Responses

"Accommodations are scarce "

"Asking for a UK Guarantor makes the process more difficult for many inte...

"None at all."

III. QUALITATIVE RESEARCH ANALYSIS

Qualitative research involves gathering non-numerical data to gain insights into people's behaviors, experiences, and perspectives, often used to influence the design process. This method was used in this project to understand the experiences of international students in securing accommodation. Interviews with students at the University of Brighton were conducted to explore the challenges faced during the housing search. These insights helped to identify user requirements and their engagement with the rental market.

For this project, user interviews were chosen as the primary qualitative research method. Interviews took place at the university library, and participants provided consent before the discussions. The interviews revealed valuable insights into the motivations, emotions, and behaviors of international students during their search for housing.

Key Insights from Interviews
Participant A (MSc International student, Nigerian, 27 years old, Female)
This participant had recently moved to the UK and was excited about new opportunities but was struggling with accommodation. Staying in an Airbnb due to difficulties in finding a suitable apartment was financially draining, and her studies were affected as she couldn't settle in. Her biggest challenge was obtaining a UK-based guarantor, and she was concerned about falling victim to rental scams. She sought safe, affordable accommodation near her university and wished for an easy way to secure a guarantor without relying on friends or family.

Participant B (MSc International student, Indian, 24 years old, Male)
This student also struggled to find housing since his arrival. He was staying with a friend but needed appropriate accommodation. He wanted to live with housemates who shared his values and could provide a culturally inclusive environment. Due to academic and social pressures, he lacked time for a comprehensive housing search. Like Participant A, finding a UK-based guarantor was a significant issue. He was also unfamiliar with the local rental market and wanted to make informed decisions about housing without compromising his studies. He was willing to pay for a guarantor service.

2. Competitor's Analysis
Before launching a new platform, conducting a competitor analysis is crucial. It provides insight into market trends, customer expectations, and competitor strengths and weaknesses. This analysis aids in differentiation, risk management, and resource allocation. In this project, it guided the development of a user-centered product by benchmarking industry performance and understanding competitor experiences. By studying key players, we aimed to strategically design a platform that meets market demands and improves the chances of success.

Types of Competitors
- Direct Competition: These are companies that offer similar services and cater to the same customer base. For example, in the guarantor service industry, companies like Housing Hand offer identical services and directly compete based on features, cost, and quality.
- Indirect Competition: These are companies that may provide similar services but are not focused on them as their primary revenue source. They may target a different customer base or address the same issue with a different approach (Zach, 2022).

Key Players in the Industry
- Housing Hand: The largest guarantor service provider in the UK, operating for over eight years. Despite their success, Housing Hand has faced customer complaints about poor service, tenancy agreement processes, and refund issues.
- Rent Guarantor: Another player offering guarantor services in the UK. Their customer service has received praise, but there are concerns regarding the acceptance of their services by letting agencies and landlords. Customers have also reported confusion over service procedures.
- Homeppl: Founded in 2016, Homeppl offers not only guarantor services but also fraud detection, risk assessment, and affordability services. While

praised for prompt customer service, the company has faced criticism for communication delays, especially during reference verification processes.

SWOT Analysis table

Competitor's name	Strengths	Weaknesses	Opportunities	Threats
Housing Hand	• Market leaders in the guarantor industry • Access to funding • Partnerships with universities, letting agencies and landlords	• Inadequate customer service • Faulty guarantor process • Poor marketing plan	• Utilizing technology to streamline the application process • Improved customer service • Enhanced user experience • Enhanced marketing strategy	• Increased competition • Vulnerable to lawsuits
Rent Guarantor	• Good user experience • Attentive customer service • Hassle free posting for letting agencies and landlords	• Limited acceptance by letting agencies and landlords • Lack of clarity in guarantor process communication on website • Limited visibility in the market • SEO is not fully maximized	• Partnerships with universities, letting agencies and landlords • Enhanced marketing strategy • SEO optimization • Expansion	• Vulnerable to lawsuits • Competition • Poor payment resolution system • Investment in real estate
Homeppl	• Prompt customer service • Comprehensive tenant referencing services • Trust between the company and landlords/letting agencies	• Lack of communication • Significant market competition • Inaccurate data and information	• Partnerships with universities, letting agencies and landlords • Enhanced risk assessment measures • Market expansion	• Vulnerable to lawsuits • Competition • Investment in real estate

Define

User personas: User personas serve as fictional representations of the target audience encompassing traits, behaviors, requirements, objectives and motivations. They are crafted to offer designers, developers and stakeholders a relatable comprehension of the individuals who will engage with a product, service or experience. User personas play a role, in humanizing the design process by enabling teams to tailor their approach to the needs and preferences of users ensuring that the final solution effectively meets their requirements (Mulder & Yaar, 2006).

The key aspects my project will be focusing on for the user personas are the following:
- User's demographics (name, age, nationality, occupation & educational User
- goals and needs
- User pain points/challenges
- User motivations
- User journey

Empathy map

Empathy maps serve as aids during the design phase allowing designers to delve into users' emotions, thoughts, actions, and overall experiences. These maps offer an approach, to consolidating research findings and insights enabling design teams to cultivate a more empathetic viewpoint, towards users. By fostering shared understanding of user needs and motivations empathy maps promote communication and collaboration (Gibbons, 2018).

An empathy map is typically divided into four quadrants, each representing a different dimension of the user experience:
- Says: This section encompasses the user's words. It covers quotations, statements and expressions that unveil the user's thoughts and viewpoints gotten from the user research.
- Think: In this section you jot down the thoughts, beliefs, and assumptions that the user may have as they experience the product. This process helps uncover the hidden motivations and concerns that

drive their actions.

- Feels: This section is dedicated to understanding the user's condition. It entails recognizing their reactions, wants, concerns and annoyances regarding the design projects context.
- Does: In this context you record the actions and conduct of the user. This includes their activities, interactions, with their surroundings and the specific steps they follow in scenarios as they experience the project/research.
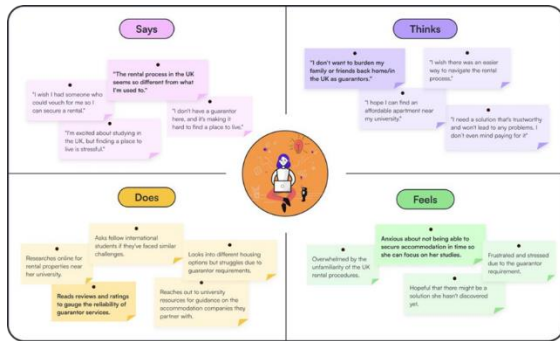
How Might We (HMW) Technique

The "How Might We" (HMW) technique is a design thinking tool that transforms challenges into opportunities by framing them as thought-provoking questions. This approach encourages creativity, open-mindedness, and optimism by shifting the focus from problems to possibilities. HMW questions stimulate brainstorming sessions, enabling design teams to explore innovative ideas from diverse perspectives. These questions help generate a broad range of solutions that may lead to transformative outcomes. By fostering teamwork and a positive outlook, the HMW method is a powerful tool in a designer's toolkit, promoting user-centric and impactful innovations.

Examples of HMW Questions for the Project:

1. How can we make the process of confirming a student's enrollment status easier for both students and guarantors?
2. How can we create an intuitive, secure user interface that simplifies the guarantor application process?
3. How might we establish real-time communication with universities for accurate enrollment verification?
4. How might we develop a transparent fee structure for guarantor services that fits student budgets?
5. How might we integrate responsive customer support into the application for better user assistance?
6. How might we securely manage student data while complying with data protection regulations?
7. How might we personalize the application based on the student's university and program requirements?
8. How might we enhance the application based on user feedback to adapt to evolving needs?
9. How might we promote the guarantor service through collaboration with universities and student organizations?
10. How might we partner with accommodation providers and landlords to create a seamless ecosystem for students?

Ideate: Starburst Technique

The Starburst Technique is a brainstorming method that encourages idea generation by addressing multiple facets of a challenge. In this technique, prompts are placed at the "legs" of a star-shaped pattern, each addressing a different aspect of the central theme or challenge. This structured approach helps teams explore diverse perspectives and uncover new dimensions for problem-solving. By rotating the starburst, participants generate questions for each prompt, stimulating creativity and leading to a comprehensive range of solutions. This method is especially useful for analyzing complex challenges and fostering innovation by considering various angles.
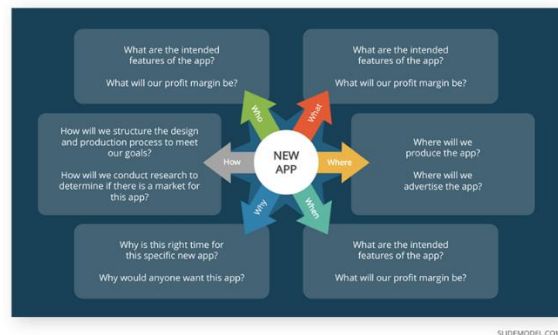

Figure 1: showing the starburst brainstorming technique.

Some of the questions raised are however answered in the image below. Answering these questions would further assist in defining and providing a solution for

the problem. By using the Starburst technique during the ideation phase of Student Nest, I was able to generate a wide range of ideas and to stimulate creativity. I was also able to explores different dimensions and be able to organize and structure my ideas.

