Pet Store management system

1.The **PetStore** class:

The **`PetStore`** class is designed to represent a pet store as a legal entity that holds a collection of pets. Here's a detailed description of its functionality and goals:

Class Overview

- **Implements**: LegalEntity interface
- **Attributes**:
  - `address`: The physical address of the pet store.
  - `vatNumber`: The Value-Added Tax (VAT) number, which is a unique identifier for tax purposes.
  - `pets`: A list that holds instances of `Pet` objects, representing the pets available in the store.

Constructors

- **`PetStore(String address, String vatNumber)`**:
  - Initialises the `address` and `vatNumber` with the provided values.
  - Initialises the `pets` list as an empty `ArrayList`.

Methods

- **`getAddress()`**:
  - Returns the address of the pet store.
  - Overrides the `getAddress` method from the `LegalEntity` interface.
- **`getVatNumber()`**:
  - Returns the VAT number of the pet store.
  - Overrides the `getVatNumber` method from the `LegalEntity` interface.
- **`getPets()`**:
  - Returns the list of pets available in the store.
- **`addPet(Pet pet)`**:
  - Adds a new pet to the list of pets.
- **`removePet(String name, String type)`**:
  - Removes a pet from the list based on its name and type.
  - Uses an iterator to traverse the list and check each pet's name and type.

    - Returns `true` if a matching pet is found and removed; otherwise, returns `false`.
- **`toString()`**:
    - Provides a string representation of the `PetStore` object, including its address, VAT number, and the list of pets.
    - Overrides the `toString` method from the `Object` class.

Goal:

The goal of the `PetStore` class is to encapsulate the properties and behaviours of a pet store in an object-oriented manner. It provides methods to manage the store's address and VAT number, as well as to maintain a list of pets, allowing for adding and removing pets. The class aims to provide a clear structure for representing a pet store, facilitating easy management and retrieval of its information.

2.The **Pet** Class:

The `Pet` class is designed to represent a pet with its basic attributes such as name, type, and age. Here's a detailed description of its functionality and goals:

Class Overview

- **Attributes**:
    - `name`: The name of the pet.
    - `type`: The type or species of the pet (e.g., dog, cat).
    - `age`: The age of the pet in years.

Constructors

- **`Pet(String name, String type, int age)`**:
    - Initialises the `name`, `type`, and `age` attributes with the provided values.

Methods

- **`getName()`**:
    - Returns the name of the pet.

- **`setName(String name)`**:
    - Sets the name of the pet to the provided value.
- **`getType()`**:
    - Returns the type of the pet.
- **`setType(String type)`**:
    - Sets the type of the pet to the provided value.
- **`getAge()`**:
    - Returns the age of the pet.
- **`setAge(int age)`**:
    - Sets the age of the pet to the provided value.
- **`toString()`**:
    - Provides a string representation of the `Pet` object, including its name, type, and age.
    - Overrides the `toString` method from the `Object` class.

Goal

The goal of the `Pet` class is to encapsulate the properties and behaviours of a pet in an object-oriented manner. It provides getter and setter methods for accessing and modifying the pet’s attributes, and a `toString` method for a readable representation of the pet's information. This class serves as a basic building block for representing individual pets within a system, such as in a pet store.