

Purpose: Classes**Learning outcomes:** 1, 2 and 3

Time: submit before 5pm Friday of Week 10.

Resources: MyLO: lecture notes and tutorial materials

Description:

The animal rescue facility next to the pharmacist in task 8.1PP has asked around and you have been recommended as good programmer to them. They need an animal inventory system to help keep track of which animals they have, and whether they have been adopted.

Task:

Write a program that defines a class called `Animal`.

The class should contain the following attributes (also known as *instance variables*):

- `name` (a string, the animal's adopted name)
- `animalType` (a string, the sort of animal, for example, *dog*, *cat*)
- `age` (an integer, the animal's estimated age)
- `adopted` (a boolean, whether the animal has been accepted for adoption yet)

Firstly, the `Animal` class should have an `__init__` method that creates and assigns values to these 4 attributes (`name`, `animalType`, `age`, `adopted`).

Then, the `Animal` class must also define the following 'set' and 'get' methods:

'set' methods:

- `setName(self, value)`
Assign the animal's `name` to be `value`
- `setAnimalType(self, value)`
Assign the animal's `animalType` to be `value`
- `setAge(self, value)`
Assign the animal's `age` to be `value`
- `setAdopted(self, value)`
Assign the animal's adoption status, `adopted` to be `value` (`True` or `False`)

'get' methods:

- `getName(self)`
returns the animal's `name`
- `getAnimalType(self)`
returns the animal's type, i.e. `animalType`
- `getAge(self)`
returns the animal's `age`
- `getAdopted(self)`
returns the animal's adoption status, i.e. `adopted`

Finally, the `Animal` class should have an `__str__` method that asks the object to print itself regarding these 4 attributes (`name`, `animalType`, `age`, `adopted`).

Submission Details

Save the class to a file called `animal.py` and upload it to the MyLO submission folder for this task.

Assessment Criteria & Hints

A completed submission **must**:

1. Include comments about the program purpose and the author of the program (your name)
2. Define a class `Animal` at the start of the program
3. Define all 'set' and 'get' methods, as well as a correct `__init__` method and a `__str__` method
4. Use meaningful names for instance variables, starting with a lower case
5. Submit the source file