TEAM PROJECT DELIVERABLE

RYM

Team Laugh

Table of Contents

I. Problem Statement.

(repeat here from chapter 13 below. Make sure that in the case of
Problem Statement, it is not directly taken from your `create your project concept' assignment and is professionally re-worded exactly as in the text book provided template.)

PROBLEM

In developing this app, we will face budget issues with no income from future app users as well as security problems such as verifying users and property owners.

Assumptions

- Users will not want to spend money, they will want a free platform to get their needs fulfilled.
- Assume that there will be users who have malicious intent such as wanting to catfish or manipulate other users for their own amusement or scam others for profit.
- There will be underaged users who will try to get on the app. We would need to find a way to enforce rules and verification to filter out not serious users.

Constraints

- Money especially will be extremely limited. We will need money to maintain and upkeep the app's server and future updates.
- Time limit for each release. We will want to meet stakeholders' needs first but we will not be able to implement every single feature we want at the first initial release.
- We will also need to take account for our team's abilities, just because there is a feature we want does not mean we will be able to do them in a certain way or even able to implement the feature successfully.

II. Goals and Objectives

State your goals and objectives.

Goal #1

Match compatible roommates together quickly.

Goal #2

Find compatible roommates and show them to the user.

Goal #3

Make swiping and showing new roommates quick.

Objective #1

Match roommates based first on location, then budget, then on their interests and display them in the user’s feed.

Objective #2

Search for compatible roommates based on the user’s profile and find matches within 3 hours.

Objective #3

Each time a user swipes the time to load a new profile is less than 10ms.

III. Stakeholders

(include the list of all stakeholders including your users)

User 1

Potential roommate (renter/subtenants)

User 2

House owner (tenant)

Stakeholder 1

Young Adults

Stakeholder 2

Homeowners

Stakeholder 3

Developers

IV. Assumptions and Constraints

(The three P's: people, process and product)

People

1. Are creating an account for themselves
2. Are owners of email accounts they input
3. Our users will follow and use our service as described in our end-user license agreement (EULA)

Process

1. The process from account creation to profile setup is straightforward and intuitive
2. After account creation the user is able to logout and log back in with the same information they've provided

Product

1. The product can run on multiple devices under one account
2. Third party APIs, licences, and software used to run our product won't be obsolete, removed, or invite vulnerabilities like viruses, hackers, or leak of user/company data

V. Examples of Alignment with new Agile Triangle

(explain in simple terms, how you meet
the following: Quality, Value and traditional triple constraints: scope, cost, time constraints)

Two simple techniques

1. Interview potential users & developers, then develop personas & user stories to reflect user needs.
2. Practice weekly meetings among developers to assess member's work & see if features developed meet objectives and provide user value.

Example for Value

Obtain value for tailored ads. For example, getting location specific ad data for revenue. This allows for stakeholders to get money while customers keep using the app for “free.”

Example for Quality

Ensure that users have accessible connections to local and further areas open for housing, connecting people who are leasing and people who are needing housing by allowing users to search for other accounts.

VI. Examples of User Stories with application of INVEST and MOSCOW Principles

From our user stories, we can justify the project with just two topics, the search and making the profile. (Will change up so it fits formatting)

Search

MoSCoW

Must have

Search is necessary because users need to quickly network with other users who meet their search criteria. Otherwise matching homeowners and renters could not find each other.

Should have

The search results should show the closest matches to the search criteria first, with less close matches following in descending order.

Could have

It would be nice to be able to optimize searches with predefined user tags such as location, price range, etc.

Wouldn’t have

No results should be shown that are not relevant to the search criteria.

INVEST

Independent

Users enter their search criteria and results depend on user type (homeowner/tenants or renter/subtenants)

Negotiable

Users specify the search parameters and get desired results

Value

Makes it easier for users to find each other by filtering in only the users that meet the search criteria

Estimable

We as developers know how long it takes to make a dropdown menu for the search bar and the time it takes to develop a search algorithm like Binary Search.

Small

Drop down menu for search bar and binary search

Testable

This can be tested by checking if users' can see other users' profiles that match their search criteria.

Make Profile

MoSCoW

Must have

Must have the ability to create a profile to allow users to represent themselves and have their own criteria,so they can be matched with other desired homeowners/renters (tenants/subtenants). Otherwise, there is no way for users to match based on the information in their profiles like location type and price range.

Should have

When a user is making a profile they should have a way to enter in their information.

Could have

It could have a way to verify if users are real with a photo id

Wouldn’t have

The profile cannot have any irrelevant information in it.

INVEST

Independent

User enters data into relevant sections in the appropriate field and making the profile does not depend on any other process.

Negotiable

Users must be able to capture the essential details about themselves like their price range, location, and type.

Value

Shows the user’s availability and needs to other users

Estimable

Can be estimated in the number of hours it takes to build the profile in HTML, CSS, and Javascript.

Small

Building the profile is a small task that consists of displaying the user information and a button for submitting the user’s information.

Testable

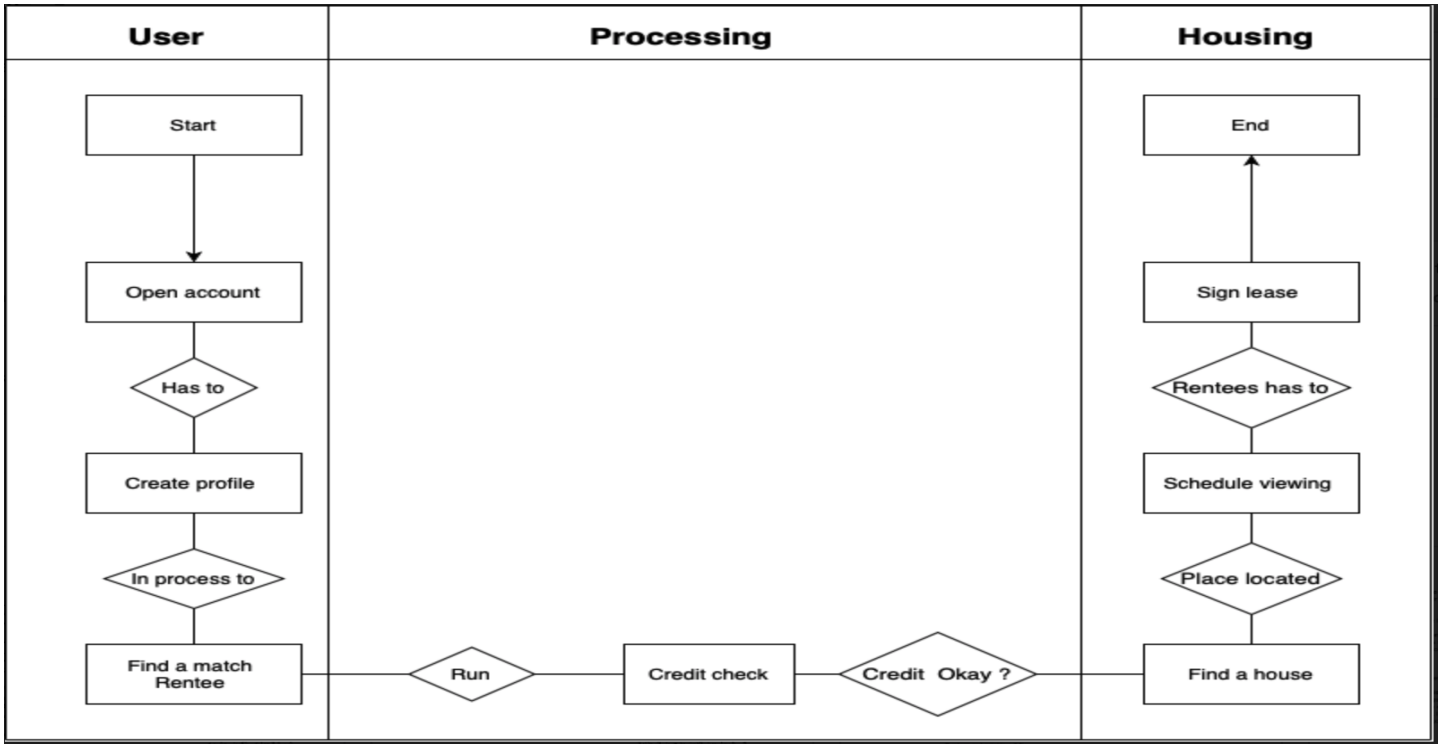
To test this we would submit sample user information into the appropriate fields, click the submit button, and see if the sample user information we created displays.

