



Analysis Document

Version	Description of Change	Author	Date
1.	First Pawsitive analysis	Khaoula El Yaagoubi Florence Gravenstein Marie Lou Zhang Sophie Dupont	12/02/2025
2.	Modified with the first feedback of the teacher.	Khaoula El Yaagoubi Florence Gravenstein Marie Lou Zhang Sophie Dupont	27/02/2025

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1. Textual description

The objective of the Pawsitive app is to connect dog owners with trusted dogsitters. Pawsitive allows both dog owners and sitters to create comprehensive profiles.

The development of the Pawsitive application will be incremental. For the first version of the app, the scope in terms of functionalities and geographic coverage will be limited. In later versions of the application, based on users' feedback, more elaborate functionalities will be added, and geographic coverage will be extended.

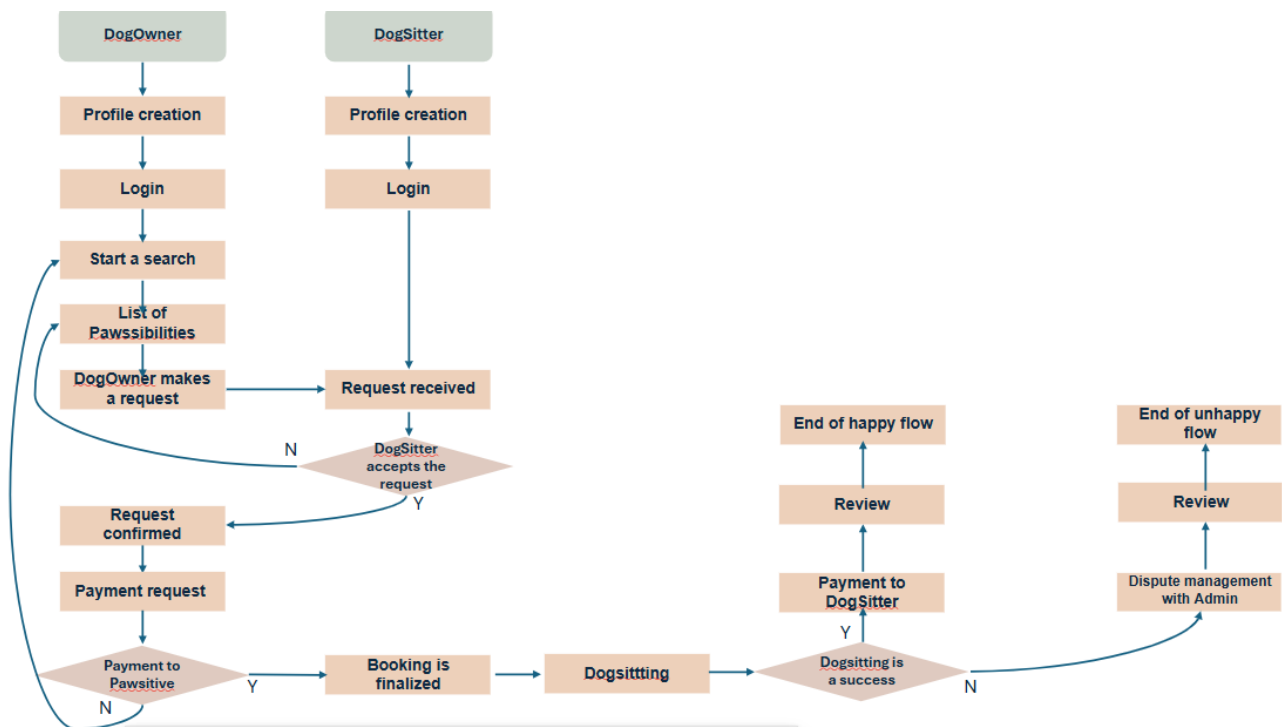
Hypothesis and limitations for the first version of the Pawsitive app are as follows:

- Pawsitive will be designed as a mobile app for Android.
- A user must choose between 2 roles: Dog Sitter or Dog Owner. Having both roles for one profile is not possible.
- Admin is either Dog Owner or Dog Sitter.
- Pawsitive will be available in Brussels only (19 communes).
- Only 1 address per user. No geolocation enabled.
- Payment only possible with Payconiq.
- Pawsitive is only available in English.
- Maximum one dog per dog owner.

In terms of payment, the payment is initiated by the dog owner upon booking. The money is only transferred to the dog sitter's bank account after completion of the dog sitting's service. Any disputes will be handled by Admin.

