


1.0 Defining and Empathising with the Problem:


1.1 User Personas:

Here, these personas are based on the first part of the assignment. In addition, I have added an additional persona based on families, which may have different living arrangements to multi-tenanted flats.

Name	Alex Singh 
Age	32
Occupation	Senior Software Engineer
Location	New Zealand
Background	Alex Singh is a driven and creative individual who has been working in the software industry for the past eight years. Originally from a small town, Alex moved to the city after university to pursue a career in software, drawn by the dynamic nature of the field and the opportunities it offers for creativity and innovation.
Education	Alex holds a Bachelor of Engineering degree from a reputable university. Throughout university, Alex was involved in various extracurricular activities, including internships and part-time jobs, which provided practical experience and helped shape their career path.
Career	After graduating, Alex started their career as a Junior Software Engineer at Software4U. Over the years, Alex demonstrated a strong work ethic, skill, and strategic thinking, which led to promotions and increased responsibilities. Currently, Alex holds the position of Senior Software Engineer at a medium-sized company, where they oversee a team of software developers and lead various projects.
Interests	Outside of work, Alex enjoys staying active by participating in outdoor activities such as hiking, biking, and running. They are also an avid reader, with interests ranging from fiction to personal development. Alex values continuous learning and often attends industry conferences and workshops to stay updated with the latest trends and strategies in software engineering.
Personality	Outside of work, Alex enjoys staying active by participating in outdoor activities such as hiking, biking, and running. They are also an avid reader, with interests ranging from fiction to personal development. Alex values continuous learning and often attends industry conferences and workshops to stay updated with the latest trends and


	strategies in software engineering.
Goals	Professionally, Alex aims to continue growing in their career and eventually take on a leadership role within the software industry. They are passionate about making a meaningful impact through their work and aspire to become a respected thought leader in the field.

Alex's Flatmates:**Steve Momoa:**


Name	Steve Momoa: 
Age	38
Occupation	Restaurant Manager
Location	New Zealand
Background	Steve Momoa, 38 years old, is an experienced manager in the hospitality industry, currently overseeing operations at a bustling restaurant downtown.
Education	Steve earned a Diploma in Hospitality Management from a polytechnic in New Zealand. This diploma equipped him with practical skills and knowledge relevant to the hospitality industry.
Career	Steve's career in the hospitality industry began at an early age, working his way up from entry-level positions to managerial roles through dedication and hard work. He has gained valuable experience in restaurant management, menu development, customer service, and staff training over the years. He hopes to open his own restaurant someday.
Interests	Outside of work, Steve prioritizes his health and wellness by staying active and maintaining a balanced lifestyle. Being more sociable, you will find him playing rugby on the weekends or going fishing with the boys.
Personality	<p>Steve possesses a charismatic and outgoing personality that resonates with both customers and staff. He exudes confidence and warmth, creating a welcoming atmosphere in the restaurant and fostering strong relationships with patrons.</p> <p>Steve has a relaxed and carefree attitude towards money, often spending it freely without much concern for budgeting or financial constraints. Steve's blasé relationship with money reflects his belief in living in the moment and enjoying life to the fullest without worrying too much about financial matters.</p>

Goals	Steve is a very carefree person a lot of the time, this needs to be reflected in his daily experiences. When he gets muddled into details, he often gets overwhelmed and disinterested.
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Sam Kelleher:


Name	Sam Kelleher: 
Age	25
Occupation	PhD Student
Location	New Zealand
Background	<p>Sam is a 28-year-old PhD student pursuing her doctorate in Economics at a prestigious university in New Zealand. Originally from a working-class family, Maya's journey to academia was driven by her passion for research and their desire to make a positive impact in the field of economics.</p> <p>She recently moved into the flat with Alex and Steve after living a 2-hour commute away. She currently is inbetween flats as she has to pay rent there until a new tenant moves in.</p>
Education	Sam holds a master's degree in economics from the same university where she is now pursuing her PhD. Their academic journey has been marked by dedication and hard work, as they strive to excel in their studies and contribute meaningfully to the field.
Career	Sam's primary focus is on conducting research, writing dissertations, and publishing papers in peer-reviewed journals. They aspire to pursue a career in academia or research, where they can continue to explore her research interests and contribute to scholarly discourse.
Interests	To alleviate stress and maintain overall well-being, they practice mindfulness techniques such as meditation and yoga. They also enjoy spending time outdoors, going for walks in nature, and engaging in creative activities like painting and journaling.
Personality	Maya values collaboration and mutual support within her shared living environment. She strives to maintain harmonious relationships with

	her flatmates and is considerate of their needs and concerns. They are also pragmatic and resourceful, having a very good eye for finances and all matters money.
Goals	<p>Coming from a poorer background. Their financial goals revolve around achieving stability and security during her academic journey. She seeks to manage her expenses prudently, build an emergency fund, and minimize debt to alleviate money-related stress and focus on her studies.</p> <p>Here, she likes to experience the feeling security.</p>


Name	<p>Emily Sharpe</p> 
Age	19
Occupation	University Student
Location	Timaru, New Zealand
Background	Currently studying at Canterbury University. Emily's primary goal is to excel in her studies and achieve academic success. She is committed to maintaining a high GPA and actively seeks opportunities to make an impact.
Education	She is currently studying at Canterbury university,
Career	As a university student, they are still evolving. She hopes to gain practical experience through internships and part-time jobs related to her field of study. Ultimately, Emily aims to pursue further education or enter the workforce in roles that allow her to make a positive impact on society.
Interests	<p>Emily is passionate about community service and volunteers her time to support various causes and initiatives in her local community. She values social responsibility and believes in giving back to society.</p> <p>In terms of more personal recreation, she is an avid walker and is often spending her weekends exploring the wilderness around Canterbury.</p>
Personality	Emily is sociable and enjoys connecting with peers. She values collaboration and teamwork, often seeking input and feedback from others to improve her work.
Goals	Right now, her immediate goal is to graduate, however financial

	challenges from the cost-of-living crisis have resulted in difficulties for her. She has had to get a loan from some family to help support her expenses recently and needs to pay them back. This has put them into immediate focus with disregard for other issues now.
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The Ngata Family:

Names	<p>Hemi (Father), Mere (Mother), Wiremu (Son), Awhina (Daughter).</p>  <p>The following photo is them 10 years ago!!</p>
Ages	<p>Hemi Ngata (Father) - Age 42 Mere Ngata (Mother) - Age 45 Wiremu Ngata (Son) - Age 17 Awhina Ngata (Daughter) - Age 15</p>
Occupations	<p>Hemi works as a tradesman in the construction industry, specializing in carpentry and home renovations. Mere is employed as a primary school teacher at a local school, where she teaches Māori language and culture.</p>
Location	Tauranga, New Zealand
Background	The Ngata Family is a close-knit household residing in Tauranga. They have called this their home for generations, embracing the laid-back lifestyle and strong community bonds that characterize the region.
Education	<p>Hemi completed a trade apprenticeship after finishing high school and has acquired practical skills through years of hands-on experience. Mere holds a Bachelor of Education degree, specializing in Māori education, from a university in Auckland.</p> <p>Both Wiremu and Awhina are still in high school.</p>
Interests	<p>The Ngata family enjoys spending quality time together, participating in cultural events, and connecting with their extended family.</p> <p>Hemi is passionate about DIY projects, fishing, and outdoor activities. Mere enjoys gardening, cooking traditional Māori dishes, and attending cultural festivals.</p> <p>Tane is interested in technology, robotics, and sports such as rugby</p>