- User flow

The user flow refers to the path that a user takes when they interact with a product, service, or interface. It maps out the steps, interactions and choices made by users, from their entry point until they successfully complete a task or objective. Designers and developers use this representation to gain insights into the user experience and identify areas where improvements can be made. User flows provide an understanding of how users interact, make decisions and transition, between stages helping create intuitive and streamlined experiences that meet their users' needs and preferences (Browne, 2023).

My tool of choice for my userflow was Figjam.
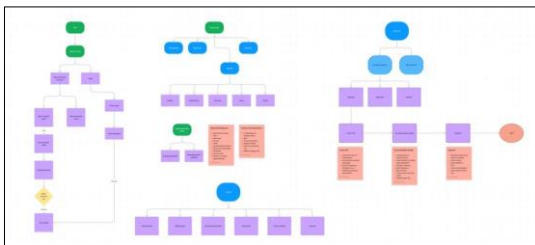
User story

A user story captures the viewpoint, requirements, and objectives of a user when they interact with a product or service. It is presented in an informal narrative format often following the structure "As a [user] I want to [action] so that [benefit]." User stories promote a user focused approach. They facilitate communication among cross-functional teams. They assist in prioritization, shared understanding, and iterative development to ensure that features meet both user expectations and business goals. By providing acceptance criteria, user stories guide the process and enable designers, developers, testers, and stakeholders to work together seamlessly in creating impactful solutions that prioritize the needs of users.

In a well-defined user story, the goal is not to indicate what the feature is, but to spell out what the user hopes to accomplish, so agile teams can determine the best method for implementing it (Interaction Design Foundation, 2016).

Prototype

Sketches: Sketches hold importance within the design field as they provide designers with a tool to visualize, iterate and communicate their ideas effectively. They serve to transform concepts into visual representations fostering innovation and exploration of ideas. Sketches allow for iteration and early validation of concepts enabling designers to refine their ideas without committing resources. Additionally sketches act as a language that bridges communication gaps, between team members, stakeholders, and users by providing a reference for design discussions. From problem solving and storytelling to inspiring creativity and facilitating user centred design approaches sketches play a role in every phase of the design process. They guide innovation efforts enhance collaboration, among stakeholders and help crystallize the desired design vision (Hua, 2019).
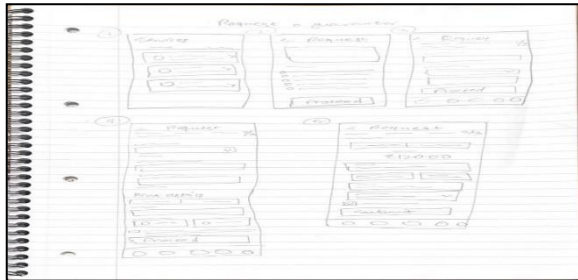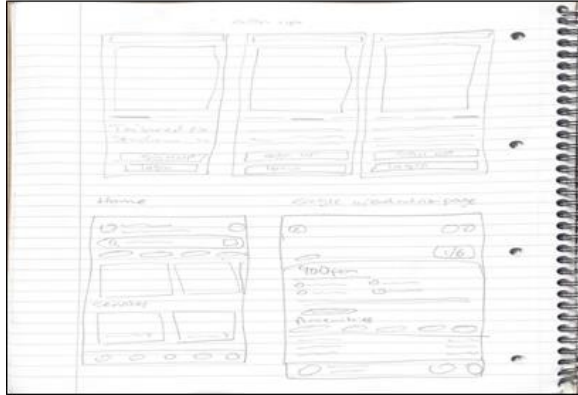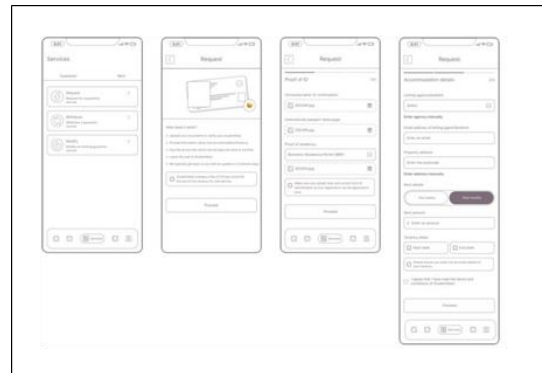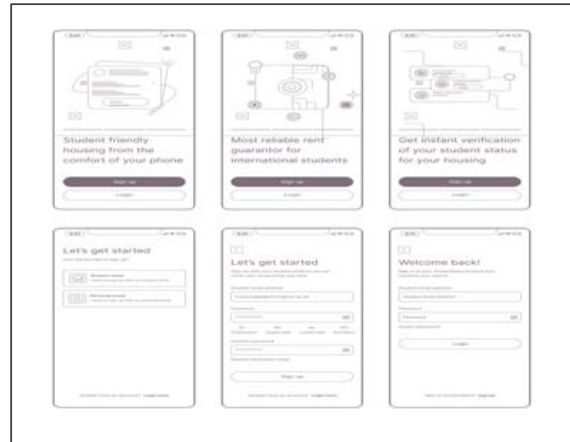
Wireframes: Wireframes are representations, that outline the layout, structure, and content arrangement of digital products like websites or applications (Interaction Design Foundation, 2021). These wireframes establish the positioning of components, hierarchies of information interactive elements, navigation flow and content placeholders. They play a role in helping designers, developers and stakeholders visualize the user experience and ensure alignment with project goals. Wireframes provide a roadmap, for the design and development process by offering a shared reference point that speeds up implementation and ultimately leads to well-structured and user-friendly digital products.