Pawsitive will earn a commission fee (15%) on each dog sitting session booked and paid for through the app.

2. Visual representation



The Pawsitive journey begins with a simple step: creating your profile. Whether you're a dog owner searching for a trusted sitter or a dogsitter eager to spend quality time with dogs, setting up your profile unlocks the door to countless opportunities...

Once their profiles are created, it's time to start exploring and find the perfect match.

The dog owner starts searching for a dogsitter and receives a list of potential candidates that match their search criteria's. The dog owner then selects the ideal sitter and sends a request.

Then, two scenarios are possible:

→ The dogsitter declines: the request is canceled, and the dog owner simply returns to the search page to select another sitter.

→ The dogsitter accepts: The request is confirmed.

At this stage, the dog owner needs to complete the payment.

→ Payment fails: the dog owner does not execute payment (refuses the price, or else). He is redirected to the search page to choose another sitter.

→ Payment succeeds: the payment amount is temporarily held by Pawsitive until the sitting

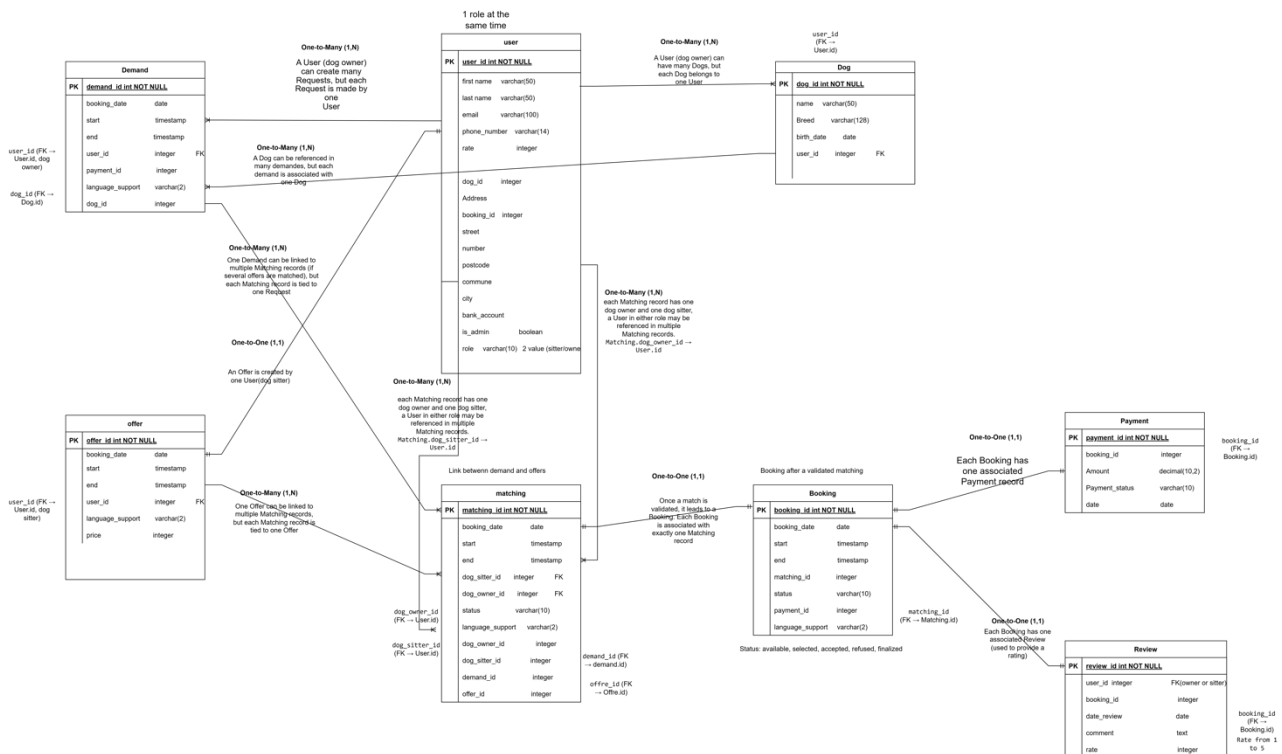
session is completed. Once the sitting session ends, the admin at Pawsitive releases the payment to the dogsitter.

After the sitting session, there are two possible outcomes:

→ A Happy Ending: the dog sitting went well, no further action is required, and the process successfully ends.

→ Something Went Wrong? : If the dog owner is dissatisfied with the sitter, they can submit a claim to request a refund. Pawsitive ensures a fair and transparent resolution to keep everyone satisfied.