VII. TECHNIQUES USED FOR ANALYSIS

A. Understanding Stakeholders: (from Chapter 11)

(3) **User Modeling**: Categories and Specific types within each category **(Matt and Yared)**

We have two kinds of users: one - the tenants who own, rent, or sublease a property and two - the subtenants who are seeking a place to stay. Our product, RYM (pronounced as “room”), is created to bridge the gap in pairing both the tenants and subtenants by location, budget, persona, allow communication between the two, and manage payment from the subtenant to the tenant; as a result, RYM needs to be able to let both users, the tenant and subtenant, create a user profile, allow the tenant to specify the location they have a room available and for the subtenant to search for roommate based on their location, budget, and compatible persona. **(Matt)**



(Image by Yared)

B. Understanding Context: (Chapter 12)

(2) **Six Questions (Jarod Castillo)**

Differentiating activities within our organization:

Whom do we serve?

The customer; The average college student

What do they want and need the most?

They need a place to stay and want to split the rent to save money.

What do we provide to help them?

A faster and a more accessible way of searching for people and housing that are available for renting.

What is the best way to provide this?

Giving users an easier time through our Web-Based/iOS/Android application. Implications of our differentiating activities for our organization.

How do we know we are succeeding?

If our daily-active users are either linearly increasing or exponentially increasing.

How should we organize to deliver?

An iOS/Android application that works as a service for the customer. Users will be able to create a profile and match with other profiles that suit their preferences.

C. Understanding the Need: (from Chapter 13)

(2) **Project Opportunity Assessment (Sharon Fitzpatrick)**

1. Exactly what problem will this solve?

The problem of trying to find compatible roommates who are in the same location with the same price range and shared interests.

2. For whom do we solve this problem?

We solve this problem for homeowners seeking roommates and individuals looking to become roommates.

3. What can be gained from solving this problem?

Individuals can easily and quickly find roommates. Helps individuals moving to a new place quickly find a place to stay that suits their needs.

4. How will we measure success?

Does a user find a suitable roommate within 30 days? On average do most users leave feedback that they liked the roommate they found?

5. What alternatives are out there now?

    1.Circle for Roommates
    2.CirTru

6. Do we have the right people to solve this problem?

Yes, we have a team of dedicated developers with first-hand experience with finding roommates.

7. Why now?

    With the upcoming housing crisis as a direct result of people who were not able to pay rent during the pandemic, there will be many people looking for cheap places to stay.

8. How will we encourage adoption?

We will initially advertise this to college students and offer in-app bonuses for those who refer their friends to the app.

9. What factors are critical to success?

The factors critical to success are the initial adoption of the app by a large group of users seeking roommates in at least one location. The matching function finds roommates who meet the users' matching parameters and the user interface being easy to use and easy for the user to customize.

10. Is this problem worth solving?

Yes, there needs to be an easy way for people to find roommates.

(3) **Problem Statement (Daisy Le)**

PROBLEM

In developing this app, we will face budget issues with no income from future app users as well as security problems such as verifying users and property owners.

Assumptions

- Users will not want to spend money, they will want a free platform to get their needs fulfilled.
- Assume that there will be users who have malicious intent such as wanting to catfish or manipulate other users for their own amusement or scam others for profit.
- There will be underaged users who will try to get on the app. We would need to find a way to enforce rules and verification to filter out not serious users.

Constraints

- Money especially will be extremely limited. We will need money to maintain and upkeep the app's server and future updates.
- Time limit for each release. We will want to meet stakeholders' needs first but we will not be able to implement every single feature we want at the first initial release.
- We will also need to take account of our team's abilities, just because there is a feature we want does not mean we will be able to do them in a certain way or even able to implement the feature successfully.

D. Understanding the Solution: (Chapter 14)

(1) **Impact Map with -- why, who, how, what (Dominic Nance)**

Why are we doing this?

The goal that our project is trying to accomplish is making housing much more affordable to a wider audience. While the audience includes everyone, this product specifically helps out young adults; since real estate is booming in prices, being able to afford to live in a home is growing much more difficult. This application aims to reduce the stress of having a roof over people's heads and hopes to build close relationships and understandings with potential roommates as they attempt to find a home to rent.

Who can bring the organization closer to this objective, or conversely who may prevent us from reaching the objective?

Any stakeholder, whether it's a user, developer, or any person a part of the development process, can bring the organization closer or prevent us from reaching the objective. If you invest your time into building a foundation that'll help many people rent a home, such as advertising or finding potential users, the system can thrive with more people. Or if you're a user looking to lease your home(s) to other users, help to add

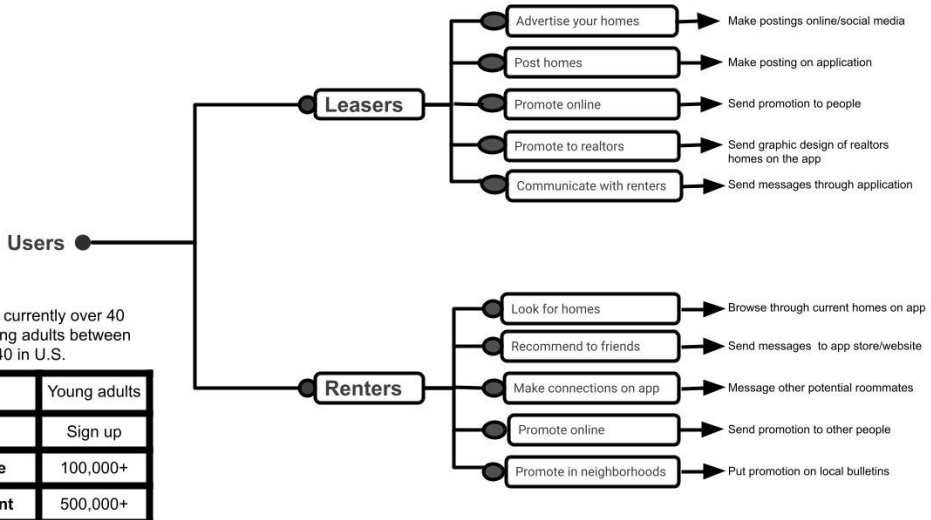
more options for people in our market. Conversely, if there's not enough people putting effort to add their color into the product, then the product will not succeed.

How should our actors' behavior change?

We're trying to generate a large group of users so that the system works. In order for this to work, the actors must be enthusiastic about this product so that, like other systems like social media with large networks of people, many people can interact and create conversations about living scenarios.

What can the organization (specifically the delivery team) do to support the desired impacts?

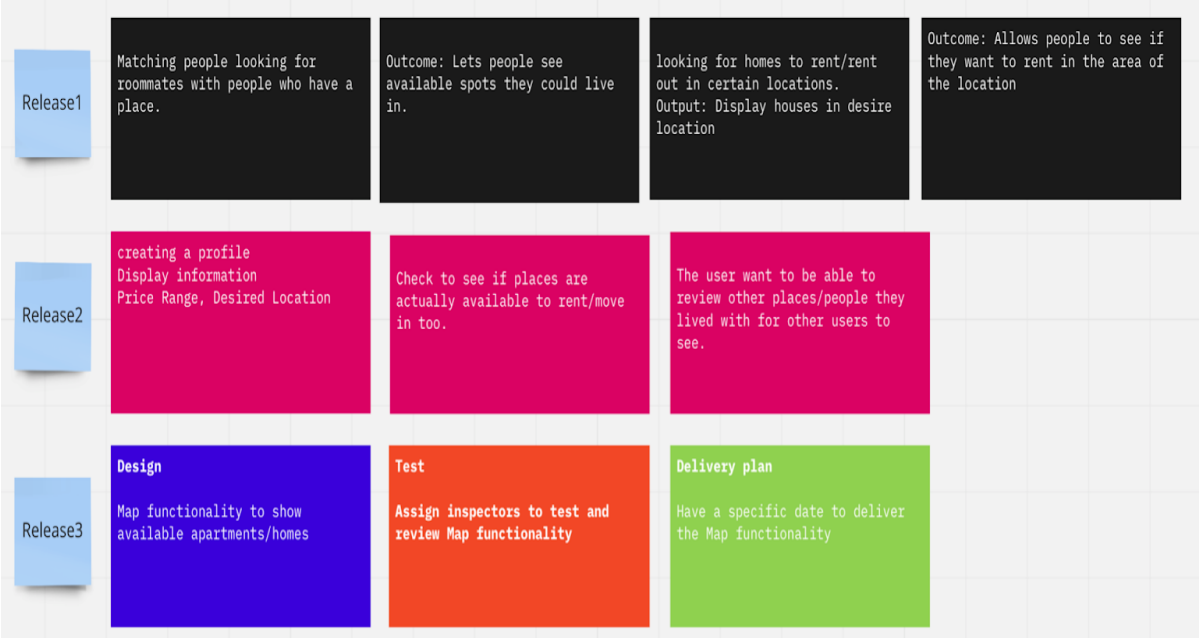
Since this is much more of an iterative process in terms of development, the delivery team should take their time to listen to feedback and incorporate it into their user stories and epics. At first, only the necessary requirements should make the cut, but the "should have/could have" ideas will give the product more personality and better UI as the iterative development continues.



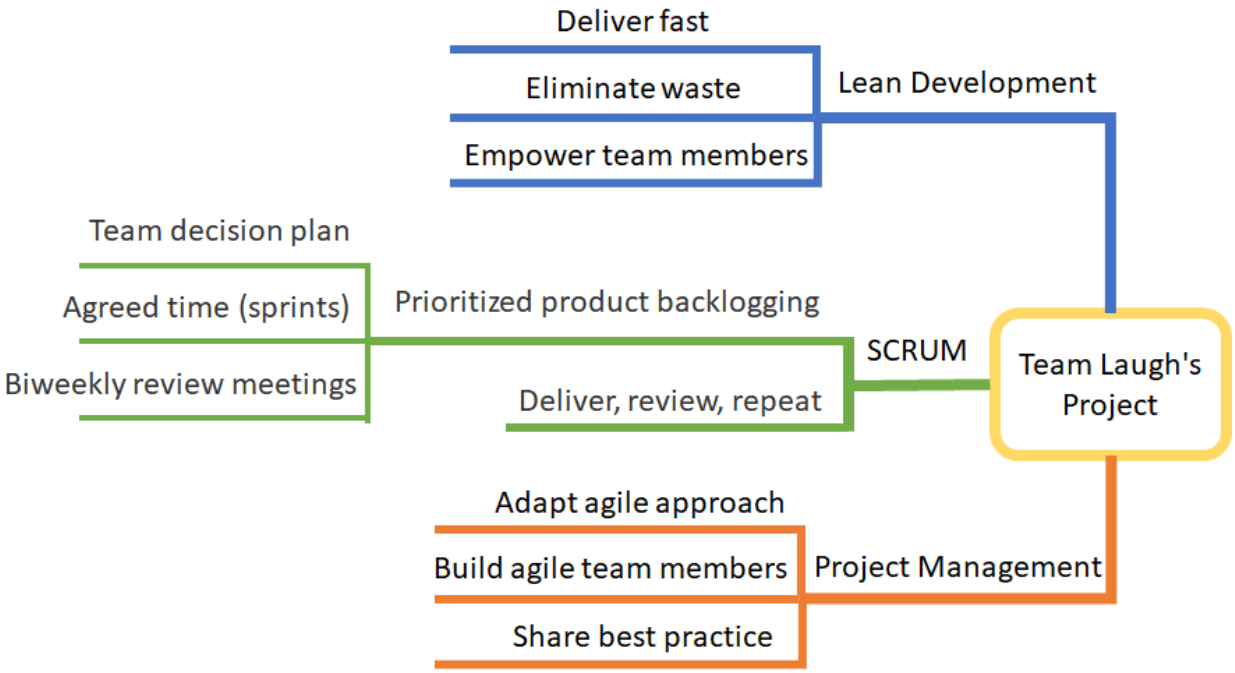
*There are currently over 40 million young adults between age 15 to 40 in U.S.

