

Download and Extract

An initial setup of files is provided to you via a shell script: [Download potd-q12](#)

Using a terminal, extract the initial files by running the shell script you just downloaded (you will need to navigate to the directory where you saved the file):

```
sh potd-q12.sh
```

Your files for this problem will be in the `potd-q12` directory.

The Problem

Write a class `Animal`. This class must:

- Store the type of animal as a `string type_`.
- This variable must only be able to be changed by functions of the `Animal` class.
- Store the type of food the animal eats as a `string food_`.
- This variable should be able to be accessed by functions of the `Animal` class **and** functions of derived classes.
- Contain getter and setter functions `getType`, `setType`, `getFood`, and `setFood`.
- Contain a function `print` that returns a string `"I am a ____."`, where the blank contains the type of the animal.
- This function should be able to be overridden by derived classes.
- Contain two constructors:
 - A default that initializes the animal type to `"cat"` and type of food to `"fish"`.
 - A constructor that accepts the type of the animal and type of food as parameters.

Testing Your Code

We have given you a `main.cpp` to test this. The expected output is:

```
Default constructor:
  Type: cat, Food: fish
I am a cat

Two parameter constructor:
  Type: horse, Food: hay
I am a horse

After using setters:
  Type: snake, Food: mouse
I am a snake
```

Upload Solution

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POTD 12

Total points: 0/1

Score: 0%

Question

Value: 1

History:

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Only the files listed below will be accepted—others will be ignored.

Files

☐ Animal.cpp
not uploaded

☐ Animal.h
not uploaded

Save & Grade

Save only