3. Entity Relationship Diagram



2.1. One-to-Many (1,N) Relationships

- **User → Dog:**
 - **Relationship:** A User (dog owner) can have many Dogs, but each Dog belongs to one User. In the current version, we will start with maximum one dog per dog owner.
 - **Foreign Key:** Dog.user_id → User.id
- **User → Demand (Request):**
 - **Relationship:** A User (dog owner) can create many Requests, but each Request is made by one User.
 - **Foreign Key:** Demand.user_id → User.id
- **Dog → Demand (Request):**
 - **Relationship:** A Dog can be referenced in many Requests, but each Request is associated with one Dog.
 - **Foreign Key:** Demand.dog_id → Dog.id
- **Demand → Matching:**
 - **Relationship:** The search launched by a dog owner can have more than one match.
 - **Foreign Key:** Matching.demand_id → Demand.id
- **Offer → Matching:**
 - **Relationship:** One Offer can be linked to multiple Matching records, but each Matching record is tied to one Offer.
 - **Foreign Key:** Matching.offre_id → Offer.id
- **User (Dog Owner or Dog Sitter) → Matching:**

- **Relationship:** Although each Matching record has one dog owner and one dog sitter, a User in either role may be referenced in multiple Matching records.
- **Foreign Keys:**
 - Matching.dog_owner_id → User.id
 - Matching.dog_sitter_id → User.id

2.2. One-to-One (1,1) Relationships

- **Matching → Booking:**
 - **Relationship:** Once a dog sitter profile is selected by a dog owner, it leads to a booking with status “selected”
 - **Foreign Key:** Booking.matching_id → Matching.id
- **Booking → Payment :**
 - **Relationship:** Each Booking has one associated Payment record.
 - **Foreign Key:** Payment.booking_id → Booking.id
- **Booking → Review:**
 - **Relationship:** Each Booking has one associated Review (used to provide a rating).
 - **Foreign Key:** Review.booking_id → Booking.id
- **User → Offer:**
 - **Relationship:** An offer is created by one User.
 - **Foreign Key:** Offre.user_id → User.id

4. Process model – sequence diagrams

To better visualize how the external payment gateway integrates with our process, we've illustrated the process with clear, step-by-step sequence diagrams.

There are two possible scenarios:

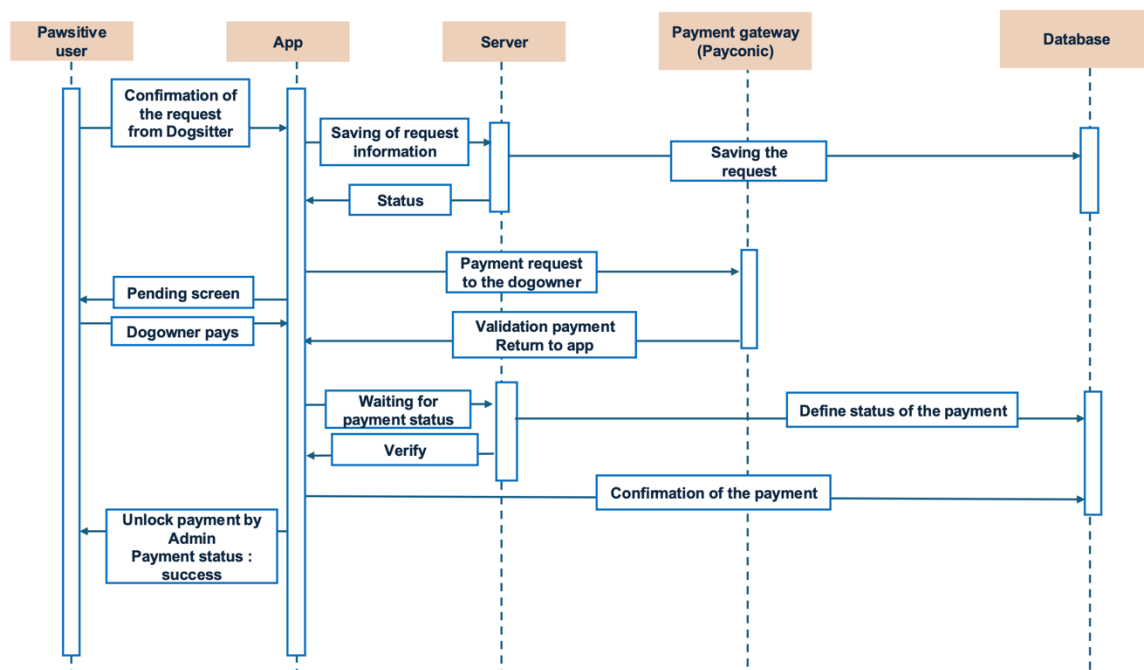
- The *Happy Flow*: where all goes well (booking, payment and qualitative service);
- The *Unhappy Flow*: where the dog owner is not satisfied with the dog sitter's service and wants to report a claim.

The process we use is designed to limit conflict between the dog owner and the dog sitter while ensuring transparency in payment and dispute management.

The dog owner cannot cancel a payment. Their only option is to file a complaint and ask for a refund. The admin's involvement in the flow prevents abusive claims and ensures that refunds are validated fairly.

3.1. The Happy Flow

1. Happy flow – payment



This first diagram describes a Happy flow, where the dog sitting session goes well and the standard payment process is completed successfully in the app.

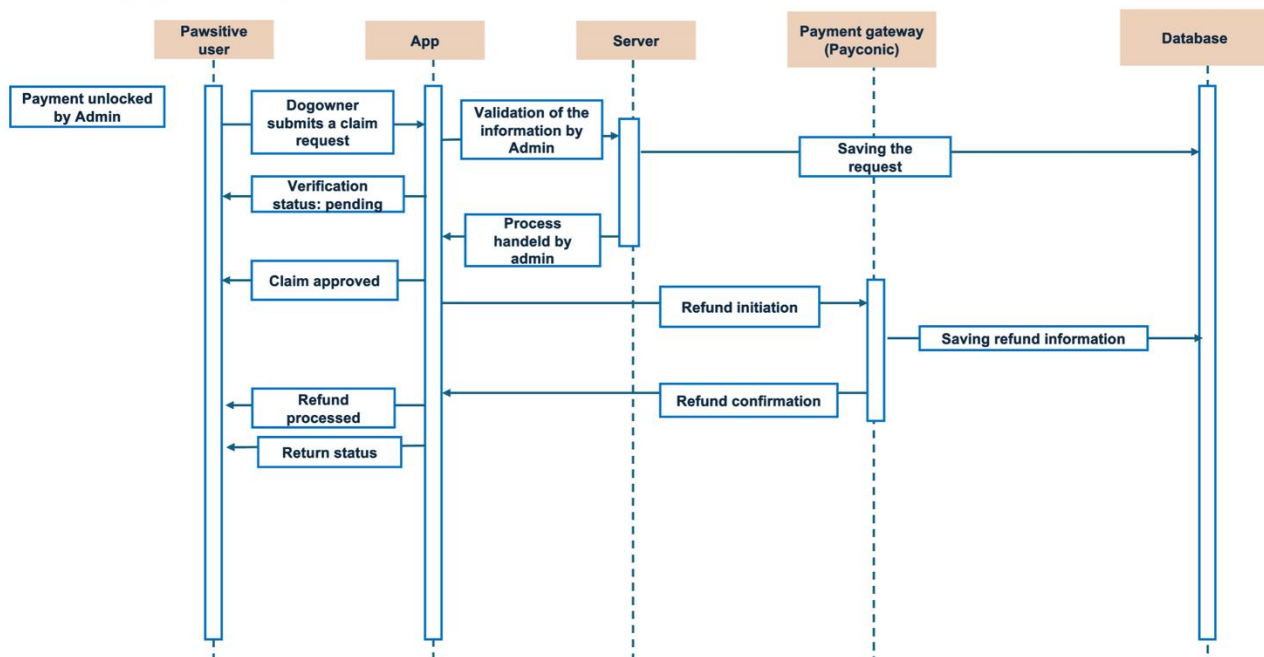
3.1.1. Flow steps

1. After the dog sitter accepts the dog sitting request, the app stores the request information and sends it to the server.
2. The payment request is sent to Payconic.

3. Payconic stores the request and prepares the processing.
4. The dog owner proceeds with the payment. A pending screen is displayed in the app while waiting for payment.
5. The payment status is updated in the database
6. The server verifies the returned payment status.
7. The final payment status is defined. The payment is confirmed, and the process is completed.

3.2. Unhappy flow: Dog owner asks for refund

2. Unhappy flow – payment : Refund with a claim



The above diagram illustrates the Unhappy Flow, which occurs when the dog owner is not satisfied with the dog sitter or the sitting session. In this case, the dog owner files a complaint via the Pawsitive app and asks for a refund.

Two actors have managed different actions in this second flow:

- Pawsitive user (dog owner): files a complaint after the sitting session.
- Admin: Analyze and decide whether a refund should be granted.