	<p>and basketball.</p> <p>Aroha is involved in community theatre, art exhibitions, and volunteer work aimed at supporting indigenous communities.</p>
Personality	<p>Hemi is known for his hardworking and reliable nature. He is practical, resourceful, and takes pride in providing for his family.</p> <p>Mere is nurturing, patient, and passionate about education. She values cultural heritage and instils traditional values in her children.</p> <p>Tane is ambitious, independent, and academically driven. He aspires to pursue a career that allows him to make a positive impact on society.</p> <p>Aroha is creative, compassionate, and socially conscious. She actively participates in community events and advocates for causes she believes in.</p>
Goals	<p>Currently, the main goal of the family's parents is getting enough money to save for a deposit. They are nearly there, but are also keeping a watchful eye over any expenses that they can save on. Also, financial costs of having kids will soon be gone in a few years.</p> <p>The kids are eager to leave home and stake a place for themselves, Wiremu intends to study at the university of Waikato and Awhina is keen on working in Auckland at some point.</p>

Name	<p>Debbie the Property Manager</p> 
Age	55
Occupation	Property Manager
Location	New Zealand
Background	<p>Debbie is a property manager who oversees multiple boarding houses in urban areas. She has been in the property management industry for over a decade and has experience handling various rental properties. Debbie is efficient in her work but prefers to maintain a certain level of distance from tenants and day-to-day operations.</p>

Education	Debbie was never involved in university, heading straight into the workforce after her O-levels. She previously worked as a clerk for the company she resides in, before leveraging her social skills to move into her current role.
Career	After graduating high school, she moved into this company, slowly working up from a clerk to eventually holding a leadership position, managing several assistants herself.
Interests	Outside of work, Debbie enjoys spending time on her creative endeavours. She is a big painter, and sculptor. While she is still at work, she can't devote all her time to this, but she plans on dedicating more time once she retires.
Personality	While she is very sociable with people, she is close with, including her co-workers. She often finds herself separating herself with her tenants, to avoid any conflict of interest. Here, she works efficiently and is very organised. However, her lack of education makes picking up new technology more difficult for her than most.
Goals	Ensure smooth management of her rental properties with minimal direct involvement. Maximize profitability and minimize vacancies by maintaining well-maintained and attractive properties. Streamline administrative tasks and communications with tenants to save time and effort.

Challenges:

Managing multiple properties scattered across different locations.

Ensuring timely rent collection and maintenance requests without being physically present at each property.

Maintaining accurate records and documentation for legal and financial purposes.

Needs and Motivations:

Efficiency: Debbie seeks tools and solutions that allow her to efficiently manage her properties remotely, without the need for constant physical presence.

Transparency: She values transparency in communication and expects to have access to real-time updates and reports on property performance, rental payments, and maintenance requests.

Simplicity: Debbie prefers user-friendly interfaces and streamlined processes that require minimal training and effort to use.

Reliability: She requires a reliable platform that can handle critical tasks such as rent collection, property inspections, and tenant communication without glitches or delays.

Usage Scenario:

Debbie logs into the property management app on her mobile device to check the status of rental payments for all her properties.

She quickly views a summary dashboard showing overdue payments, upcoming lease renewals, and recent maintenance requests.

Debbie sends automated reminders to tenants with pending payments and assigns maintenance tasks to the appropriate contractors directly through the app.

She reviews and approves invoices submitted by contractors for completed maintenance work and updates property records accordingly.

Persona Image:

Debbie is a seasoned property manager who values efficiency and reliability in her daily operations.

She prefers to maintain a hands-off approach to property management, relying on technology to streamline administrative tasks and communications.

While she is not deeply involved in the day-to-day activities of her properties, Debbie remains proactive in ensuring their smooth operation and financial success.

1.2 Ideation

What are some key goals from Personas:

End goals:

- Long term financial success. Some people are interested in buying a house and want to keep a firm grip on expenses.
- Other people want to grow as an individual, through self-improvement.

