CENG 2001 - C Programming - Fall 2020
Lab Exam

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Duration : 120 minutes

1. **(40 Pts)** The given code (available on Online-Learning web page at the time of exam) is supposed to create a new string from a string read from user input by removing all occurrences of vowels and replacing whitespaces with the character '_'. For example, the code is supposed to have the following input / output:

   input: selam naber?

   output: slm_nbr?

   input:You will never walk alone.

   output: Y_wll_nvr_wlk_ln.

   Unfortunately, there are some compile and run-time errors and function implementation to detect vowels is missing. Find and correct these errors on the code so that the program performs the desired task. You must write a comment to each corrected line about the error and how you fix it. (You can use // to create a comment.)

2. **(60 Pts)** Write a program that finds the min digit and average of the digits.
   Example:

4567890123	—> min: 0, average: 22.5
385	—> min: 3, average: 8.0
20	—> min: 0, average: 1.0

   The program should read numbers from a text file (It is "Data.txt" and is available on Online-Learning web page at the time of exam). Each line in the file has only one number followed by a new line. (Hint: You can use "%lld\n" when reading with fscanf). The number can be large so keep it in a *long long int* variable. After finding the min digit and average, the program must write the result for each number in a file in the format given above. (To same file, line by line). The name for the file that keeps the result must be result_yourstudentid.txt.

Notes:
- You can use internet during the exam
- No solutions can be identical. (Change of variable names and printf statements are considered identical solution.)
- Submit your codes together with result file to online-learning web page.

Name: Signature: