



Computer Science Department

COMP1310 Fall2024

Assignment N°4 Due Date: Sunday 12/1/2025 (on Moodle)

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Type and turn in a complete C program to solve the following problems:

**Question 1:**

Write a C program that prompts the user to repeatedly enter pairs of a number and a digit. The program should implement the following functionalities:

- **Count digit occurrences:** The program should use a function named `countOcc` to calculate how many times the entered digit appears in the given number, The main function should display the results returned by the `countOcc` function.
- **Find Last position of the digit:** another function called `digitPos` that finds and displays the last position of the digit within the number. For example, in the number 123451234, if the digit is 2, the last position is 7,
- **Displays a Star Pyramid:** After all pairs have been processed and the program ends, use a separate function to display a stars pyramid. The height of the pyramid (number of rows) should be dynamically determined based on user input.

The user can input multiple pairs, and to signal the end of input, they should enter -1 as the number.

Example of run:

User enters 2331,3

The program prints : number of occurrences of 3 is 2

Last position of 3 is 3

User enters 5361,4

The program prints : number of occurrences of 4 is 0

Last position of 4 is -1

User enters -1

User enter number of pyramid rows : 5

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The program ends.

Note: you cannot use the number 1 or true as a condition for your loops.

Notes:

1. This assignment should be **TYPED** and should be submitted on ITC (Moodle) meta course on [Assignment Four](#) before the deadline. Due date is **Sunday 12 January 2025**.
2. Please don't send your assignment as a message to your instructor.
3. **Late and Hand written** assignments will not be accepted.
4. You should submit :
  - the main.c file containing the assignment code.
  - print screen of a project run.
5. The assignments are *individual* effort and **copying the assignment or part of it or using any AI/chatgpt tools will be treated as a cheating attempt**, which may lead to *FAILING* the course.