

# Program 4: Vector

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**Due** Sunday by 11:59pm **Points** 10 **Submitting** a file upload **File Types** h  
**Available** after Sep 15 at 12am

Basically the entire assignment is implementing the methods in the stub I gave in "Support Files".

Obey the Rules of Pain.

A few things to remember about templates:

1. All the code is in the h file
2. When testing a template, any method you don't call gets deleted. So make sure you test them all, or you might secretly have one that doesn't compile.
3. If you make your Vector not a template (change all the T's to int or something) it becomes easy to test as long as you remember to re-template it. (VS has trouble autocompleting a template since the code doesn't exist yet.) This can accidentally destroy your homework if you aren't careful.
4. I'm going to drop your vector in to my project, so don't bother changing main unless you want to test something differently.

You need to implement all of the methods, and that's it. You cannot add any new properties. You cannot break any of the unbreakable rules in the announcements section. Your solutions must conform to the Big O notations next to each method. If you can't figure out what a method does by the name, look it up on cplusplus since the names will match.

The hard part of this is the memory management, so take special care with Reserve, the constructors, and the destructor. I provided a test file but please test any way you want. Make sure it doesn't crash. And if it doesn't compile it doesn't even count as code so that is the saddest 0 you can get. Don't let that happen.

 <http://www.cplusplus.com/reference/vector/vector/?kw=vector> [.\(http://www.cplusplus.com/reference/vector/vector/?kw=vector\)](http://www.cplusplus.com/reference/vector/vector/?kw=vector)

Expecting points from homework that doesn't compile is like having a history essay due and turning in a banana.