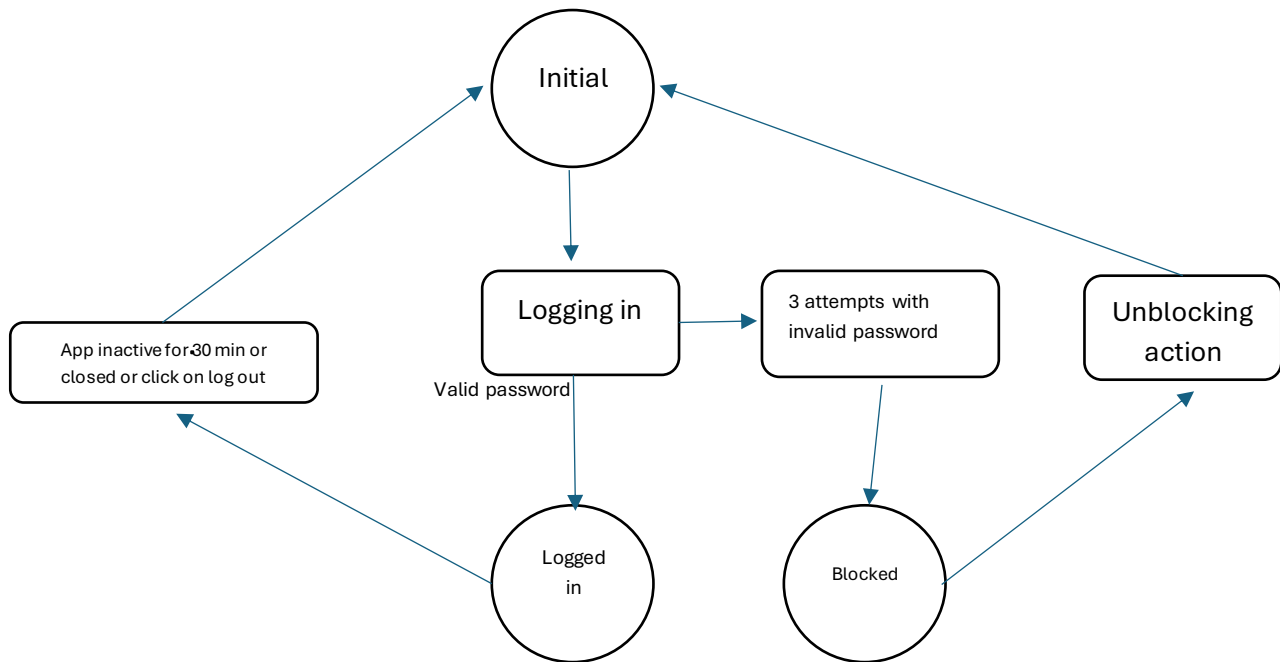
3.2.1. Flow steps:

1. The dog owner makes the payment upon booking.
2. The dog owner files a complaint in the app, explaining the issue and possibly attaching a photo as proof (e.g., if the pet is injured).
3. The app sends the claim to the server for validation.
4. The admin verifies the claim and processes the claim.

5. When the claim is processed by the admin, the refund request and updates are stored in the database.
6. The admin authorizes the refund, transferring the amount manually back to the dog owner's bank account.
7. The refund status is sent to the app, informing the dog owner about the refund processing.

5. State transition model

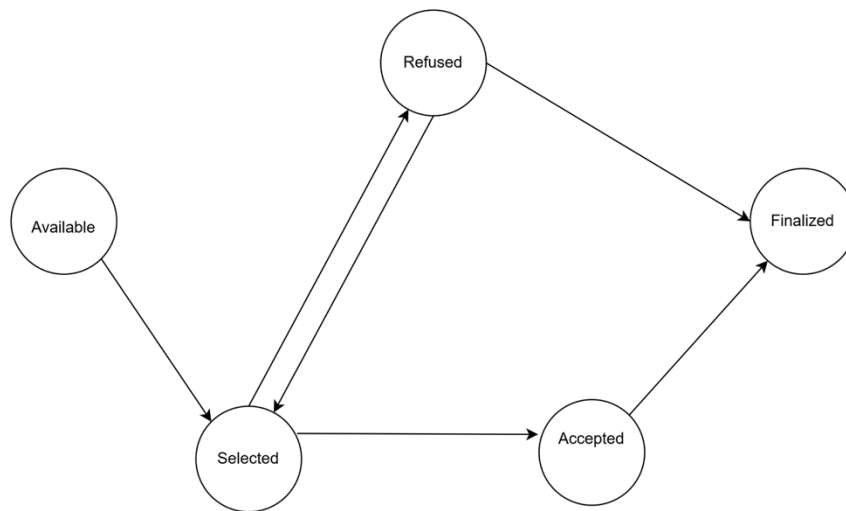
Login



This diagram illustrates the transition between states:

- After 3 incorrect attempts to log in (wrong password), the user's account is blocked.
- Action is needed to unblock account (procedure is similar to password reset).
- When app is inactive for 30 min or closed, account is logged out.

