

### Common Problems, etc. for CS 3 Homework 3 Extra Credit

- Grade the homework out of 50 points.

FIRST, the GOOD THINGS!!!

- it was good to see several people make the dfs functions take a templated source, even though the website mistakingly said to make it a string. (No points were taken off either way on that) It would've been smartest to make it templated though, because the graph class itself is templated.
- a few people even took the time to make sure that both the recursive and non-recursive functions produced the same output, although that was not absolutely necessary...a dfs is a dfs (if you're confused, just ask me and i'll explain)

Recursive. (25 pts)

- if you used a recursive "helper" function, which most of you did (you called it 'recursiveDFS') then that helper function should be private because you don't want the user calling that function, only your own dfs function should be able to call it!
- several people made bad assumptions...let me explain if you write a class, such as the graph class, then unless you specify something in the PRE/POST comments (like seen in listNode2.h) then you can't assume things!!!

So, several people assumed that when they receive the distances and parent vectors from the user that they're automatically filled with negative...this is bad to do...instead you should automatically do that yourself inside your dfs function

Other people assumed that when they receive the distances and parent vectors that they're of length zero...but that's not always true either, thus you should instead automatically resize them to the proper size inside your dfs function

- Some people again had memory leaks

Non-Recursive. (25 pts)

- Some people again had memory leaks