Discovery Series #13: x86_64 programming (all integer instructions discussed so far, CLI/DOS environment)

Started: Oct 17 at 5:23pm

Quiz Instructions

Reminding you of the academic honor pledge that you signed.

General directions:

1.) Take a screenshot of your project specification for reference purposes. That will be your project specification regardless of the attempts.

2.) Submission filename: 3SurnameFirstcharofyourfirstnam.asm (surname max of 6 characters only;example: 3bonifaA.asm).

3.) Place your name and section (as a comment) on the first line of the program.

4.) You can always return to your submission page as long as you have not pressed the submit button.

*File upload: source code

**Note: the program will be checked and executed in the Command Line Interface (CLI) / DOS prompt.

Question 1 10 pts

Write an x86-64 program to calculate the number of leading zeros in the binary representation of a quad-word integer. Leading zeros are defined as the number of zeros that appear before the first '1' bit from the leftmost position.

You must use at least one functional x86-64 register in the program.

- **Input**: A hexadecimal number.
- **Output**: The number of leading zeros in decimal.
- Do not use built-in leading zero count instructions.

Write your name and section on the 1st line of the code as a comment.

An example of a program run is given below:

Example:

```
Enter number: 1000000000000000

Leading zeroes: 3
```

Upload

Choose a File

Quiz saved at 5:42pm Submit Quiz