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CSE 122 – HW6 Rubric

Exercise	Points Given	Points Total
1. **Should have:** Replaced the binary search from HW5 with C's binary search **Code requirements:** • Filename is scrabble_bsearch.c • Used C's binary search, code successfully finds words in the dictionary • Wrote a comparison function • No memory leaks (check with valgrind) Problem not done	0	20

2.
Should have: Sorted the file fruits using C's qsort(), print the unsorted list (one word per line), a blank line, and the sorted list (one word per line, words should be lowercase)
 	
Additional requirements:
• The filename is test_qsort.c
• Fixed memory leak in test_qsort.c (no leaks)
• *Create a library for (or just wrote these functions):*
  • rstrip() – removes whitespace from the end of a string
  ◦ Used C's isspace()
  • tolowercase() – converts a string to lowercase characters
  ◦ Used C's tolower()
 	
Leaks memory
	20	25

3. **Should have:** Written a generic heapsort function modeled after C's qsort(). The program should print the original data one item per line, followed by a blank line, and the sorted items one item per line. **Additional requirements:** • Filenames are test_heap.c, test_heap_int.c • Modified their heapsort from HW5 to make it generic • Have an integer comparison function • Have a string comparison function • No memory leaks (check with valgrind) Does not properly sort the input. Missing test_heap_int. Does not free memory	10	30

4. **Should have:** Found the first repeated character in a string by using a character count array **Code requirements:** • The filename is repeated.c • The function name is strchrrep and returns a pointer to the first repeated character • Used a character count array of size 128 initialized to 0 • Walk through the given string and increment the given character's value in the character count array • If the count in the array is already 1 the program should stop and report the first repeated character	5	20

• No memory leaks (check with valgrind) Does not return anything for strings with repeated characters and segfaults when inputted strings without repeated characters.		

Miscellaneous Criteria • Code is well commented and easy to read • Doxygen style comments • Code follows linux kernel coding style • Used a Makefile	5	5
Total	**40**	**100**

Comments: