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- Seminar report -

catMe

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Abstract

catMe is an application that has the purpose of connecting cat owners and cat enthusiasts. It also provides a platform for those who are searching for a cat sitter while on vacation or off to work. The app itself wants to check whether persons are in your vicinity so that you can see if there is a need for a cat sitter, or if there is a cat that needs to be taken care of. This will be done by asking for your location or if this is not something you want to share, by letting the user enter their city. If you find someone that matches your wishes, there will be a chat function available so that you can get in touch with that specific person. There will be a function to review people's profiles so that you can have a first impression. Having all those functions presented, we would like to add a safe money function where the cat owner can pay the cat sitter within a safe space via “catMe-Secure-Pay”. This option will hold the money that the cat owner paid so that the money is in a haven. It will be divided by the days that the cat will be watched, so the cat sitter needs to track when the cat sitting did happen. Only then when the cat sitter, ticked the sitting happened, and the cat owner accepted this, the money will be partially given to the cat sitter's account.

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# Introduction

In this section, the idea and the motivation of the project are described.

## Motivation

Many people love their cats and want to ensure that they are well taken care of when they are away from home. We understand that finding someone to look after your cat can be a challenge.

Our application has been developed to address this problem and make the process of finding a cat sitter as easy as possible. It provides a platform for cat owners to connect with experienced cat sitters who can take care of their cats while they are away.

## Idea

The idea of this project is to develop a cat-sitting application, where people can find someone to take care of their cat or cats. This new platform also allows new cat owners to receive advice from experienced cat owners.

Every user posts the days they will be on vacation or away from home, and the cat sitters see the post and contact the cat owner based on their availability on the dates they need to take care of the cat. Cat owners can access the profile of the cat sitter who is willing to take care of their cat and make a choice based on the cat sitter's profile. Factors in choosing a cat sitter can be experience, cost per day, or distance from home

## Goals

# Requirements Engineering

## Storyboard

A group of posters with text

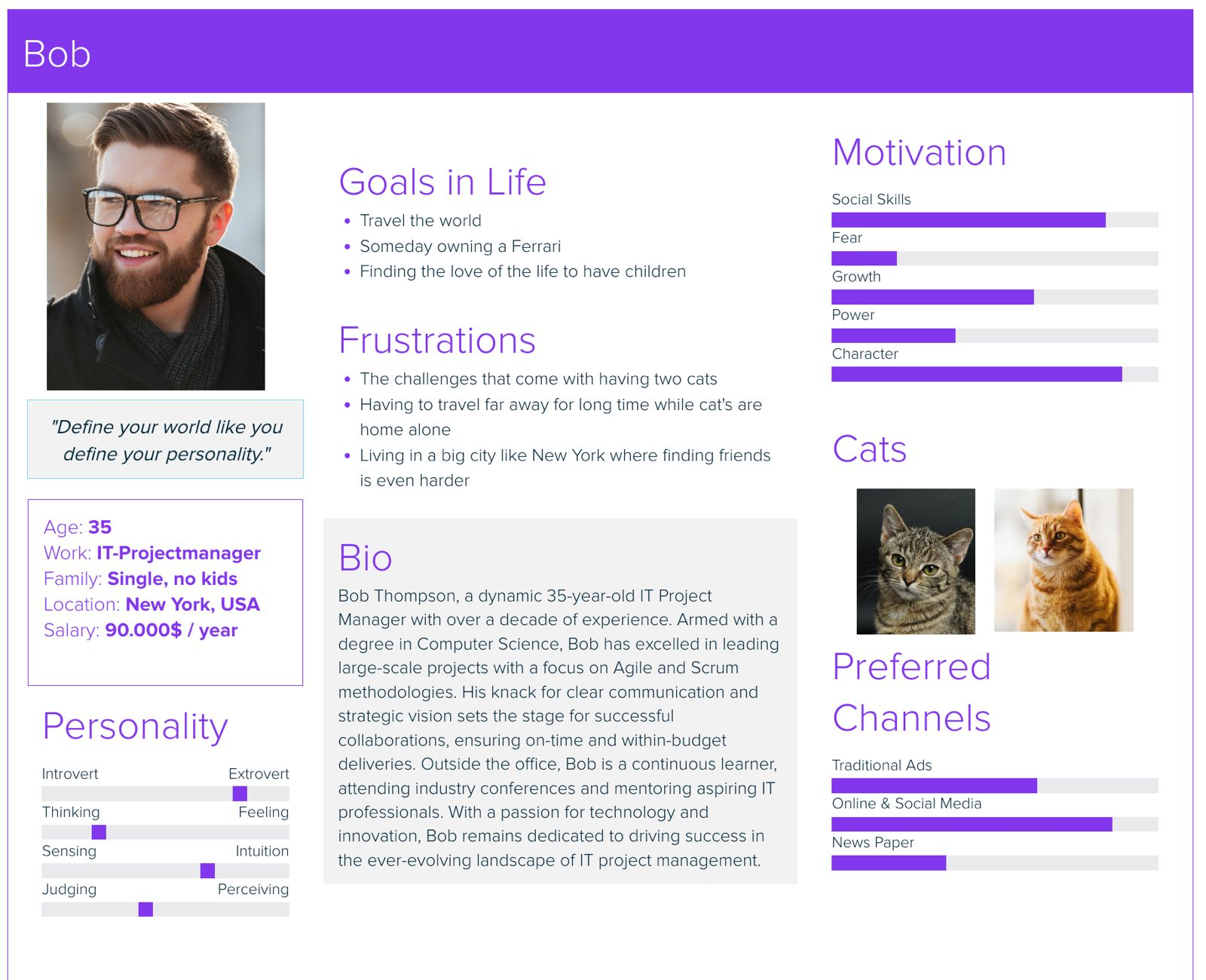
Description automatically generated

In this storyboard is shown the story of a friend who suggests to another friend doing a trip, his friend agrees, but he thinks that it could be difficult to go on a vacation due to his cat. Then his friend, who is a cat owner as well, suggested to him catMe application to find a cat sitter there.

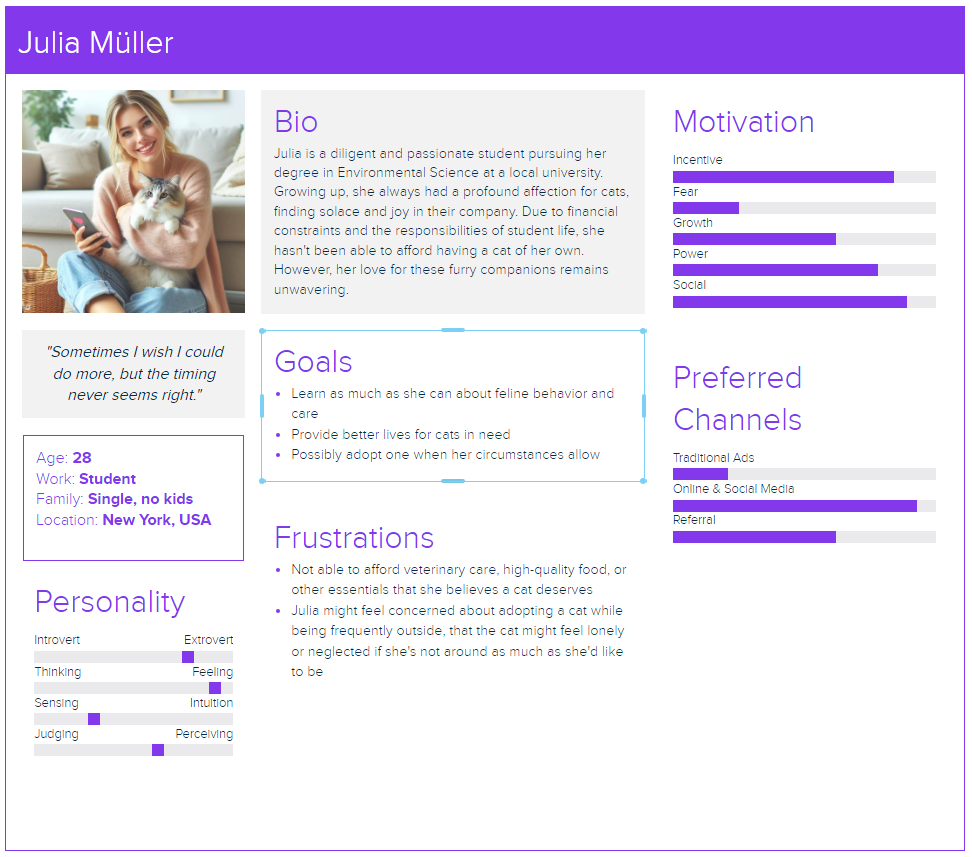
 This is a representation of how catMe could help people since it is always hard to find someone to look after their cats.

## Personas

### Persona 1



### Persona 2



## User Stories

1. User Stories 1

“As a cat sitter I want to see the distance of the cats that are shown to me, therefore I can choose whether it is suitable or not.”

Acceptance Criteria:

* Cat sitters can see the approximate distance to the cat owner.
* The list is in an order of distance to the cat sitter, so that the cat sitter can choose from the nearest results.

1. User Stories 2

“As a cat sitter, I may not always be available to take care of the cat during all the necessary times. Therefore, I want to work only during certain times.”

Acceptance Criteria:

* Adjustable working hours according to individual preferences.
* Matching the times available for cat care with the advertised schedules.

1. User Stories 3

“As a cat sitter, I want to express my interest by advertising myself and my skillset.

Acceptance Criteria:

* The cat sitter must advertise his or her skills for the cat sitter by filling in a form letter and creating a profile.
* The cat owner can send me a request based on my profile, and we can discuss further details or negotiate terms through the app's messaging feature.

1. User Stories 4

“As a cat owner using the app, I want to find a trustworthy cat sitter who can provide care and attention to my cat in my absence.”

Acceptance Criteria:

* I should be able to register on the app as a cat owner, providing details such as my name, contact information, and information about my cat(s) (names, breeds, special needs, habits, etc.).
* The app should provide a messaging or communication feature allowing me to directly contact potential cat sitters to discuss my cat's needs, ask questions, and negotiate terms.

1. User Stories 5

“As a cat owner, I want to find a cat sitter, whose experience, accommodation possibility, location, price, and available time match my needs.”

Acceptance Criteria:

* A cat owner should filter cat sitter opportunities through mentioned criteria, so that he/she can find the best possible cat sitter
* A cat owner and a cat sitter should have private chat space so that they can negotiate about price, place, time period, and so on.

1. User Stories 6

"As a cat owner, I would like to receive regular updates on my cat from the person taking care of them.”

Acceptance Criteria:

* For example, I would like to have the ability to easily see my cat's condition through videos and pictures at specified intervals, such as twice a day.
* The platform should have a chat area where cat owners and cat caretakers can communicate.
* There should be a notification section where the cat's condition can be observed.

## Use Cases

Use Cases describes the interaction of a user with the application to reach a specific goal. It is used to document functionalities from the perspective of the user and consists out of a sequence of actions that take place in a prescribed order.

We described our Use Cases with the User Roles and a detailed description.

### The cat owner posts an advertisement for his/her cat

**Primary Actor**: Cat Owner

**Goal**: To create and publish an advertisement seeking a cat sitter for the cat(s) owned by the actor.

**Preconditions**:

* The cat owner must be registered and logged into catMe app.
* The cat owner has access to the necessary information about their cat(s) and their specific needs.

**Success Scenario**:

* The cat owner logs into the cat sitting service platform using their credentials.
* The cat owner navigates to the "Post Advertisement" or a similar section within the platform.
* The system presents a form prompting the cat owner to input details about the cat(s) and the requirements for a cat sitter.
* The cat owner fills in the necessary information, which may include:
  + Number of cats needing a sitter.
  + Cat(s) names, breeds, ages, and any specific medical or dietary needs.
  + Duration of the cat sitting period (start date and end date).
  + Location where the cat sitting will take place (if applicable).
  + Any additional preferences or requirements for the cat sitter (e.g., experience, availability, references).
* Once all required information is entered, the cat owner reviews the details provided to ensure accuracy and completeness.
* The cat owner submits the advertisement through the platform.
* The system processes the advertisement and publishes it on the platform, making it visible to potential cat sitters.

**Alternative Flows:**

If the cat owner encounters errors while filling out the form:

* The system displays appropriate error messages and prompts the cat owner to correct the information before submission.
* If the cat owner decides to edit the advertisement after submission:
* The cat owner can access their posted advertisement and make necessary modifications or updates through the platform's editing functionality.

If the cat owner wants to remove the advertisement:

* The cat owner can delete the advertisement from the platform, removing it from visibility to potential cat sitters.

**Postconditions:**

* The advertisement seeking a cat sitter is successfully posted and visible to potential cat sitters on the platform.
* Interested cat sitters can view the advertisement and contact the cat owner as per the provided contact information or through the platform's messaging system.

### The Cat Sitter Searches for a Suitable Cat and Applies to be the Cat Sitter

**Primary Actor**: Cat Sitter

**Goal**: To search for available cat sitting opportunities and apply to become the cat sitter for a specific cat based on suitability and preferences.

**Preconditions**:

* The cat sitter must be registered and logged into catMe app.
* The system must have active cat sitting advertisements posted by cat owners seeking a cat sitter.

**Success Scenario:**

* The cat sitter logs into the cat sitting service platform using their credentials.
* The cat sitter navigates to the "Search" or a similar section within the platform to find available cat sitting opportunities.
* The system displays a list of available cats sitting advertisements posted by cat owners seeking a cat sitter.
* The cat sitter filters or searches through the available advertisements based on preferences, which may include:
  + Location of the cat sitting job.
  + Number and specific details of cats needing a sitter.
  + Duration of the cat sitting period.
  + Specific requirements or preferences set by the cat owners (e.g., experience, availability, references).
* Upon finding a suitable cat sitting opportunity, the cat sitter selects the specific advertisement to view detailed information about the cat(s) and the owner's requirements.
* The cat sitter reviews the advertisement to ensure it aligns with their capabilities, preferences, and availability.
* If the cat sitter decides to apply for the cat sitting opportunity, they initiate the application process through the platform, which may include:
  + Clicking on an "Apply" or "Express Interest" button provided within the advertisement.
  + Providing additional information or a brief message demonstrating their suitability for the cat sitting job.
* The system processes the application and notifies the cat owner about the cat sitter's interest in the cat sitting opportunity.

**Alternative Flows:**

If the cat sitter doesn’t find a suitable cat sitting opportunity:

* They can modify their search criteria and continue browsing other available advertisements on the platform.

If the cat owner accepts the cat sitter's application:

* The cat owner and cat sitter can communicate further through the messaging system to discuss details and finalize arrangements for the cat sitting job.

If the cat owner declines the cat sitter's application:

* The cat sitter receives a notification informing them that their application was not accepted for the specific cat sitting opportunity.

**Postconditions:**

* The cat sitter has applied for a specific cat sitting opportunity.
* The cat owner has received the application and can review the cat sitter's interest in their advertisement.
* Further communication between the cat owner and cat sitter may occur through the platform's messaging or communication channels.

### Negotiating between cat owner and cat sitter

**Primary Actors:** Cat Owner, Cat Sitter

**Goal:** To facilitate communication and negotiation between the cat owner and cat sitter regarding the terms, conditions, and details of the cat sitting arrangement.

**Preconditions:**

* The cat owner and cat sitter must have initiated communication through the platform regarding a specific cat sitting opportunity.
* Both the cat owner and cat sitter are registered and logged into the cat sitting service platform.

**Success Scenario:**

* The cat owner and cat sitter engage in a chat after the cat sitter apply for the cat sitting opportunity.
* Both parties discuss and negotiate various aspects related to the cat sitting arrangement, which may include:
  + Specific dates and times for the cat sitting period.
  + Detailed care instructions for the cat(s) (feeding schedule, medication if applicable, playtime, etc.).
  + Any specific requirements or preferences from both sides.
  + Rates or compensation for the cat sitting services.
  + Exchange of contact information or additional verification if necessary.
* The negotiation process continues until both the cat owner and cat sitter reach mutual agreement and satisfaction regarding the terms and conditions of the cat sitting arrangement.
* Once the negotiation is complete and both parties agree on the terms, they confirm the finalized details of the cat sitting agreement.

**Alternative Flows:**

If adjustments to the terms are required:

* Both parties can discuss and make necessary amendments to the agreement until a mutually acceptable arrangement is reached.

If either party decides to cancel the negotiation:

* Either the cat owner or cat sitter can decide to terminate the negotiation process if they are unable to reach a satisfactory agreement. In this case, they may explore other cat sitting opportunities available on the platform.

Postconditions:

* The cat owner and cat sitter have successfully negotiated and agreed upon the terms and conditions of the cat sitting arrangement.
* Both parties confirm their commitment to the finalized details of the agreement.