There are several types of wireframes but for the context of this project, my paramount emphasis will be low-fidelity and high-fidelity wireframes.

Low fidelity wireframes: They act as blueprints focusing on the framework of the user interface while leaving out elements. They are basic and simple representations that focus on the overall layout and structure of the design. These simplified designs are highly valuable for early-stage iteration fostering collaboration and prioritizing user centricity and functionality (Nguyen, 2019).

My tool of choice for both low-fidelity and high-fidelity wireframes was Figma.

High-fidelity wireframes: A high fidelity wireframe is a representation of a digital products user interface final design. It shows content, fonts, images, and visuals to provide an accurate depiction of how the product will look and work. High fidelity wireframes capture design details, interactions, and user experience nuances. They give a view of the aesthetics and functionality of the user interface. These wireframes are commonly used in stages of the design process to bridge the gap, between design and

development. They also facilitate communication, among designers, developers, and stakeholders.

Link to design prototype https://www.figma.com/proto/JSDFDHpKMM9ZbF BBA7PmIx/StudentNest?page-id=0%3A1&type=design&node-id=525-9105&viewport=-851%2C-936%2C0.35&t=ndQDxtFYNEnvIkSe-1&scaling=scale-down&starting-point-node-id=67%3A941&mode=design
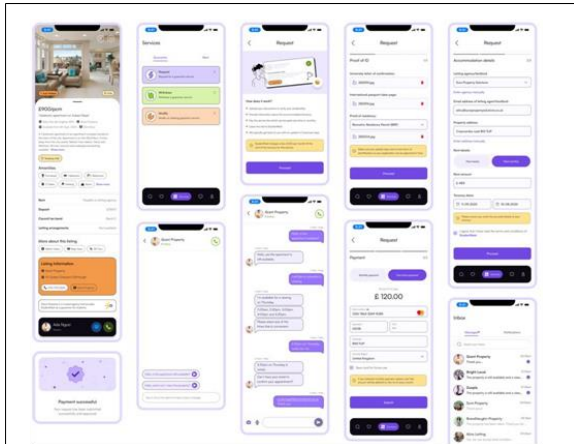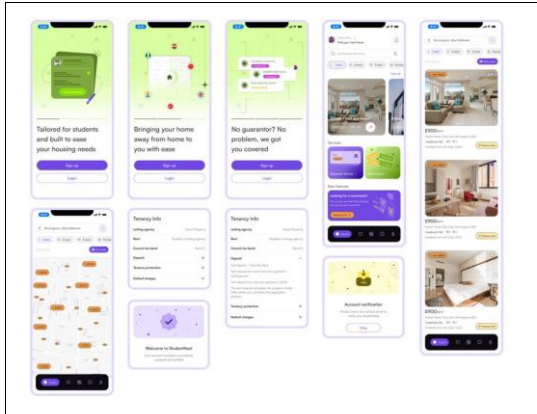
Typography

Typography is the art of arranging text to enhance readability, mood, and visual appeal. It plays a crucial role in conveying tone, emotion, and message, while also reinforcing brand identity. Good typography improves communication and evokes emotions, contributing to a consistent and memorable design.

Fonts Used:
- Vickey: A serif, open-source, bold, and minimalist typeface used for the brand name. Its decorative serifs enhance readability and give a sense of authority and tradition.
- Satoshi: A modern sans-serif font used throughout the app, including headings and body text. Its clean and geometric design ensures clarity and simplicity, particularly for digital platforms.

Design Documentation
Onboarding:
New users sign up using their school email, with verification required through a confirmation email. Returning users log in with their credentials.

