POTD9.1. Problem of the Day #9

Download and Extract

An initial setup of files is provided to you via a shell script: Download potd-q9

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-q9.sh
```

Your files for this problem will be in the `potd-q9` directory.

The Problem

In class you saw how to create a dynamic list of property names. This time we are going to extend that by making a class that keeps track of both properties and values (e.g., property: color, value: green).

Write a class `Thing`. It should have these private variables:

- `int props_ct_` to count how many properties we have,
- `int props_max_` to return the maximum number or properties,
- `string *properties_` containing the names of the properties,
- `string *values_` containing the values of the properties.

Your class should have the following methods:

- `Thing(int size)` — a constructor that takes the max size of the properties and values arrays.
- `Thing(const Thing &)` — a copy constructor.
- The other two methods you need because of the Rule of Three. Make your own private `copy_` and `destroy_` methods to assist with this.
- `int set_property(string name, string value)` — Takes a property name and value, and inserts them into the arrays. Returns the index into the array if successul, and `-1` if the array was full. If the property name already exists, replace the value.
- `string get_property(string name)` — Returns the corresponding value for a given property name, or else an empty string if that property is not found.
- You may want to have a `_copy(const Thing &)` method, but that is optional.

Testing Your Code

Run the following commands to compile and execute your code:

```
make
./main
```

Sample Output

```
Kermit is Green
Kermit is Green
Grover is Blue
```

Upload Solution

Drop files here or click to upload.

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

Files

Thing.cpp
uploaded

Show preview

POTD 9

Total points:	1/1
Score:	0%

Question

Value:	1
History:	1 1
Awarded points:	1/1

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Submitted answer 8 correct: 100%

Submitted at 2019-02-11 20:28:29 (CST)

hide

Files

Thing.cpp

uploaded

Show preview

Score: 8/8 (100%)

Test Results

- [1/1] **Test that thing can be created.**
- [1/1] **Test that we can set a single property.**
- [1/1] **Test that we can set three properties.**
- [1/1] **Test that we can replace a property.**
- [1/1] **Sneaky test that we can replace a property.**
- [1/1] **Test that we handle overflow.**
- [1/1] **Check copy constructor.**
- [1/1] **Check operator=.**

Submitted answer 7 correct: 100%

Submitted at 2019-02-11 20:28:01 (CST)

show

Submitted answer 6 partially correct: 87%

Submitted at 2019-02-11 20:22:55 (CST)

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Submitted answer 5 partially correct: 87%

Submitted at 2019-02-11 20:15:25 (CST)

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Submitted answer 4 partially correct: 87%

Submitted at 2019-02-11 20:08:57 (CST)

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Submitted answer 3 partially correct: 25%

Submitted at 2019-02-11 19:50:26 (CST)

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Submitted answer 2 incorrect: 0%

Submitted at 2019-02-11 19:47:17 (CST)

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Submitted answer 1 incorrect: 0%

Submitted at 2019-02-11 19:44:52 (CST)

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