

Constraints:

- Every user of the app is an App User, with a user ID and password that enables logging in. The user ID is unique.
- An App User can be a PSC Administrator or other Users but not both.
- A User has name, gender, and address as additional attributes.
- A User can be either a Pet Owner or a Care Taker. A Pet Owner can be a Care Taker at the same time.
- A Care Taker can be either full-time or part-time, but not both.
- Each Care Taker has an average rating out of 5.
- Every Care Taker should specify the days they are available in 2 years. Part-time Care Takers can specify their days available by themselves, whereas days available of full-time Care Takers are dependent on their leaves.
- A Full-time Care Taker can take a leave only when he or she is not taking care of any pets during the time period of leave and he or she can fulfill the working commitment requirement of a minimum $2 * 150$ consecutive days a year.
- Each Leave of each full-time Care Taker has a Period of time associated with it.
- Each Period includes some consecutive days.
- Each Period has a unique identifier in the format of "yyyy/mm/dd-yyyy/mm/dd", and each day also has a unique identifier "yyyy-mm-dd".
- Every Care Taker should specify the categories of pets that they can take care of together with the daily price they take care for that pet category. One Care Taker can take care of more than one Categories and has to be able to take care of at least one Category.
- Each Category of pet is uniquely identified by its name (dog, cat, etc).
- Each Pet Owner owns at least a pet, and a pet must be owned by someone, but not more than one Pet Owners.
- Every Pet has a unique ID, and they have names and special requirements.
- Each Pet is classified in exactly one of the Categories.
- A Pet Owner can publish advertisements to find Care Takers for a specified Period of time.
- Each advertisement should be dealt with a Transaction.
- A Transaction is finalized with a specific Care Taker to take care of the pet during that Period of time. Each Transaction has a transfer type (deliver, pick-up, or transfer at the PSC building), a cost (calculated from the product of duration and daily price as specified for this Care Taker for this Category), and a payment method (card or cash).
- After the Transaction is done (the Period of taking care is over), the Pet Owner can write a review to this Transaction and give a rating from 1 to 5.
- All Care Takers can only care for up to 5 Pets at the same time (on the same day).
- Part-time Caretakers cannot take care of more than 2 Pets unless they have an average rating of more than 4 out of 5.
- A Caretaker should not take care of pets they cannot care for but may take care of more than one pet at any given time.