Booking



This diagram shows the different status that a booking can receive:

Available	Dog owner gets a list of results that match their search criteria
Selected	Dog owner chooses one specific profile from the list of available dog sitters
Accepted	Dog sitter accepts the dog owner's request
Refused	Dog sitter declines the dog owner's request
Finalized	After the dog sitting session is completed

6. UX screens -

Please refer to the PDF document uploaded on DigiLearn.

Appendix 1 - Use case/user stories

1. Dog sitter creates a profile

Account creation

Basic information

Email verification

Dog sitter profile

Saving data

Consent

Submit

Welcome email



Actor: Elise (Dog Sitter)

Pre-conditions:

- Elise has access to the Pawsitive website or mobile app.
- Elise has a valid email address to register with the platform.

Description:

This use case describes the process of Elise creating a dog sitter account on Pawsitive, allowing her to offer her services to dog owners.

1. Elise accesses the Pawsitive application:

- Elise downloads the Pawsitive app from the Play Store and proceeds with the installation

2. Elise selects the "Create Account" option:

- From the homepage, Elise clicks on "Create an Account" button, which leads her to the registration page.

3. System asks for basic account information:

- Elise is prompted to enter her **e-mail address** to create an account.
- The system validates the e-mail address format to ensure it is correct.
- Elise is also required to choose a **password** that meets the platform's security requirements (e.g., minimum length, alphanumeric characters).

4. System sends a verification email:

- The system sends a **verification email** to the address Elise provided, including a **verification link** to ensure that the email address is valid and belongs to her.
- Elise checks her inbox and clicks the verification link.

5. Elise sets up her profile:

- After verifying her email, the system redirects Elise to a profile setup page where she can provide the following information:
 - **Role selection** : Elise is asked to specify her role on the platform. She selects "**Dog sitter**" from a list of roles (Dog sitter or Dog owner)
 - **Full Name**: Elise enters her first and last name.
 - **Phone Number**: Elise adds her phone number for easy communication with dog owners.
 - **Location**: Elise provides her address

6. Elise agrees to the platform's terms and conditions:

- The system presents the **terms of service** and **privacy policy** for Elise to read and agree to before proceeding with the account creation.
- Elise checks the box to confirm that she agrees to the terms and conditions.

7. Elise submits her profile information:

- After filling out the necessary fields, Elise clicks the "**Create Account**" or "**Finish Setup**" button.
- The system processes her information and creates her dog sitter profile on Pawsitive.

8. Elise can now access her dashboard:

- Elise is redirected to her **dashboard**, where she can:
 - Edit her profile information (e.g., update availability or pricing).
 - View her pending **service requests** and **bookings**.
 - Set up **payment information** to receive payments for services.

9. Elise starts receiving requests from DogOwners:

- Elise is now a fully registered dog sitter on Pawsitive and can begin accepting dog sitting requests from dog owners in her area.

Post-condition:

- Elise's dog sitter account is successfully created, and she is now part of the Pawsitive platform, ready to receive dog sitting requests and offer her services.

Alternate Flows:

- **Profile incomplete:**
If Elise fails to complete certain required fields (e.g., services offered, experience), the system will prompt her to complete the missing information before finalizing the account creation.
- **Email not received:**
If Elise does not receive the email within a reasonable time, she can request a new verification email or check her spam/junk folder.
- **Incorrect password format:**
If Elise tries to choose a password that doesn't meet the security requirements, the system will prompt her to choose a valid password.
- **Incorrect email format:**
If Elise tries to mention an email address that doesn't meet email structure, the system will prompt her to choose a valid email address.

Email address already in use:

If the email address is already associated with an existing account, the system will display an error message and ask Elise to log in instead or use a different email address.

2. Dog owner - adding dog data

Dog Owner access

Dashboard access

Add a dog

Providing dog

Reviewing data

Saving data

New dog added

Confirmation email -



Pre-conditions:

- Marie has successfully created her Pawsitive account.
- Marie has logged in to her Pawsitive account and is ready to create a profile for her dog.

