Vet Clinic Project

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Problem Statement

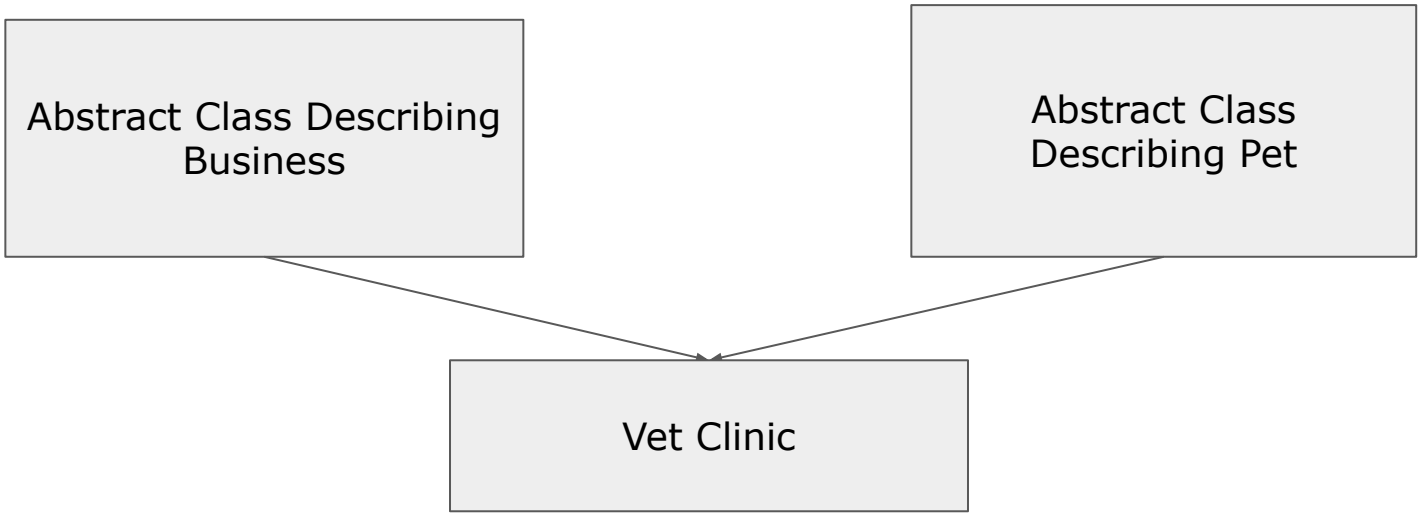
- Smaller independent practises, shelters, and non-profit SPCAs often can’t afford sophisticated and robust appointment management and scheduling systems.

- To address it, there’s need for an open-source, lightweight and modular appointment scheduling system designed specifically for vet clinics or shelters.

Project Objectives

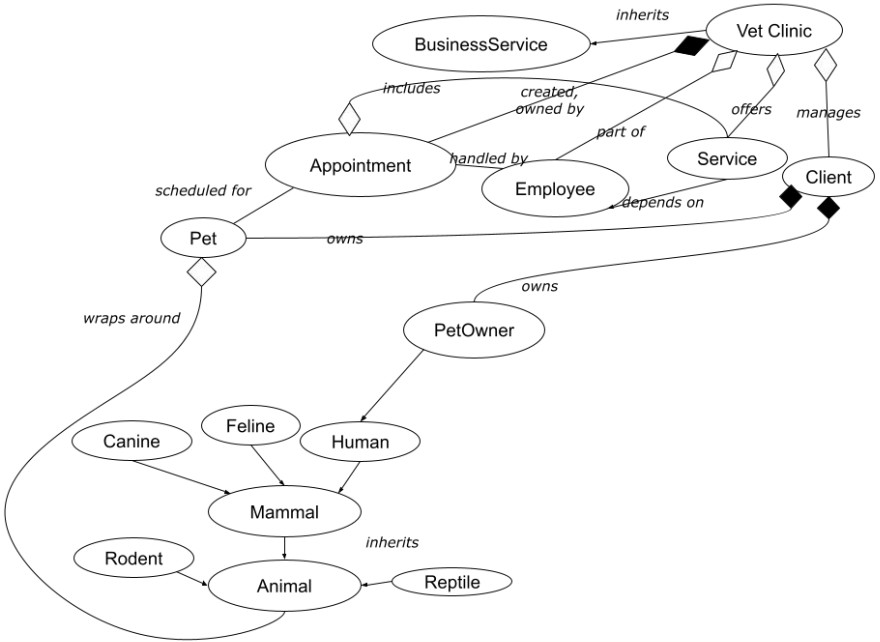
- Design and implement virtual vet clinic management system in Python.
- Model real-world operations of a clinic using OOP.
- Demonstrate use of core programming constructs.

Initial Approach:



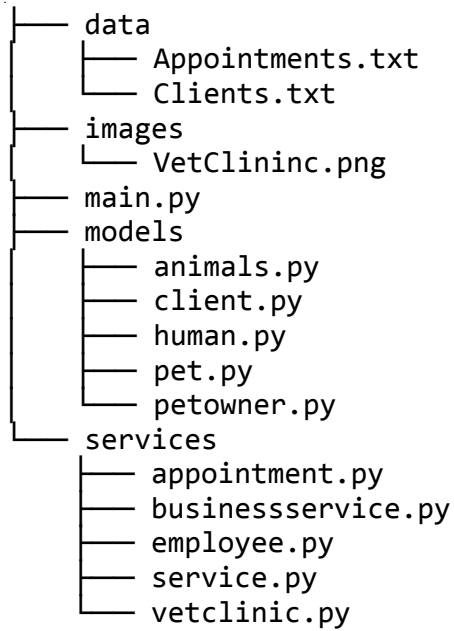
Note: these are not UML-type shapes or arrows.

