Tutorial Problem Set #7

Due: Wednesday, November 6, 2024, 11:59 PM

Policy

- Piazza questions on tutorial problems will be ignored or deleted. Questions will only be answered in your assigned tutorial section.

- Sample executables can be found in your 1249 git repository directory (run `git pull`).

- Completing the problem set will reduce the weight of the final exam by 0.5%. To complete a problem set, you must pass at least 50% of the public and secret tests.

- You may assume all input is valid. Tutorial problems **NEVER** require checking for invalid inputs.

Question 1

In this exercise there are *widgets* and there are *wudgets*. Little is known about widgets and wudgets, but we do know that every widget has a name, and that a wudget is a special kind of widget that has a nickname as well as a name.

We also know that widgets like to gather. A *widget gathering* always consists of a chief widget, a chief wudget, and any number of additional attendees, each of whom might be a widget or a wudget.

Classes to represent widgets and wudgets have been provided in the file `widget.cc`. These files codify the information described above, but they are missing the Big 5. Or, specifically, copy and move constructors have been *attempted* for classes `Widget` and `Wudget`, but they may not be complete (they do print when they run, and you should not change this). Copy and move constructors are also needed for the class `WidgetGathering`. Note that the provided code will not currently compile; you can use the compiler errors as a partial hint about what to do, but you'll need to do more that just fix those errors to get the program working!

Your task is to complete the copy and move constructors for the classes `Widget` and `Wudget`, and to implement the copy and move constructors for the class `WidgetGathering`. You can also attempt the assignment operators, but you will be graded on your copy and move constructors. You may add fields and/or public methods to any class if you deem them necessary.

Submission

Submit the file `widget.cc`.