Description:

This use case describes the process of creating a dog profile on Pawsitive for Marie's dog.

1. Marie accesses the dog profile creation page:
 - Marie logs into her Pawsitive account and is directed to her dashboard.
 - From the dashboard, Marie selects the "Add a Dog" option.
2. System prompts for dog details:
 - The system displays a form asking Marie to enter her dog's information. The following fields are provided:
 - Dog's Name: Marie enters her dog's name.
 - Breed: Marie selects the breed from a dropdown list or types it in manually.

- Age: Marie provides her dog's age or birthdate.
 - Size: Marie selects the size of her dog (small, medium, large).
 - Special Needs: A checkbox or text box to indicate if her dog has any medical conditions, dietary restrictions, or other special care requirements.
3. Marie uploads dog photos:
 - Marie can upload clear, well-lit images of her dog.
 4. Marie saves the dog profile:
 - Once satisfied with the information, Marie clicks the "Save" button.
 - The system stores the dog profile and confirms the creation with a success message.
 5. System completes the dog profile creation:
 - Marie's dog profile is now available in her account, and she can access, edit, or update it at any time.
 - The profile is saved and is available for any future dog-sitting requests.

Post-conditions:

- Marie's dog profile is created and stored in the system.
- The profile is associated with Marie's Pawsitive account, and the system is ready to match her dog with available dog sitters.

Alternate Flows:

- **Incomplete information:** If Marie tries to save the profile without filling out required fields (e.g., dog's name, breed, or age), the system will prompt her to fill in the missing details before submitting.
- **Image upload error:** If there is an issue with uploading the dog's photo (e.g., incorrect file type or size), the system will notify Marie of the issue and ask her to upload a valid image.
- **Edit existing profile:** If Marie wants to make changes after saving the profile, she can navigate back to the dog profile section and update any information.

3. Dog owner - creates and sends a booking request



Actor: Marie (Dog Owner)

Pre-conditions:

- Marie has logged into her Pawsitive account.
- Marie has already created her dog profile.
- Marie's location services (or manual address entry) are enabled for distance-based sitter search.

Description:

1. Marie logs in
 - Marie logs into Pawsitive and is directed to her dashboard.
2. Marie accesses the "start a search" section:
 - The system proposes some criteria for her search (price, location,...).
3. System searches for available dog sitters whose offer corresponds to the mentioned criteria. System displays a list of available sitters:
 - The system presents a list of dog sitters who meet the location, availability, and service requirements. Each sitter's profile includes:
 - Name and Profile Picture
 - Availability: Shows available dates for the requested service.
 - Pricing: Displays the cost for the requested service.
 - Ratings/Reviews: Shows user ratings and reviews for each sitter.
 - Location: Indicates if the sitter is within the 5 km radius.
 - Services Offered: Lists the services the sitter can provide (e.g., overnight stay, dog walking).
4. Marie reviews available sitters:
 - She clicks on the sitter's profile to see more details, such as:
 - The sitter's experience.
 - Any special certifications or skills (e.g., first aid).
 - Detailed reviews or testimonials from other dog owners.
5. Marie selects a sitter:
 - Marie selects a sitter from the list that best meets her needs. She sends them a booking request.
6. Marie sends a booking request :
 - The system notifies the selected dog sitter of the request

Post-conditions:

- The dog sitting request is successfully created and sent to the selected sitter.
- The system awaits the sitter's response (either accept or decline).

4. Dog sitter receives and manages a request

Dog sitter account sign
up

New care request

Request review

Request is accepted

Confirmation and
payment request



Actor: Elise, Dog Sitter

Pre-conditions:

- The sitter has an active Pawsitive account and is logged in.
- The sitter's profile includes relevant services and availability.
- Marie (the dog owner) has created a dog sitting request, which is now sent to the sitter.

Description:

This use case describes the process of the dog sitter receiving and responding to a care request from a dog owner.

1. Sitter receives a dog sitting request:

- The system sends a notification to the sitter indicating that a new dog sitting request has been made by a dog owner (Marie).
- The sitter is notified either through email, app notification, or dashboard alert.

2. Sitter opens the request details:

- The sitter clicks on the notification or accesses the "New Requests" section in

their dashboard.