Final Project Diagram

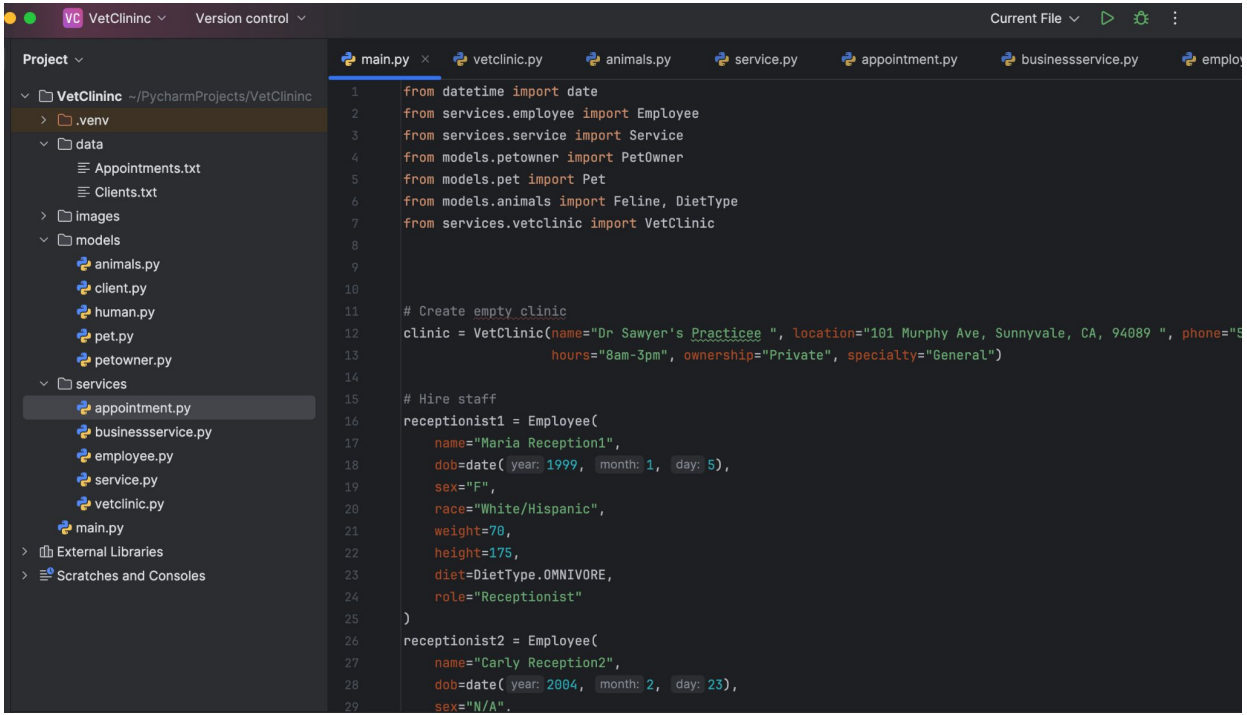


Note: these in fact are UML-type arrows.

Project File Structure



Moving on to DEMO…



Project Requirements

For this project, you will draw upon the topics that we have covered (or will be covering) the course such as:

- Variables, types and operators
- User input and output
- Methods
- Conditional Statements
- Loops and String manipulation
- Arrays
- Try/Except
- Classes (and objects)

In order to test your mastery of the subjects of this course, your project will unify what we have covered in this course into a program.

Additionally:

1. Create a user interface using previously covered output methods and take in input from the user
2. Make use of conditionals, loops, and both arrays and string manipulation in your code.
3. Validate input and check for risky sections of code in try/except blocks.
4. Create objects of at least three classes in your code, with at least one case of inheritance. Store multiple objects in an array for ease of access.
5. You will be required to present a project report covering your implementation, design decisions, and an impact statement that reflects on how your project others if fully developed and released, with attention given to blind spots.

Impact Statement

Pros:

If fully developed and released, this project could positively affect the workflow of small shelters, foster parents, and rescue organizations.

Cons:

This project is not designed to securely handle and store PII and PHI data.

Summary

- Designed and implemented virtual vet clinic management system in Python.
- Modeled core real-world operations of a clinic using OOP.
- Demonstrated use of required programming constructs.

Issues

- Comments
- Variable naming
- Circular import
- Overcomplicated `Appointments`
- Half-implemented appointment scheduling logic where appointments are functionally scheduled by `VetClinic`.

Future Work

- `PetOwner` should have a wrapper object for `VetClinic and` schedule appointments through it.
- `VetClinic` should have methods corresponding to `Service` that would change `Client's` object: like vaccinate, neuter.
- `VetClinic` need `to` use `SQL` for logging/information or use pandas with SQL .
- Test and adapt for multiple clients/pets and simultaneous appointments.
- Add basic GUI for client info or appointments.

Thank You