General instructions:

1) Submit **only running** code that you have tested before.
2) Put the source code of all questions in **one** file.
3) Mark the start of each question with this **comment**: `;;; Question <number>`
4) Each question **MUST BE WRITTEN IN A PROCEDURE (A PROCEDURE FOR EACH QUESTION). DO NOT COMMENT ANY CODE, WRITE A PROCEDURE FOR EACH QUESTION AND CALL ALL OF THE QUESTIONS WITHIN THE MAIN FUNCTION.**
5) Rename the .asm file as *yourSection_yourID_yourName*.asm.
   Example: 1_2015170999_FirstName_LastName
6) Submit **only** the **.asm** file. You have to press "Submit" button not the "Save button" to receive your assignment through coursesites.
7) **Do not use directives, such as .if, .while, etc …**
8) This assignment is intended for *individual* contribution. Sharing ideas or part of answers is considered plagiarism which is not tolerant.
9) Three questions out of five are mandatory (any three), and two are bonus.
10) **Submit only the .asm file on coursesites. Don't submit .sln, .vcproj, zip files, rar files, screenshots, etc .. Or your submission will be rejected.**

Marks will be deducted for not following the submission rules (-5/instruction).

Q1. Write an assembly program that counts the frequency of digits for given number.

Input

Input any number: 321150

Output

Frequency of 0 = 1

Frequency of 1 = 2

Frequency of 2 = 1
Frequency of 3 = 1
Frequency of 4 = 0
Frequency of 5 = 1
Frequency of 6 = 0
Frequency of 7 = 0
Frequency of 8 = 0
Frequency of 9 = 0

Q2. Write a procedure that checks whether the number is power of four or not.
Input:
Enter Your Number: 4

Output:
It is a power of four.
Input:
Enter Your Number: 5

Output:
It is not a power of four.

Q3. Write an assembly program to read two words from the user: the first one is a correct spelling of a word, and the second one is a correct/incorrect spelling of the first word. Determine if the second word is spelled correctly. Finally, output the second word and the degree of correctness.

The degree of correctness is as follows:
"CORRECT" if it is an exact match
"ALMOST CORRECT" if no more than 2 letters are wrong
"WRONG" if 3 or more letters are wrong

Words will contain only upper-case letters. The maximum word length is 20. Each word will be on a separate line.

Input:
SAMPLE
SIMPLE
Output:
SIMPLE IS ALMOST CORRECT
Input:
THEIR
THEIR
Output:
THEIR IS CORRECT
Input:
WINDMILL
WINDOWS
Output:
WINDOWS IS WRONG
Input:

ASSEMBLY
ASSEMBLYY
Output:
ASSEMBLYY IS ALMOST CORRECT

Q4. Write a program which takes a number from user & reverses the numerals in the integer.

Sample input
Enter a number: 7623

Sample Output

3267

Sample input
Enter a number: 1234567

Sample Output

7654321

Q5. Write an Assembly program that calculates the sum of the powers of the digits of a given **INTEGER**

Given a number, decompose it to its constituting digits then calculate n^3 were n is a digit in the given number. Finally, sum the powers.

YOU MUST READ AN INTEGER FROM USER USING CALL READINT NOT READSTRING.

Examples:

56 → $(5^3 + 6^3)$

327 → $(3^3 + 2^3 + 7^3)$

123456789 → $(1^3 + 2^3 + 3^3 + \cdots)$

Input

56

Output

341

Input

327

Output

378

Input

123456789

Output

2025