Home Page:
Features include a search function with filters, recommended listings, notifications, and easy access to Student Nest services. A navigation menu allows users to explore the app effortlessly.

Services Tab:
Allows users to request, modify, or withdraw guarantor services. The process is divided into three stages: identity verification, accommodation details, and payment options.

Search Function:
Users can search for apartments by location and view results on a map or list. Detailed listings provide tenancy information, and in-app messaging allows direct communication with agents.

Inbox Tab:
Displays conversations with landlords or agents, with AI-generated messages to streamline communication.

Profile Tab:
Allows users to edit profile details, manage payment options, and customize settings, including notifications, language, and accessibility.

UI Elements (Style Guide)
Logo Design:
A logo represents a brand's identity, communicating professionalism, trust, and uniqueness. It enhances recognition and establishes a visual presence across

different mediums, promoting customer loyalty and emotional connection.
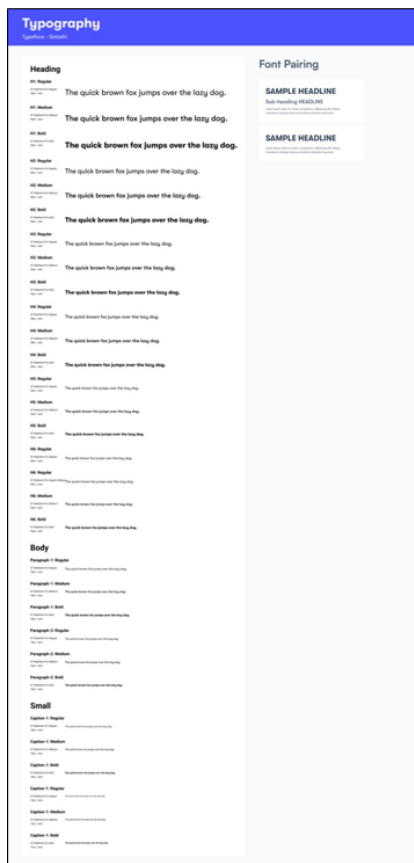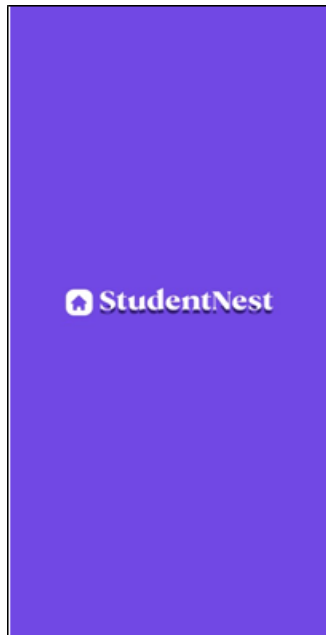
Color

Purple was chosen for this project due to its associations with creativity, luxury, and innovation. It conveys a sense of opulence and sophistication, making it ideal for high-end property listings. Lighter shades of purple evoke peace, which suits users searching for living spaces. The color's uniqueness helps the app stand out, while its gender-neutral appeal attracts a broad user base. Purple also resonates with users seeking personal growth and imagination. When used thoughtfully, it enhances brand recognition, readability, and overall user engagement. Additionally, purple is accessible to those with red-green color blindness, which affects 99% of color-blind individuals (Kosari, 2022).
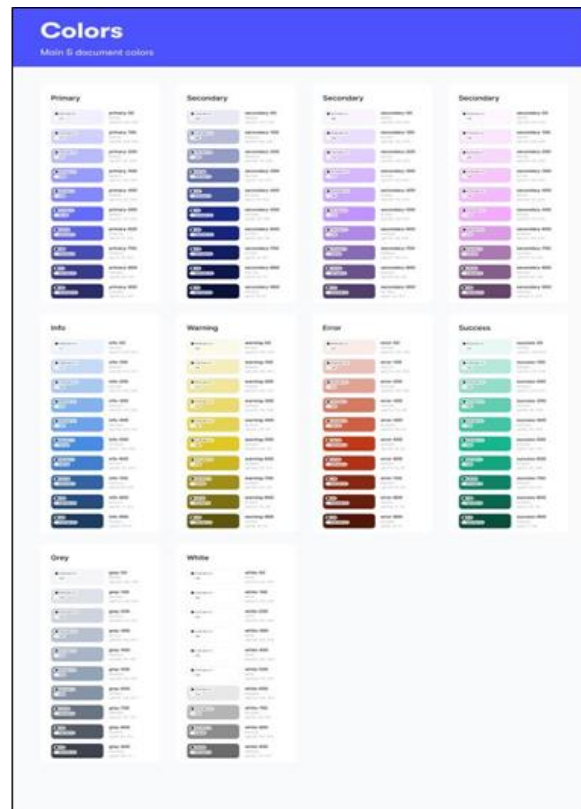
Usability Testing

Usability testing is the final stage of the design thinking process, assessing how effectively a product performs by observing users as they interact with it. The goal is to identify usability issues and make design decisions that enhance user experience, efficiency, and ease of use. During testing, users are given tasks, and researchers observe their behavior, noting difficulties or confusion. This helps uncover issues like navigation

problems or unclear instructions, optimizing workflows and improving satisfaction.

