Pet Adoption Centre

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This application will store the information and constraints required to run a pet adoption centre. The main function of the database is to be able to track the adoptions being made by households. There are some logistical constraints to ensure that households do not incessantly place adoption requests, and also to ensure the safety of the pets being adopted such as making it a requirement for managers to approve an adoption. Various other statistics are stored, such as pet's medical information to be able to better support their life while in the adoption centre, as well as documents to provide supporting information giving insight into decision reasoning and other important data that might need to be retrieved looking back on the decisions that were made pertaining to pets' adoption.

Instances of inheritance include the employee/manager relation and the relationship to the documents. Weak entities are the relationships between a potential household's history and the household itself and the pet's relationship to a medical history. Key constraints are the application's relationship to the employee and the kennel's relationship to the pet. The ternary relationship is the relationship between insurance, the accepted document, and the payment.

Requirements

- Employees of the Pet Centre are identified by their eid. Additionally, they have a name, an address, and a wage
- A manager is an employee who has been promoted to this position. The date the employee was promoted to a manager is stored
- The pet centre's pets are identified by their pid. The date they came into the centre is stored, as well as their breed, species, age, weight, and if they were rescued or not.
    - If the pet was not a rescue, that implies the pet was donated
    - The donator's information is stored, which includes their name and address
    - If the pet was a rescue, an employee is associated with that case of rescue
- Each kennel has a number to identify it. Each pet must be assigned to exactly one kennel at all times while they are in the adoption centre
- Each pet has a medical history that is stored.
    - The medical history stored is current conditions, past conditions, and required medication, if any.
    - The medical history is identified through a mid

- A potential pet household is identified through the address of the person opening up an adoption application. The name of the person, their age, job, and previous history with pets is also stored.
  - The previous history includes the date they adopted the pet at and if they returned the pet
- An adoption application is identified by its aid. The date the application was opened is stored, as a household may open an adoption application for a specific pet once per calendar year.
  - It should be possible to see the date the adoption application was opened for a particular pet. If they try to open an application for the same pet in the same calendar year, the application gets a new aid and is automatically declined
- There is exactly one employee assigned to an adoption application
  - An application cannot exist without an employee being assigned to it at any point in time
  - An employee need not be assigned to an application at any point in time
- Exactly one manager must sign each adoption offer
- Upon a successful adoption approval by a manager, an accepted document is opened for that adoption request. The document stores the date the acceptance was made and the pick up date for the pet. The household information, as well as the pet's information must be accessible from this document as well.
  - It is possible that the manager may not be assigned to the adoption offer upon creation of the adoption application, but an acceptance document can not exist without a manager approving the application
- Payment information is also stored in the acceptance document. This includes the total price along with the breakdown, and the method of payment.
  - The payment is uniquely identified with a transaction id
- Along with the payment information, the acceptance document is also associated to a mandatory pet insurance
  - The pet insurance has an insurance number and a monthly cost attached to it
- If an adoption request is denied, a denial document is opened for the request. The document stores the date the denial was made and the reasoning behind the decision
  - It should be possible to access the household information, as well as the pet's information through this document
  - Both the denial and acceptance documents are different types of documents themselves and are identified by a unique document number. Any generic form of document should also contain the date it was created

Relational Model

- *Entity :*
    - *Employee(eid, name, address, wage)*
    - *Manager(eid, date)*
    - *Pet(pid, date, age, weight, breed, species, kno, mid) kno references Kennel, mid reference Medical History*
    - *Donator(did, name, address)*
    - *Medical History(mid, pid, cCondition, pCondition, medication) pid references Pet*
    - *Kennel(kno)*
    - *Adoption Application(aID, date, eid, address) eid references Employee, address references Potential Household*
    - *Potential Household(address, job, age, name, wage)*
    - *Document(docNumber, date)*
    - *Accepted Document(docNumber, eid, transactionID, insurancenumber, pickUpDate, furtherInstructions) eid references Manager, transactionID reference Payment, insurancenumber references Pet Insurance*
    - *Denial Document(docNumber, reasoning)*
    - *Pet Insurance(insurancenumber, transactionID, docnumber, type, monthlycost) transactionID reference Payment, docnumber reference Accepted Document)*
    - *Payment(transactionID, insurancenumber, docnumber, totalPrice, paymentMethod, breakdown) insurancenumber reference Pet Insurance, docnumber reference Accepted Document*

- *Weak entity :*
    - *Previous History(address, adoptionDate, returnedPet) address reference Potential Pet Household*

- *Relations :*
    - *Rescue(eid, pid) eid references Employees, pid references Pet*
    - *Donated(did, pid) did references Donator, pid references Pet*
    - *Received(aID, pid) aID references Adoption application, pid references Pet*
    - *Receive(docNumber, address) docNumber references Document, address references Potential Pet Household*