

# CSE2031

## Winter 2016 Practice Questions

Here are some practice questions to test your C abilities

1. Write a program that reads a person name on the form first name followed by either middle name and last name, or just last name. Then the program should display the name as last name followed by comma, then first letter of the first name followed by a period. For example

Input	Output
John Smith	Smith, J.
John D. Smith	Smith, J. D.
John David Smith	Smith, J. D.

The words in the input should be separated by any number of white spaces.

2. Write a program that calculates the average word length in a sentence. The input is a stream of words with no punctuations except the period at the end of the sentence. The program then displays the average word length. If the first character is a period, the program should display an appropriate message. The program should also ignore everything after the first period.
3. Write a program that accepts an integer from the standard input and display the positions of the digits that are repeated.  
For example if the input is 56257278 the output should be 0,2,3,4,5,6  
Explanation:     56257278  
positions         01234567  
repeated         rnrrrrrn  
where r means repeated, n means not repeated. Note that the first digit (5) is at position 0.
4. Write a program that reads a text file on the form  
Student first name, last name, email addresses, three test scores.  
Student names (first and last) are a maximum of 20 characters. Email address is a maximum of 20 characters. Then test scores are out of a 100. Each record (line) is read and stored in a struct with the above fields. Fields are separated by white spaces.  
For simplicity, you should allocate (reallocate) memory each time you read 5 records.  
Then your program should read enquires from the user, the inquiries are on the form  
command    data

The allowed commands are

Tn lastname

Where n is either 1,2, or 3 followed by student last name

Your program should display

first name, last name of the student followed by result of test n

Av lastname

Your program should display firstname lastname and the average of the 3 scores with 2 decimal places

CAV Tn

where n is 1, 2, or 3. Your program should display the class average for test n.

CAV

Your program should display class average for all the three tests

average\_test\_1 average\_test\_2 average\_test\_3