

COE 205 Term 032

Computer Organization and Assembly Language Programming

Programming Assignment # 2

In these assignments you are required to write a series of programs. Submit your program in a virus-free floppy disk containing the source code, and the executable code.

Write your program in a structured way.

1. Input
2. Processing
3. Output

Put as many comments as you judge it necessary.

Program:

Purpose: In this program we are to perform long division of two integer numbers to check for rational and irrational numbers. A rational number is a number that can be represented as the ratio of two integer numbers. If the ratio of the two integer numbers has a period then the number is rational.

Write a program that prompts the user to enter two 5 digit **decimal** numbers in the range 0-65535 (i.e. 0000-FFFFh)m then display them.

The program asks the user to enter a number N between 1 and 100 (or more) then performs the division. The result should be displayed up to the Nth significant figure after the decimal point.

Bonus:

Based on the number of decimal figures, can you check if the number is rational or not.