Lab (ii): Comments, coding format and directives

Question 1: Basic Program Structure

Write an 8086 assembly language program that declares a variable with the value **5**. Use the .model, .stack, .data, and .code directives appropriately. Include comments to explain each part of your program.

Question 2: Defining Data Segment

Write an 8086 assembly language program that:

1. Defines a variable num with the initial value 10.
2. Defines a message msg that says "The initial value is 10$".

Use the .model, .stack, .data, and .code directives appropriately.

Question 3: Arithmetic Operations

Write an 8086 assembly language program that:

1. Declares two variables num1 and num2 with initial values 3 and 7, respectively.
2. Adds the two variables and stores the result in a variable sum.
3. Convert the result into ASCII format.
4. Displays the result of the addition using DOS interrupt 21h function 02h.

Use the .model, .stack, .data, and .code directives appropriately.