

Grading Guidelines for Part-2 of Lab Test 3

Problem Set 1

Grade this part strictly, do not be too lenient. For 1 mark subparts, if they are not close, give 0.

If they do not submit the Intermediate file and were not excused by us: deduct 0.5

- Output: 2 marks
 - Exact message format not important.
 - Test case 1: Number = 24A3B3A3B3A3B3A2, k = 3
 - Distinct 2nd and 3rd Largest: A3B and 4A3 (0.5 marks, binary, either get both or 0)
 - Sum in decimal): 2186 (0.5 marks, binary)
 - Test case 2: Number = AAAABBBB, k = 4
 - Distinct 2nd and 3rd Largest: BBBB and AABB (0.5 marks, binary, either get both or 0)
 - Sum in decimal): 37870 (0.5 marks, binary)
- Code: 8 marks
 - FindSum() function: 7 marks
 - They cannot convert the character strings to decimal until the last part, i.e. finding the decimal sum of the 2nd and 3rd largest numbers)
 - Finding the distinct 2nd and 3rd largest numbers: 3 marks
 - Basic loop to find k-digit consecutive sequence from characters: 1 mark
 - Keeping track of distinct 2nd and 3rd largest: 2 marks
 - Deduct 2 if they convert to decimal anywhere in this part
 - Summing the two numbers found in base-12: 2 marks
 - Give 0 if they convert to decimal, then add
 - Convert to decimal: 1 mark
 - Adding proper parameters and return: 1 mark
 - They have to return two character arrays and one integer
 - Simple way to do it (given that they cannot use char **) is to declare static arrays of size 6 (max k) in main, and pass them. Can malloc the array in main also. But if they malloc inside the function, it will need char **p). Cannot just pass pointer to static array defined inside the function also.
 - Give 0 if they use char **p or if the character pointer passed does not have proper backing storage. Also note that, if they do a char *p say inside the function, then malloc the storage, they cannot return the pointer unless a ** parameter is passed, which is prohibited.

- main(): 1 mark
 - Reading character by character correctly
 - Give 0 if they use %s
- Deduct 1 mark if they write any other functions for print, sort etc. Clearly told not to write any. Just wanted them to type a lot of code, or at least know they can cut-and-paste it.

Problem Set 2

Grade Leniently. Use your judgement.

- Output: 1 mark
 - Test case 1: X = "155462" Y="645" k=4
 - Largest integer with 4 digits in X is "6554"
 - There is a substring in X that is reverse of Y
- Code: 5 marks
 - FindLargest() function: 3 marks
 - 2 marks for logic to identify the characters
 - Can use any logic, but give 0 in this part if they sort P first and then just take the first k characters
 - 1 marks for conversion to decimal
 - IsSubReversed() function: 2 marks
 - Can use any logic
 - Use your judgement, nothing to specify
 - No marks for main()