- The system displays the details of the dog sitting request, including:
 - **Dog's name and profile information:** Includes breed, size, age, temperament, and any special care instructions.
 - **Requested dates and times:** Start and end dates for the service.
 - **Owner's contact information:** Marie's contact number and any preferences.
 - **Location:** The location of the dog sitting service (or address).
- 3. **Sitter reviews the request:**
 - The sitter carefully reviews the dog's profile and the requested dates to ensure they can provide the requested services.
 - The sitter checks their availability for the start and end dates of the request.
 - The sitter ensures they are willing and able to meet any special instructions or needs mentioned.
 - The sitter verifies the location and ensures it is within a reasonable distance from their current location or their ability to travel.
 - The system shows the sitter the pricing for the requested service, including any possible additional fees (e.g., for travel distance, extra services, etc.).
 - The sitter confirms whether they are comfortable with the proposed payment.
- 4. **Sitter makes a decision to accept or decline the request:**
 - After reviewing all the details, the sitter decides whether to accept or decline the dog sitting request:
 - **Accept:** The sitter is willing to care for the dog on the requested dates and agrees to all terms.
 - **Decline:** The sitter is unavailable, does not agree to the terms, or has other reasons for not accepting the request.
- 5. **Sitter clicks on the "Accept" or "Decline" button:**
 - The sitter clicks the **"Accept"** button if they are willing to accept the request.
 - Alternatively, if the sitter cannot fulfill the request, they click the **"Decline"** button.
- 6. **System sends a confirmation of the sitter's decision:**
 - **If the sitter accepts:**
 - The system sends a confirmation message to the dog owner (Marie) that the request has been accepted.
 - Payment is required within 24 hours
 - The sitter's calendar is updated with the booking, and both the sitter and the dog owner receive the booking details.
 - A confirmation email or notification is sent to both parties.
 - **If the sitter declines:**
 - The system sends a notification to Marie that the request was declined and provides her the option to search for another sitter.
 - The sitter's calendar remains unchanged, and the request is removed from their active requests list.

Post-conditions:

- If the sitter **accepts** the request, the sitting service is confirmed, and the sitter is booked for the dates requested by Marie. The Owner has 24 hours to perform the payment, otherwise, the booking is cancelled.

- If the sitter **declines** the request, Marie is notified, and the sitter is no longer associated with the request.

Alternate Flows:

- **Request modification:**
If the sitter wants to accept the request but has concerns or needs adjustments (e.g., a different start time), they may contact the dog owner (Marie) for clarification or to request changes. This flow may involve communication before final acceptance.
- **No response within a time limit:**
If the sitter does not respond to the request within a specified timeframe (e.g., 24-48 hours), the system may automatically remind the sitter to respond, or the request may expire, and the dog owner will be notified to search for another sitter.

Appendix 2 - Personas

1. Marie, the Busy Professional Dog Owner



- **Age:** 34
- **Occupation:** Marketing Manager
- **Location:** Brussels
- **Dog(s):** Labrador Retriever, 3 years old
- **Goals:** Marie is a young professional who loves her dog, but her demanding work schedule often leaves her with little time for walks or playtime. She is looking for a reliable and trustworthy pet sitter to help care for her dog during work hours or when she travels for business.
- **Pain Points:** Lack of time to properly care for her dog, worries about finding a sitter who aligns with her values and her dog's needs.
- **Tech Savviness:** High—Marie uses mobile apps for most tasks, including grocery shopping, fitness tracking, and managing her calendar.

2. Johan, the Retired Pet Owner



- **Age:** 70
- **Occupation:** Retired (former teacher)
- **Location:** Ghent
- **Dog(s):** 2 Cockers Spaniel, 7 and 12 years old
- **Goals:** Johan enjoys having his dogs around and goes for daily walks in the park. However, he sometimes needs assistance when he is unavailable, whether for medical appointments or trips. Johan is not tech-savvy but appreciates simplicity and clear

communication.

- **Pain Points:** Limited mobility, apprehension towards using technology, concerns over the quality of pet care.
- **Tech Savviness:** Low—Johan uses a basic smartphone for calls and texts but needs a straightforward interface and easy navigation in any pet-sitting platform.

3. Elise, the Young Pet Sitting Entrepreneur



- **Age:** 26
- **Occupation:** Freelance Graphic Designer
- **Location:** Antwerp
- **Dog(s):** None (sits for clients)
- **Goals:** Elise is an experienced pet sitter who enjoys looking after animals and wants to grow her freelance business. She's looking for a platform that can connect her with local pet owners who need reliable care. She values flexibility and wants to be able to set her own hours.
- **Pain Points:** Finding consistent clients, managing multiple sitting jobs while balancing her freelance work.
- **Tech Savviness:** High—Elise is comfortable with digital tools and platforms, frequently uses social media for business marketing.

1 role at the
same time