Scale	Young adults
Meter	Sign up
Baseline	100,000+
Constraint	500,000+
Target	2,000,000+

(2) **Story map (Mohammed Msallam)**



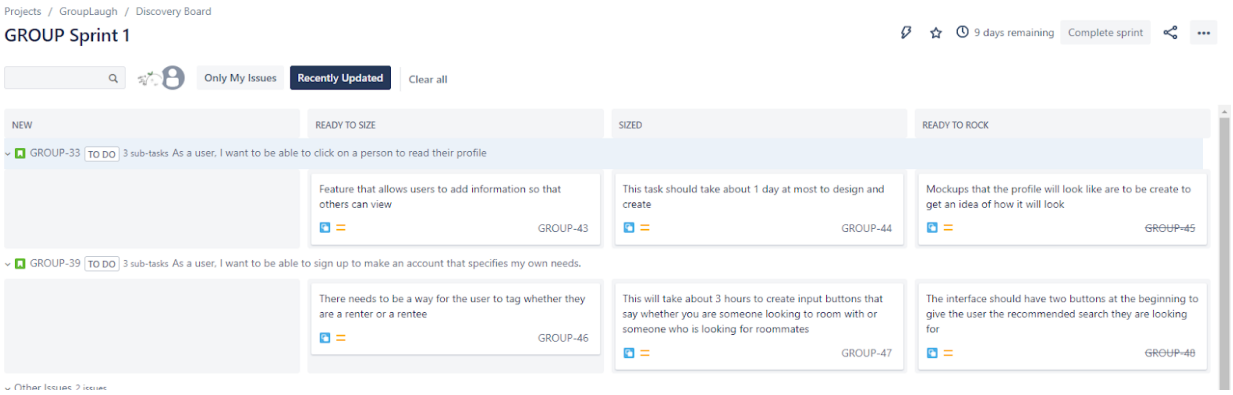
(4) **Mind Map of Acceptance Criteria (Matthew Mendoza)**



E. **Organizing and Persisting Solution Information (using JIRA): (Belle Nguyen)**

(1) Discovery board

https://grouplaugh.atlassian.net/secure/RapidBoard.jspa?rapidView=10&atlOrigin=eyJpIjoiYmM0OGI3OWY4YTg0NGZmMTg5MzBkNGEzNjEzZTZkODUiLCJwIjoiaiJ9



(3) Definition of Ready

What qualifies as “ready” in terms from our team would be that from our user stories, we can determine what features need to be made for our project. Thus for our discovery board we take into account the user stories, like in this case the example shown will discuss how the users want to have profile-like features. Then for the size we can see how long or what we can get done within our power, in which the feature to allow users to input info and to let users distinguish whether they are someone looking for more roommates or looking for a roommate will take us about one day and three hours. We then have our ready to rock in which once we figure out how exactly we want the layout to be and we can see that the section from the user story about wanting to use profiles to find what they are looking for is ready to be integrated.

