

Title

Reverse a string; convert to upper case and vice versa.

Background

N/A

Program Specifications

Implement a program that asks users a string.

Then, reverse the string; and convert lowercase to uppercase and vice versa.

Function details:

1. Function 1: Display a screen to prompt users to input a string.
 - Users run the program and ask users to input a string.
 - Users input a string; perform Function 2.
2. Function 2: Reverse the string and convert uppercase to lowercase and vice versa.
 - The program reverses the string. During the reversing process, perform Function 3 to convert uppercase to lowercase and vice versa.
 - After reversing the string, returns the new reversed string.
 - Perform Function 4.
3. Function 3: Convert uppercase to lowercase and vice versa.
 - The program takes input as a string.
 - If a letter is uppercase, convert to lowercase.
 - If a letter is lowercase, convert to uppercase.
4. Function 4: Output the new string to the screen.

Expectation of User interface:

```
Enter a string: This is the TEST data.  
          .ATAD tset EHT SI SIHt
```

Guidelines

Use the following functions in the ctype.h library for the tasks

Use the function **int isalpha (int c)** to check if a character is a letter:

- c: ASCII character
- return: 0 if not a letter; otherwise non-zero

Use the function **int islower(int c)** to check if a letter is lowercase

Use the function **int isupper (int c)** to check if a letter is uppercase

Use the function **int toupper (int c)** to convert a lowercase letter to uppercase letter

Use the function **int tolower (int c)** to convert an uppercase letter to lowercase letter