### The cat sitter takes updates for the cat owner

**Primary Actors:** Cat Sitter, Cat Owner

**Goal**: To keep the cat owner informed and updated about the well-being, activities, and care provided to the cat(s) during the cat sitting period.

**Preconditions:**

* The negotiation between the cat owner and cat sitter for the cat sitting arrangement has been successfully completed.
* The cat sitter has commenced the cat sitting period and is currently responsible for caring for the cat(s).

**Success Scenario:**

* During the agreed-upon cat sitting period, the cat sitter initiates regular updates to keep the cat owner informed about the cat's status and care.
* The cat sitter communicates updates through the platform's messaging system, or any other designated communication channel agreed upon during the negotiation phase.
* Updates provided by the cat sitter may include, but are not limited to:
  + Health and well-being of the cat(s).
  + Activities and interactions with the cat(s) (playtime, feeding, grooming, etc.).
  + Any notable behaviors or changes observed in the cat(s).
  + Administration of medication (if applicable) and adherence to care instructions provided by the cat owner.
* The frequency and level of detail in the updates are determined based on the agreement reached between the cat owner and cat sitter during the negotiation phase.
* The cat sitter ensures that the updates are timely and informative, providing reassurance to the cat owner about the well-being and care of their cat(s).
* Cat owner opens the catMe App and views the update, including pictures and videos, ensuring they have a clear understanding of their cat's daily condition.
* Cat owner receives a notification indicating that there's a new update from the cat sitter.
* Cat owner and cat sitter can engage in a chat within the app for any additional information or questions.

**Alternative Flows:**

If there are unexpected changes or concerns about the cat's health or behavior:

* The cat sitter promptly communicates these issues to the cat owner, seeking guidance or approval for necessary actions (such as contacting a veterinarian if required).

If the cat owner requests specific information or additional updates:

* The cat sitter accommodates these requests to the best of their ability, providing the requested information within the agreed-upon communication framework.

If there are difficulties in communication or updates cannot be sent:

* The cat sitter makes reasonable efforts to resolve communication issues and may seek assistance from the app support if necessary.

**Postconditions:**

* The cat owner receives regular and informative updates from the cat sitter regarding the care and status of their cat(s) during the cat sitting period.
* Both the cat owner and cat sitter maintain effective communication throughout the cat sitting arrangement.

## Requirement Specification

### Functional requirements

Functional requirements define what the app should do and specify its intended functionalities. The functional requirements of the application are as follows:

High Level of Importance:

1. User Authentication:

* Authentication and authorization for cat owners and cat sitters to access the platform and its features.

1. Messaging System:

* Messaging functionality for communication between cat owners and cat sitters throughout the process.

1. Advertisement Creation and Application Submission:

* Enable cat owners to create detailed advertisements and cat sitters to submit applications easily.

1. Update Functionality:

* Capability for cat sitters to provide regular updates on the cat(s) to the cat owners during the sitting period.

Medium Level of Importance

1. Advertisement Search and Filtering:

* Functional search and filtering options for cat sitters to find suitable cat sitting opportunities.

1. Negotiation Tracking:

* Tracking system to record and monitor the negotiation process between cat owners and cat sitters.

1. Advertisement Management:

* Tools for cat owners to manage their posted advertisements (editing, deleting).

Low Level of Importance:

1. Update Frequency Setting:

* Allow agreement between cat owners and cat sitters on the frequency and detail level of updates.

1. Emergency Communication:

* Capability for the cat sitter to quickly notify the cat owner in case of emergencies.

### Non-Functional requirements

Non-functional requirements define how the app should behave, perform, and operate, focusing on aspects beyond its specific functionalities. The non-functional requirements of the application are as follows:

* Security:
  + Data Encryption: Ensure all sensitive data (user credentials, personal information) is encrypted both in transit and at rest.
  + Secure Communication: Use secure communication protocols (e.g., HTTPS) for all interactions between users and the platform.
* Usability: The app’s interface should be easy to navigate, allowing users to complete tasks without having an issue.
* Privacy: The users may not access other users’ profiles and chats.
* Compatibility: The app should be compatible with the latest smartphone platforms (IOS and Android).

# Conceptual Model

## Component diagram

## Sequence diagram

## Mock-Ups

### Login Screen

### Register Screen

### Home Screen

# Software Architecture

# Result