Experience Goals

- Some people want security, but others want a carefree experience.
- In terms of experience, people want up to date features and compatibility. Other people want an intuitive and easy to learn experience.
- Some people want to be deeply involved in the product, but others want a more distant, external view.

Key User Types:

- Money conscious people/groups
- Distant people, not too much involvement.
- People without too much concern over money

What activities can address these goals:

- Giving people the flexibility to set goals for themselves, without deterring others.
- Offering a fun flavourful experience, with seamless use and up to date standards.
- Intuitive design, increasing usability for people less capable with technology.

Problem Statement:

Our app must cater to various groups and their goals when it comes to their flat expense management. By catering to managers, savers, and carefree people, we can ensure all feel comfortable using it. This comfort can be generated through making services, and by ensuring that we profile people and create the simplest user flows for each user's needs. By doing this, we can retain users as they won't feel overwhelmed with the services we offer, helping retain them.

Goals, Scenarios, Tasks and Metaphors:

Here, my primary goal is to set up goals, scenarios and tasks so that I can get a good idea of the architecture required for the website.

Goal Analysis:

Here a set of goals that will typically be experienced from the uses identified:

- Alex sets up an account.
- Alex's flatmates join the account.
- The flat reconsiders changing their expenses.
- Sam notifies Steve about late power.
- Emily pays for her power after being pinged.
- Debbie wants to add a new flat.
- Debbie wants to add a new expense
- The Ngata family are setting a spending goal.

Scenario Analysis:*Scenario 1 Alex sets up an account:*

Alex chooses to set up an account, after signing up from our homepage, he is immediately presented with the options of what he wants: is he setting up a new flat, a flatmate for an existing flat, or a property manager. He selects that he is setting up a new flat and he is then presented with a form asking for various information. Finally, he is asked if he is interested in setting a goal, he selects 'no' as he is not sure about the other flatmates. He fills this out and he reaches the dashboard page with all expenses and rent.

Scenario 1.1 Alex's flatmates join the account:

As they decided to use our service after a flat meeting, both flatmates intend to join the flat. They sign up and are presented with the options again, this time choosing the existing flat option. They are then presented with a screen asking for Alex to share the flat's ID code so they can request to join. They input the code that Alex promptly shares. Alex then accepts these requests that are informed via email. Both flatmates can now view a dashboard of their rent and expenses.

Scenario 1.2 The flat is reconsidering their expenses.

After talking to flatmates about their broadband plan, they decide to upgrade their package to one that provides unlimited fibre. This costs more than their current ADSL package. As a result, Sam opens the webapp, goes into expenses management, clicks the broadband expense, and updates it to the new cost, ensuring that it is billed correctly.

Scenario 1.3 Sam notifies Steve about a power bill.

Sam, who tends to be onto it with finances, notices that they are a bit short on expenses from the dashboard. Upon further inspection, they notice that the missing payment appears to be the power one, and that Steve hasn't marked off having paid his share. She clicks a box on the expense to notify Steve that he hasn't paid yet.

Scenario 2.1 Emily pays for power after notification:

While Emily is studying at university, she gets a notification from her phone about being pinged for a payment. Looking at it, she sees that one of her flatmates says that she hasn't paid for power. She quickly transfers money to the shared flat account. Afterwards, she opens the app, finds the section for expenses and checks the box that she paid for power.

Scenario 3 Debbie wants to add a new flat and then view their expenses:

Debbie has decided to add a new flat to her account. Here, she navigates to the group management section, selects add a new flat. She puts in the relevant information (name/address, rent, power) for that flat. Afterwards, she is redirected to the main dashboard, which by default has all flat expenses. This will now include the new flat as well.

Scenario 3.1 Debbie is creating a new expense:

One of Debbie's flats needs housekeeping, she organises a housekeeper and wants to add that as an expense for the boarding house. She navigates to the flat on her dashboard and opens their expenses. She then selects "add new expense" and puts in the billing information, which includes name, date, period, and amount.