RYM - SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

Overview of Roommate Matching Application

1.1 Matching Users

After the success of apps like Tinder, Bumble, Hinge and more the framework of building apps based on the **swipe** feature has risen exponentially in popularity. This success has inspired our team of developers to create the roommate matching app RYM. The idea behind RYM is to have users make their own profiles stating their price range for the rent they can pay, the location where they will be renting to or from, their interests and whether or not they are a homeowner or renter. These profiles are then used to match them to other users based primarily on location, price range, whether the user is a homeowner or not, then on other criteria from the profile like interests. Users can swipe on roommates depending on if they think they are compatible or not and if they believe they are they can chat using RYM's chat feature then connect off app to form a rental agreement.

Project SRS v1-1

1. Introduction

RYM is a mobile phone application that individuals use to find compatible roommates based on price range, location, and interests.

1.1 Product Vision

RYM has users create a user profile with their price range, location, interests, and whether they are looking for a roommate with a home or without a home. It uses this profile data to find compatible roommates that match price range and location first, then match on shared interests. Users will be shown compatible roommates when they enter the "Find My Roommate" page and can swipe left (disapprove) or right (approve) to choose their desired roommate. If both users approve, then they can chat with each other and decide if they want to become roommates.

1.2 Project Scope

RYM is an open-source mobile application that must have a beta version out by the end of Summer 2021.

1.3 Stakeholders

Project stakeholders include the following.

1. The developers
2. The users

1.4 Design and Implementation Constraints

1. RYM must be written in REACT Native.
2. RYM must use a form of secure payment.
3. RYM must be tested with automated unit tests and integration tests.
4. RYM must be shared amongst developers using GitHub.
5. The version control system used must be Git.

2. Functional Requirements

2.1 Product Behavior

1. RYM must have features for both roommates and homeowners.
2. Homeowners must be able to post photos of their homes.
3. Roommates must check whether they are a “Homeowner” or “Seeking a home” in the homeowner section of their profile.
4. Roommates must set their price range in the budget section of their profile.
5. Roommates must set their location in the location section of their profile.
6. Roommates who do not have interests will have their interests shown as “private”.
7. When a roommate and a homeowner match a new chat will appear in the chat section with the roommates’ names and user icon.
8. When a roommate and a homeowner match a popup will appear with the other roommate’s user profile showing the text “You Matched!”
9. When a user swipes to the left the profile being displayed disappears and a new profile that matches the user’s preferences slides in from the right.
10. When a user is done chatting with another user they can hold the chat box and a popup will appear asking if they want to delete it or block the user.

2.2 User Interfaces

A mockup of the user interface has been created in figma and is in the file, figma_RYM_prototype.pdf.

2.3 System Interfaces

1. RYM can run on both android and iphones that support REACT native.

2.4 Data Requirements

1. RYM must accept png, jpeg,jpg psd, and tiff image types for upload.

3. Non-Functional Requirements

1. The RYM must load in at most 20 ms.
2. A user must receive at least 1 compatible roommate within 3 hours of initially making their profile.
3. After a user clicks submit on their profile it must take no longer than 10 ms to reload the profile page.
4. After a user swipes a profile it must not take longer than 10ms to load a new profile if there is one available.

4. Other Requirements

1. RYM must be sold on the Google Play Store and on the Apple App Store.
2. RYM must have at least 10 users within 20 miles of a single location to be effective.

5. Glossary

Swipe

A finger’s motion to the left or right on a touchscreen.

Match

A match is an event that occurs when two user’s with compatible profiles both swipe right (approve) each other and a chat option is formed for them to communicate

Popup

A message or image that appears on top of everything on screen typically done to alert the user of an event