

# Database Constraints

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## Person

- Persons must be either Users or Administrators but not both (covering, no overlap).
- Persons are uniquely identified by a username.
- A Person's name, email, password, joindate, and isactive must be recorded.
- A Person's emails must be unique.

## User

- Users must be either PetOwners or CareTakers or both (covering, overlap).
- Users' address, gender, and age must be recorded.

## CareTaker

- A CareTaker can be either FullTime or PartTime but not both (covering, no overlap).
- A CareTaker takes care of a PetOwner's Pet by confirming a Job.
- A CareTaker can take care of the same Pet multiple times through different Jobs.
- A CareTaker can have any number of Jobs.\*

## FullTime

- A FullTime can apply for multiple Leaves.

## PartTime

- A PartTime can indicate multiple Availability dates.

## PetOwner

- A PetOwner can own any number of Pets.
- A PetOwner can register any number of CreditCards.

## Pet

- A Pet is uniquely identified among the other Pets of the same PetOwner by its name.
- A Pet's age, gender, description, and personality must be recorded.
- A Pet's specialreq may be null.
- A Pet is owned by exactly one PetOwner.
- A Pet cannot exist without a PetOwner.
- A Pet falls under exactly one PetCategory.

## Job

- A Job is uniquely identified among other Jobs with the same CareTaker, PetOwner, and Pet by its startdate.
- A Job's deliverytype, paymenttype, enddate, timestamp, amountpaid must be recorded.
- A Job's rating and review may be null.

- A Job must belong to one CareTaker, one PetOwner, and one Pet.
- A Job cannot exist without the corresponding CareTaker, PetOwner, and Pet.

#### PetCategory

- A PetCategory is uniquely identified by its category.
- A PetCategory's baseprice must be recorded.
- A PetCategory can belong to any number of Pets.
- A PetCategory can be catered by any number of CareTakers.

#### CreditCard

- A CreditCard is uniquely identified by its number.
- A CreditCard's fullname, cvv, and expirydate must be recorded.
- A CreditCard must belong to exactly one PetOwner.
- A CreditCard cannot exist without a PetOwner.

#### Payment

- A Payment is uniquely identified among the other Payments of the same CareTaker from its paymentdate.
- A Payment's totalamount must be recorded.
- A Payment can only belong to exactly one CareTaker.
- A Payment cannot exist without its corresponding CareTaker.

#### Availability

- An Availability is uniquely identified among the other Availabilities of the same PartTime from its date.
- An Availability can only belong to exactly one PartTime.
- An Availability cannot exist without its corresponding PartTime.

#### Leave

- A Leave is uniquely identified among the other Leaves of the same FullTime from its startdate.
- A Leave's enddate must be recorded.
- A Leave can only belong to exactly one FullTime.
- A Leave cannot exist without its corresponding FullTime.

**\*Refer to limitations on number of Jobs (for CareTaker, PartTime, and FullTime) below**

## Other Constraints (Business Logic)

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### PetOwner

- A PetOwner must pay the CareTaker upfront with either their pre-registered CreditCard or cash.
- Pet Owners can post only one review and one rating for one specific Job.
- A Pet Owner may submit multiple reviews and ratings for a CareTaker if the CareTaker has taken care of the PetOwner's Pet multiple times (incl. same Pet) - will be a different Job.
- Reviews are available to all Users.

### PetCategory

- Each PetCategory has a baseprice determined by the Administrator.

### Job

- There are 3 deliverytype values for a job: POD (Pet Owner Delivery), CTP (Care Taker Pickup), or PTB (Physical Transfer in Building)

### CareTaker

- \*A CareTaker can take on at most 5 Jobs at any given time (can have any number of Jobs).
- A CareTaker only caters for Pets in their preferred PetCategory.

### PartTime

- \*A PartTime cannot take on more than 2 Jobs at the same time if they do not have a good average rating.
- \*A PartTime can take on more than 2 Jobs but not more than 5 if they have good average rating of more than 4 out of 5.
- A PartTime will receive 75% of the daily price (PCS will receive 25%).
- A PartTime can indicate their Availability for the current year and next year.

### FullTime

- \*A FullTime cannot take more than 5 Jobs at a single point of time.
- A FullTime must work a minimum of 150 consecutive days twice (total 300 days).
- A FullTime will have their daily price of each Pet type based on their ratings (increases along).
- Salary of FullTimes will have a base salary of \$3000.
- If they work for more than 60 pet days, they will receive 80% of their daily price as a bonus.
- A FullTime is deemed available unless they apply for a Leave.
- A FullTime cannot apply for leave if they have at least one Pet under their care currently.