Scenario 4 Ngata Family is Goal Setting:

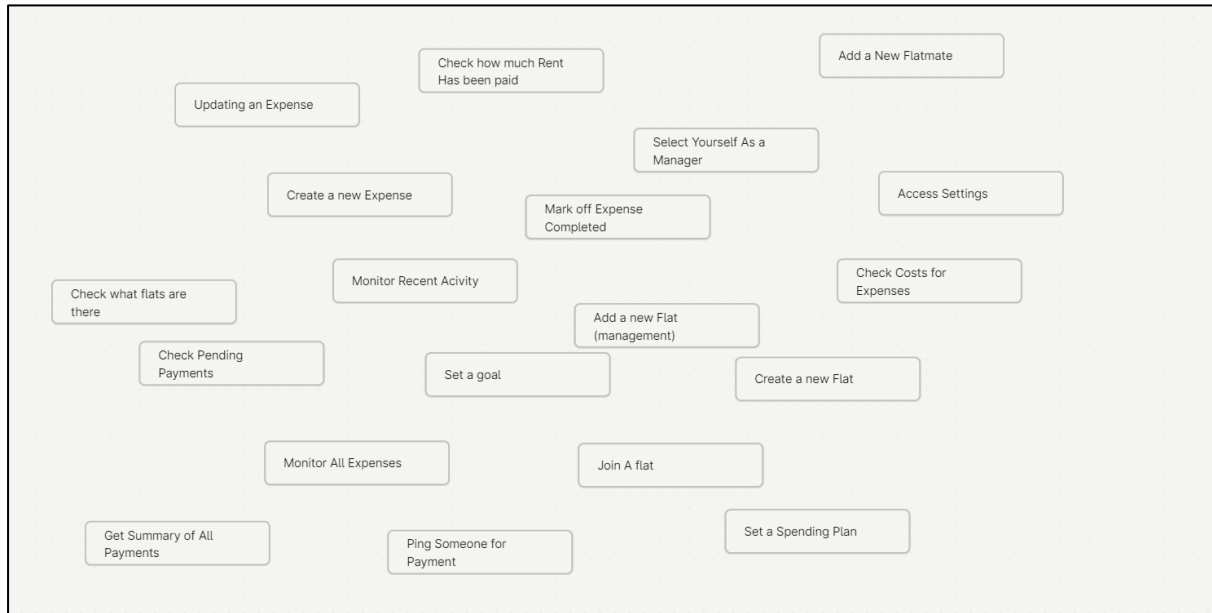
The Ngata family notice that they are spending a lot of money on power. They decide to decrease their power bill by 10%. To help combat this, they hope to use the goal-setting feature on the app. They open the goals section of the website and select 'add a new goal'. When filling out the form they select that they want to manage their power expense, that they want to decrease it by 10%. They then create it. Afterwards they can see a status notification on their dashboard, informing them of their goal!

Information Architecture:

Here, we can establish the needs of

Labelling:

Reflecting on user tasks and scenarios, we need to design an intuitive user architecture for the website.