Research Goals:

- Test the Student Nest app with representative users.
- Observe users interacting with the prototype.
- Gather feedback and iterate based on insights.

Usability Requirements:

- Clear, intuitive navigation.
- Compliance with accessibility standards.
- Visually appealing, consistent design.
- Efficient task completion with minimal effort.
- Responsive across devices and screen sizes.
- Culturally sensitive design for a global audience.
- Timely feedback for user actions and error handling.

Testing Requirements:

Using Maze for remote testing, 23 MSc students from the University of Brighton participated. The tool tracks user behavior and feedback, providing quantifiable data for analysis.

User Tasks:

1. Create an account.
2. Search for an apartment.
3. Engage with an agent.
4. Request a guarantor service.

These tasks summarize core functionalities and offer valuable insights into user interactions.

Post-Testing Feedback:

Users were asked to rate their experience, highlight challenges, and provide suggestions, followed by filling out a SUS (System Usability Scale) questionnaire.
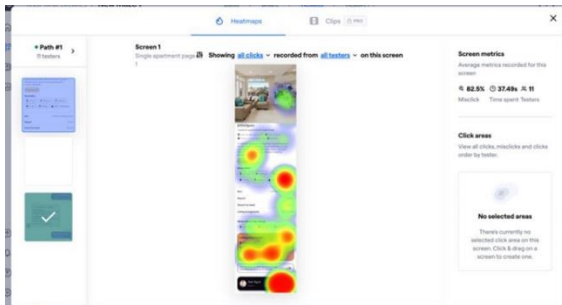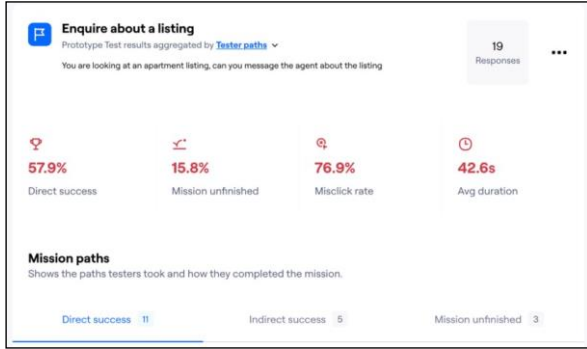
Research Objectives:

- Gain insights into user behavior and preferences.
- Evaluate navigation effectiveness.
- Identify pain points and obstacles.
- Ensure users can complete key tasks successfully.
- Use feedback to refine and improve the app's design.

