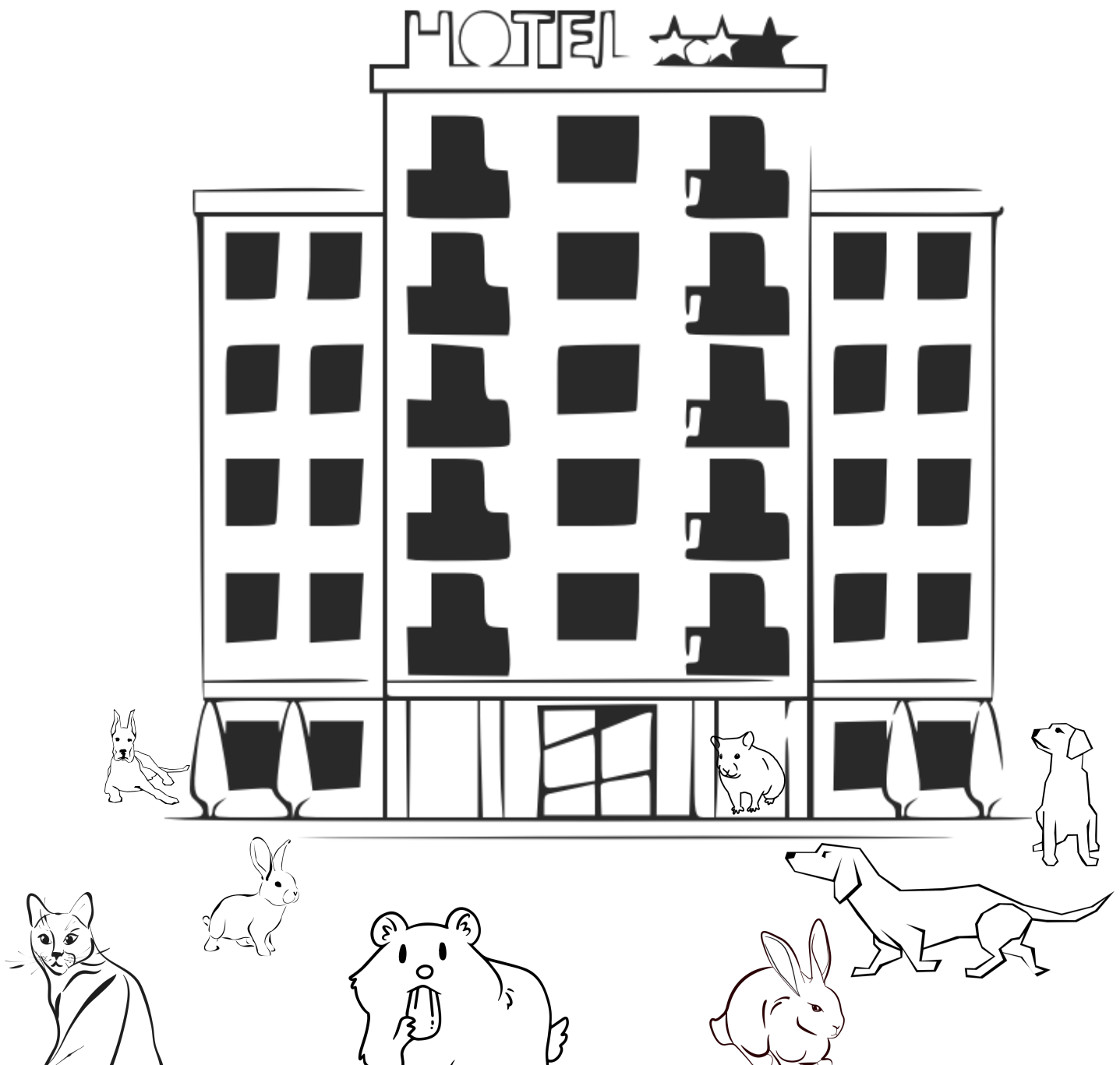21.04.2023

Semester: Spring 2023

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Hotel for animals

Preliminary/final project

I. Description of the project

1. Overview of the project

This project is designed to build an animal-friendly hotel where pet owners can leave their animals for a predetermined amount of time in a secure setting. For the animals' comfort and well-being throughout their stay, the hotel will provide a variety of amenities. Each of the pet-specific rooms, including those for dogs, cats, birds, hamsters, rabbits, and guinea pigs, will be appropriately furnished with bedding, furniture, and toys.

Pet owners will be able to select from a variety of packages, including basic, standard, and luxury options. Dogs will receive food, water, and daily walks as part of the basic subscription, while the standard package will include include other services like grooming, playtime, and greater spaces. All of the aforementioned, as well as unique goodies and access to a pet spa, will be a part of the opulent package.

Through the hotel's booking system, pet owners may make reservations in advance to make sure their pets have a place to stay when necessary.

Project Features

The main features of the hotel for animals project include:

-A reservation system that allows pet owners to book a room for their pets in advance

-Separate rooms for different types of animals, with appropriate furniture, bedding, and toys

-Packages with different levels of service, including food, water, walks, grooming, playtime, and access to a pet spa

-A payment system for pet owners to pay for their pet's stay and any additional services

Project Goals

1.The primary goals of the hotel for animals project are:

2.To provide a safe and comfortable environment for pets while their owners are away

3.To offer a range of services that meet the needs and preferences of pet owners

4.To create a profitable business that serves the needs of the local community of pet owners.
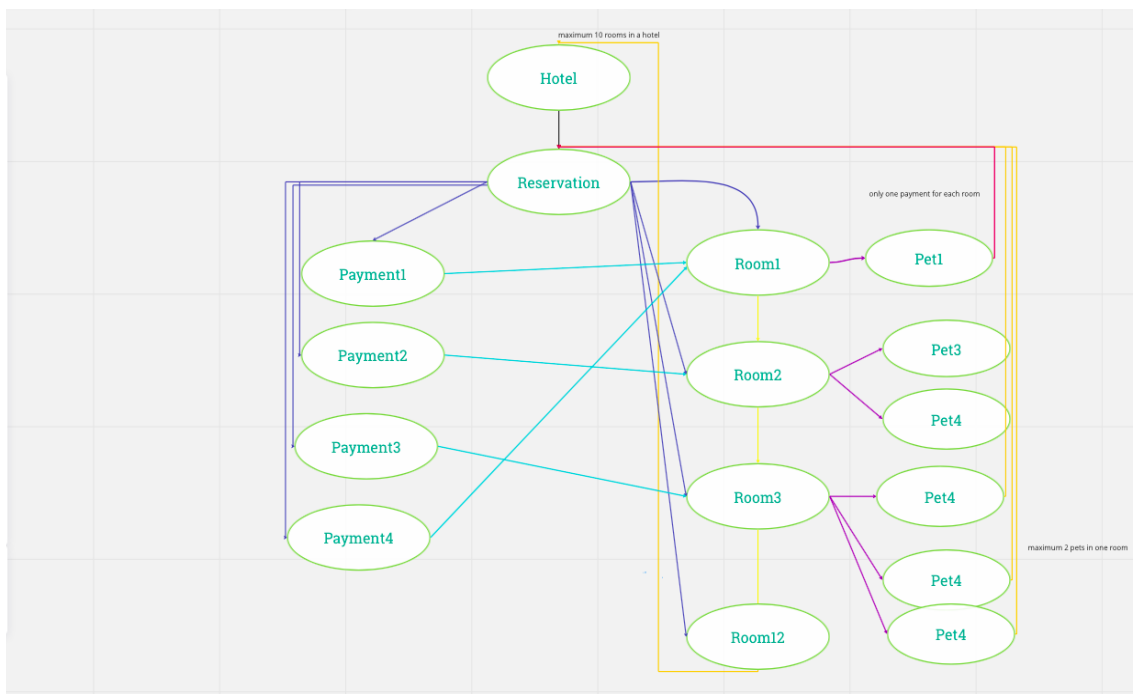
2. Class and data structures overview

There are several classes and data structures that will be implemented in the hotel for animals project:

- Hotel Class:
  This class will serve as the main interface to the project module. It will have methods for creating a new reservation, canceling a reservation, modifying services, and updating the payment status. It will also have methods for maintaining the list of available rooms and updating the reservation schedule. The package information and pricing will be stored as constants within the Hotel class.
- Pet Class:
  This class will represent each individual pet that stays at the hotel. It will have properties such as name, species, breed, age.

- Room Class:
  This class will represent each individual room at the hotel. It will have properties such as size, type of animal it can accommodate, and the amenities included in each package. It will also have methods for retrieving the available rooms and updating the room status.

- Reservation Class:
  This class will represent each individual reservation made by a pet owner. It will have properties such as the pet's name, arrival and departure dates, and the package selected. It will also have methods for adding additional services, calculating the total cost of the reservation, and updating the reservation schedule.

- Payment Class:
  This class will represent the payment made by the pet owner for the pet's stay and any additional services. It will have properties such as the total amount due, the method of payment, and any discounts applied. It will also have methods for processing the payment. The payment processing methods will be moved to the Reservation class.

3. Restrictions, limits, assumptions

R1. Only pets of certain types will be allowed to stay at the hotel.

R2. Each room will have a limited capacity based on the type of pet.

R3. Pets with special requirements may require additional fees.

R4. A pet can only be reserved for a certain number of days.

R5. Payment must be made in full at the time of check-out.

R6. Only a certain number of pets can be accommodated at one time.

R7. Additional services can be added to a reservation for an extra fee.

II.Memory map

Here is a link for a memory map.

https://miro.com/welcomeonboard/dnAzSGw3ZzJWNWhlTnV5bTNTTWxqc1Z
4MWJaNmV2MVU3SG54eFNZeWYxMUswMWljQVVTUkZCcXp0dWdVVXRJT
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