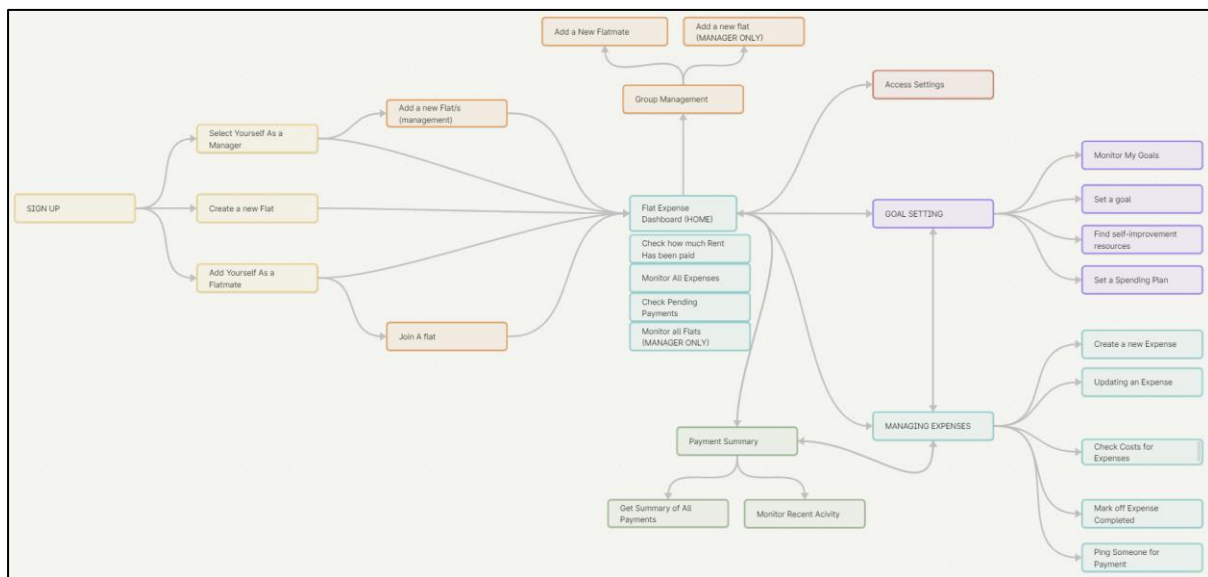
Categorising:

Here, I broadly categories the components of the website into general information spaces.

Largely speaking, we have aligned each group with where people are likely to meet their goals.

Here, if someone's interested in the status of groups, they would stick with the cyan groups. But if they want to set a goal, they may be more attracted towards the purple section.



Structure:

Reflecting on the organisation, we would ideally have a matrix organisation. With the dashboard for the expenses being front and centre. This can then branch out into the various designs.

References:

Used AI with the prompt:

Do a statement on a new persona, covering this person. please include their background, education, career, personality, interests and goals.

If this management system goes beyond the flatmates. Another stakeholder we could consider are landlords/property managers in a boarding house. We can think of these people as another type of primary persona. However, they have different needs for an app. By knowing priorities and motivations, we can tailor a solution for them. This could be a 'Debbie the Distant' manager, where we have a 'landlord view' with limited involvement and just tracking on mobile UX or web app so that it is easy to use. This represents a different purpose for the same app and needs to be accounted for.

Used AI with the prompt:

Do a statement on a new persona, covering this person. please include their background, education, career, personality, interests, and goals.

In terms of our more direct users may also want additional primary personae for our user to boost the range of our products design. We could explore their concerns if they were a female university student, who is less tech proficient. These people will have unique concerns and goals compared to the more affluent Alex. This will provide greater range and prevent stereotyping for the app, as it would be unwise to solely target affluent, middle-aged renters [9]. Similarly, by accounting for this in our approach to the UX, we could incorporate parts of our strategy to help poorer users, as well as others with different needs. This would broaden the range of our approach, making it more robust to the needs of renters in New Zealand.

Used AI with the prompt:

Do a statement on a new persona, covering this person. please include their background, education, career, personality, interests and goals.

One way we can view our users is as a group of stakeholder's personas based on a flat's dynamic. Within the flat, we will need to address wildly different personas. We could have a money-anxious PhD student, or a money-careless manager. Doing this in mind would account for group dynamics within a flat, as well as identify common pain-points in shared-living situations. By catering to the mixture of individuals in Alex's flat, we can create a general approach to handling the flat. This may mean that there are more features that allow for concerns and desires within the flat to be brought up in a safe environment, improving their experience.

Used AI with the prompt:

Create a persona for the Ngata Family, based on ages, background, personalities, location, occupations, goals, interests, education.