RESULTS
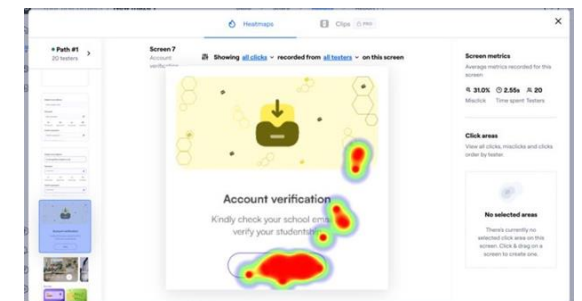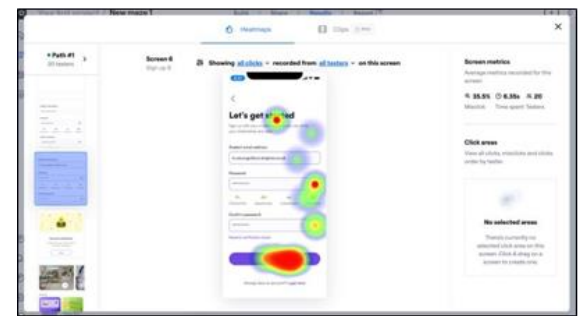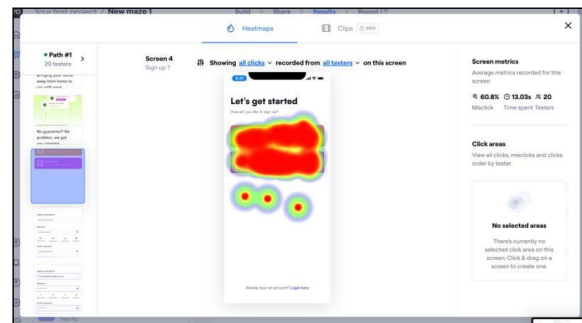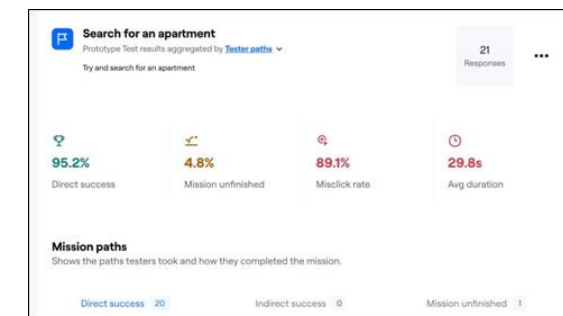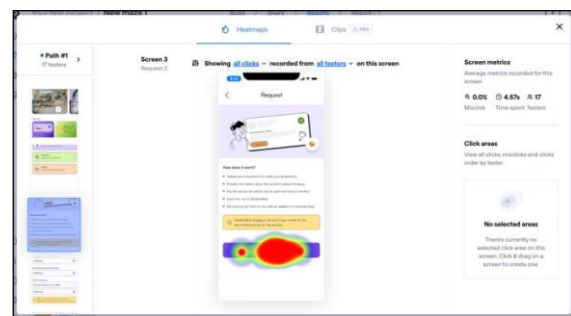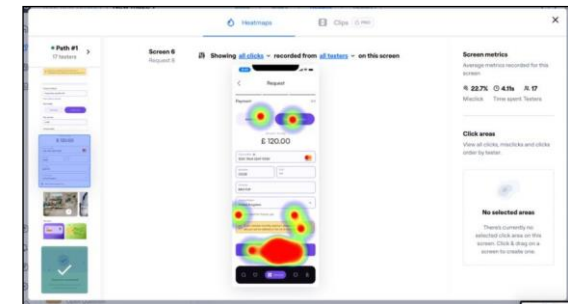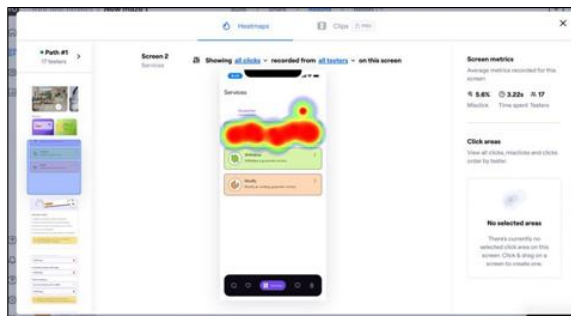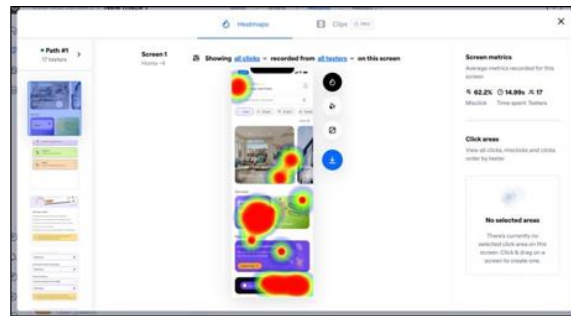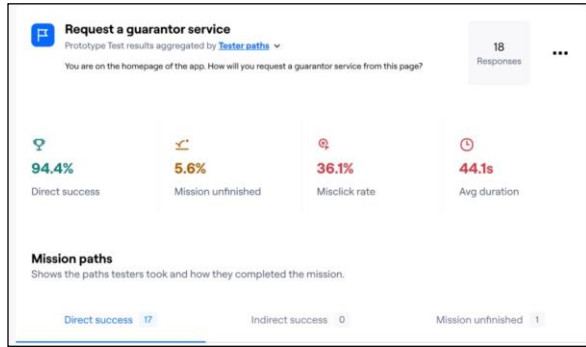
General comments/feedback

The following comments were the general comments from users who participated in the remote user testing.
"The app was easy to navigate 👌" "Completing each task was really easy."
"Some of the interface or features are not activated but looks well thought out and
exhaustive in comparison to industry practice."
"Good flows. The app looks beautiful, and the information were relevant." "Hint or example of what kind or how the document must be uploaded."
"Very well designed and smooth experience. I was able to navigate easily. I think an icon should be placed beside the uploaded documents, so users don't think it's an
input field."
"Maybe text below icon could be more helpful."

