LAB 01 Tasks

Task 01:

Think of two toy boxes, one labeled AX and the other BX. Your task is to switch the toys inside these boxes. Initially, the AX box has 10 toy cars, and the BX box has 20 toy robots. After your magic program runs, we want the AX box to have 20 robots and the BX box to have 10 cars.

Task 02:

Imagine two jars of marbles, one with AX marbles and the other with BX marbles. Your job is to combine the marbles from both jars. Assume the AX jar has 15 marbles and the BX jar has 25 marbles. After your clever program, the AX jar should have 40 marbles in total.

Task 03:

Write an assembly program to multiply the values stored in AX and BX. Assume AX contains 5, and BX contains 8 initially. After execution, AX should contain the product of 5 and 8.

Guidelines

1. Create static variables in the "`.data`" section
    a. Initialize your variables using the following syntax:

Example

`.data`
`value1 WORD x ;replace "x" with your value`
`value2 WORD y ;replace "y" with your value`

Note: In x86 assembly language, `WORD` is a term used to specify the size of a data item typically refers to a 16-bit data type.

2. Now move the values in the registers.
3. Use the terms:
    a. "`add`", to perform addition.
    b. "`sub`", to perform subtraction.
    c. "`imul`", to perform multiplication

i.e., `add eax, ebx`