

Programming Assignment #4

Loops

1) Write a program that prints the reverse of a given string (using loops).

Input:

CODE

Output:

EDOC

2) Write a program that do the following: given a string containing words and numbers, return another string after replacing numbers with words. The given string may contain numbers only from 0 to 9. An example is shown below

Input:

I have 3 Networking books, 0 Database books, and 8 Programming books.

Output:

I have three Networking books, zero Database books, and eight Programming books.

Note: You should use loops, don't use some existing method to replace string.

3) Write a program that returns number of decimal digits in the given input string. E.g.

Input:

2345abc423

Output: //the input contains 7 digits

7

4) Read a positive integer value, and compute the following sequence: If the number is even, halve it; if it's odd, multiply by 3 and add 1. Repeat this process until the value is 1, printing out each value. Finally print out how many of these operations you performed. If the input value is less than 1: Print a message "Error" and exit the program.

Input:

9

Output:

Initial value is 9

Next value is 28

Next value is 14

Next value is 7

Next value is 22

Next value is 11

Next value is 34

Next value is 17

Next value is 52

Next value is 26

Next value is 13

Next value is 40

Next value is 20

Next value is 10

Next value is 5

Next value is 16

Next value is 8

Next value is 4

Next value is 2

Final value 1

Number of steps 19