Design iteration based on feedback
"Some of the interface or features are not activated but looks well thought out and
exhaustive in comparison to industry practice."
I added more pages to the design outside of the main features and added them to the prototype.
"Hint or example of what kind or how the document must be uploaded."
I added an info icon beside the upload fields which has a sample of what the document to upload looks like.
"Maybe text below icon could be more helpful."
I added labels to the icons on the navigation bar when clicked.
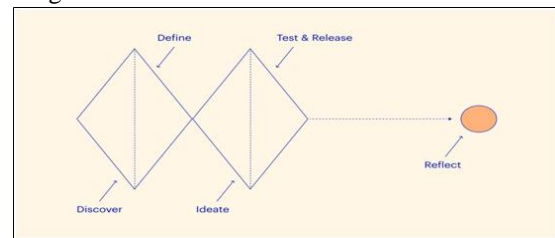
Design Reflection

Figure 2: Image showing the position of reflection on the design thinking road map

Usability test feedback: Feedback from usability tests played an important role, in the design process as it provided insights directly from real users. These insights helped shape the user centered aspect of the app. The feedbacks were very useful because it helped me look at the app holistically. I implemented labels with the navigation bar icons, included examples of document images to be uploaded and expanded the range of screens to enhance the user experience. These actions were based on insights gathered from usability testing and user feedback. By adding labelsusers can easily understand the purpose of each icon on the navigation bar.

Providing image examples for document uploads ensures clarity and guidance helping users provide the content. Moreover, introducing screens enriches the user journey by offering interactions and making tasks easier to complete. These changes demonstrate my dedication, to delivering a user-centric app.

Project timeline: Using a project management tool, for this project was extremely important in ensuring that the project is well organized and successful. This tool

allowed me to carefully manage tasks, resources and establish timelines, which promoted accountability and helped avoid potential delays. The tool also facilitated collaboration and real time communication ensuring that my supervisor stayedconnected and well informed thereby enhancing teamwork.

I used the Notion for my project management tool. A picture of the project calendar timeline has been attached below. The entire project took 64 days; however the intended timeline was 59 days this was due to my user testing which I had to extendby 5 days to accommodate the schedule of my participants.
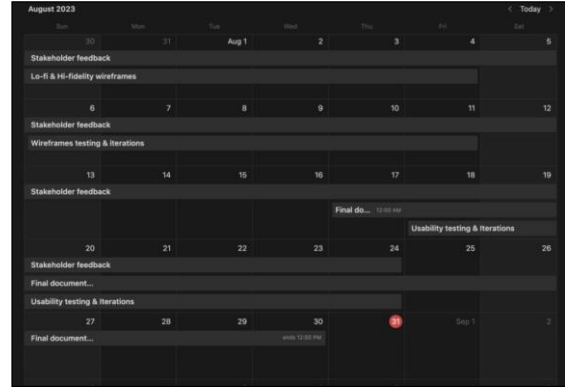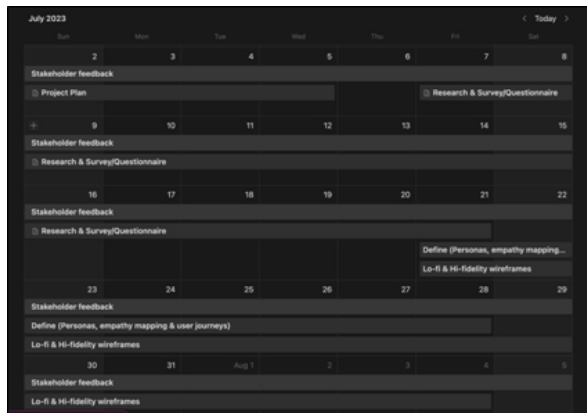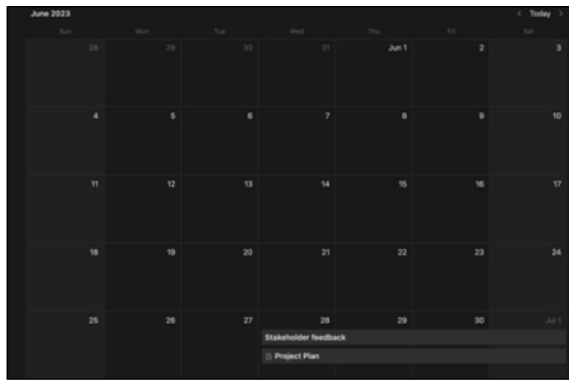

CONCLUSION

Based on the results of the usability testing the project successfully accomplished itsintended goals by having a high success rate of 86% from the test. The application effectively addressed the needs of users providing a user-centric and seamless experience. The implementation of a design thinking approach proved to be very effective aligning with the projects focus on meeting user needs comprehensively.

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