

Download and Extract

An initial setup of files is provided to you via a shell script: [Download potd-q7](#)

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-q7.sh
```

Your files for this problem will be in the `potd-q7` directory.

The Problem

Today you will become one with the Rule of Three. You are given a class `Foo` that takes a `name` for its constructor. The `Foo` has a `get_name()` method that returns the name of the `Foo`. The `Foo` class also keeps track of how many `Foo`'s exist using something called a *class variable*, but that is not something we have gone over in class yet.

Your work is to create a `Bar` class that also has a name, but it stores its name by creating a new `Foo`. You will put your code in `Bar.h` and `Bar.cpp`. This class should reside in the `potd` namespace.

TODO: The class `Bar`, including:

- A private member variable `Foo * f_`.
- A constructor that takes a string.
- A copy constructor.
- A destructor.
- An `operator=`.
- A method `string get_name()` to return the name contained within `f_`.

Be sure to allocate your memory correctly!

Testing Your Code

This time we give you a `main.cpp`. Run the following commands to compile and execute your code:

```
make
./main
```

Sample Output

```
There are 0 Foo's in the world.
There are 1 Foo's in the world.
There are 2 Foo's in the world.
There are 3 Foo's in the world.
b1 is aramis
b2 is aramis
b3 is porthos
There are 3 Foo's in the world.
b1 is porthos
b2 is porthos
b3 is porthos
There are 2 Foo's in the world.
There are 1 Foo's in the world.
There are 0 Foo's in the world.
```

Upload Solution

Drop files here or click to upload.

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

POTD 7

Total points: 1/1

Score: 100%

Question

Value: 1

History: 1

Awarded points: 1/1

Report an error in this question

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Files

✓ Bar.h

uploaded

Show preview ▾

✓ Bar.cpp

uploaded

Show preview ▾

Save & Grade

Save only

Submitted answer 5

correct: 100%

i

hide ^

Submitted at 2019-01-30 12:48:59 (CST)

Files

✓ Bar.cpp

uploaded

Show preview ▾

✓ Bar.h

uploaded

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Score: 6/6 (100%)

Test Results

✓ [1/1]

Foo count starts at zero.

▾

✓ [1/1]

Creating a Bar increments the Foo count.

▾

✓ [1/1]

Creating a second Bar increments the Foo count again.

▾

✓ [1/1]

Copy constructor works.

▾

✓ [1/1]

Operator= works.

▾

✓ [1/1]

Delete decrements the Foo count.

▾

Submitted answer 4

partially correct: 83%

i

show ▾

Submitted at 2019-01-30 10:50:55 (CST)

Submitted answer 3

partially correct: 83%

i

show ▾

Submitted at 2019-01-30 10:12:57 (CST)

Submitted answer 2

partially correct: 83%

i

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Submitted at 2019-01-30 10:05:46 (CST)

Submitted answer 1

partially correct: 83%

i

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Submitted at 2019-01-30 09:53:28 (CST)