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## Controllers

**REST URL:** “/pethotel”

### Input/Output

Form URL Encoded Activity “/addactivity”	(In Postman) name: type: desc:
Form URL Encoded Room “/addroom”	(In Postman) name: floornum: occupied:
Form URL Encoded Toy “/addtoy”	(In Postman) name: type: desc:
JSON Checkin “/addcheckin”	{ `petName`: `type`: `neutered`: `vaccinated`: `medication`: `gender`: `size`: `color`: `additional`:  `ownerName`: `ownerContact`: `numPets`:  `roomName`: `floorNum`: `occupied`: }
JSON Playtime “/addplaytime”	{ `activityName`: `activityType`: `activityDesc`:  `petName`:

	<pre> `type`: `size`: `neutered`: `vaccinated`:  `id`: `activityID`: `toyID`: `duration`:  `toyName`: `toyType`: } </pre>
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## Entities

### Pet

- petID
- ownerID (not null)
- petName (not null)
- type (not null, must be cat/dog)
- color
- neutered
- vaccinated
- medication
- gender (not null, must only be male/female)
- size (not null, must be small/medium/large)
- additionalRemarks

### Owner

- ownerID
- ownerName (not null)
- ownerContact (not null)
- numPets (minimum of 1)

### Activity

- activityID
- roomID (not null)
- activityName (not null)
- activityType (not null, must choose between light/medium/high)

- activityDesc

#### Room

- roomID
- roomName
- floorNum (range of 1 to 10)
- occupied

#### Playtime

- playtimeID
- petID (not null)
- activityID (not null)
- duration (must be valid dates) (range of 7 days)

#### Toy (Can be optional)

- toyID
- activityID (not null)
- toyName (not null)
- toyType (not null, must be dog/cat/both)
- toyDesc

#### Checkin

- checkinID
- roomID
- animalID
- ownerID
- lengthOfStay
- roomName
- floorNum
- occupied

#### **Notes**

- Pet and Owner are linked, Many to One
- Activity and Room are linked, Many to One
- Toys and Activity are linked, Many to One

## **Repositories**

#### Pet Repository

- Search for type, size, gender, neutered, and vaccinated

#### Owner Repository

- responsible for handling the storage and retrieval of owner details

### Activity Repository

- Search for activityType

### Room Repository

- Search for floorNum

### Playtime Repository

- responsible for storing and retrieving playtime records for pets

### Toy Repository

- Search for toyType

### Look ups

- Playtime contains owner, pet, activity, room info, and other misc info like date and comments. Check the pet table for matching pet name with that inputted in JSON. If none, add to table
- Pets can only participate in playtimes with pets of SAME size
- Playtimes cannot be two unneutered pets and two unvaccinated pets
- Certain toys can only be used by certain types of pets
  - Scratch towers, cat towers, for cats
  - Chew toys, balls, rope toys, for dogs

## Components and their jobs

### Activity Controller:

- **Endpoint: /pethotel/addactivity**
  - Request Method: POST
  - Input: Form URL Encoded Activity
    - Validate the input JSON for required fields (roomId, activityName, activityType).
    - Check if the roomId provided exists in the Room repository.
    - Save the activity details to the Activity repository.

### Room Controller:

- **Endpoint: /pethotel/addroom**
  - Request Method: POST
  - Input: Form URL Encoded Room

- Validate the input for required fields (roomName, floorNum).
- Save the room details to the Room repository.

### **Toy Controller:**

- **Endpoint: /pethotel/addtoy**
  - Request Method: POST
  - Input: Form URL Encoded Toy
    - Validate the input for required fields (activityID, toyName, toyType).
    - Check if the activityID provided exists in the Activity repository.
    - Ensure that certain toys can only be used by certain types of pets.
    - Save the toy details to the Toy repository.

### **Checkin Controller:**

- **Endpoint: /pethotel/addcheckin**
  - Request Method: POST
  - Input: JSON Checkin
    - Validate the input JSON for required fields
    - Check if roomID exists and if not, create a new room
    - Save the checkin details to the Checkin repository

### **Playtime Controller:**

- **Endpoint: /pethotel/addplaytime**
  - Request Method: POST
  - Input: JSON Playtime
    - Validate the input JSON for required fields (petID, activityID, duration).
    - Check if the petID and activityID provided exist in their respective repositories.
    - Validate that pets participating in playtime have the same size.
    - Ensure that playtime doesn't involve two unneutered or two unvaccinated pets.
    - Save the playtime details to the Playtime repository.

### **Lookups:**

- **Playtime Lookup:**
  - Fetch owner, pet, activity, room info from the Playtime repository.
  - Check if the pet name in the JSON exists in the Pet repository, if not, add to the Pet repository.

### **Repositories:**

- **Pet Repository:**
  - Implement a search functionality for type, size, gender, neutered, and vaccinated.
- **Owner Repository:**
  - Responsible for handling the storage and retrieval of owner details.
- **Activity Repository:**
  - Implement a search functionality for activityType.
- **Room Repository:**
  - Implement a search functionality for floorNum.
- **Playtime Repository:**
  - Responsible for storing and retrieving playtime records for pets.
- **Toy Repository:**
  - Implement a search functionality for toyType.
- **Checkin Repository**