In-class exercise 04

Write a C code to find the integration of

$$\int_0^1 (x^3 + 3x + 1)\, dx$$

Use the trapezoid method.

Before, we wrote a code, EX03.c, to find the integration using rectangle method. For simplicity, I have copied the code EX03.c to EX04.c. For this excises, you can simply modify the code of EX04.c

Formular for Trapezoid method:

$$\int_a^b f(x)dx = \frac{h}{2}\sum_{i=1}^{n-1}[f(x_i) + f(x_{i+1})]$$

where n is the number of nodes, and $h = (b-a)/\,(n-1)$ is the width for each column (or the spacing between 2 neighboring nodes), x_i is the x for the ith node.

You can share your codes, questions, and bugs in the following google slides:

https://docs.google.com/presentation/d/1-Fh5DwOrNTT7TiC4Gzd4YfiBvOPx9M0NrTL8lmnWKXY/edit?usp=sharing