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CS-211

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Assembly Language Programming

Design and Implementation:

Formula is designed to expand the binomial (1+x)^n according to the users input (n).

This program runs by a single for loop in the C implementation part where r = 0 and prints the powers of the 1st integer. nCr is an assembly level function that prints the constants of the solution. nCr includes two functions, one that derives the factorial of a given integer and one that derives the constant. This program also prints the time it takes to execute.

Challenges:

The biggest challenge I had was trying to understand assembly level programming as well as linking it with the c program. Trying to grasp the concept of how the linking process works was a bit confusing at first. Also I realized that assembly could be written in very simplified forms compared to when compilers translate it for you.

Big-O:

Considering that there is a for loop in my C implementation which runs n times which also calls an assembly function that runs a for loop of n times as well, The Big-O for my formula program is n^2.