

Title

Count the number of the appearance of letters in a string.

Background

N/A

Program Specifications

Implement a program to prompt users to input a string.

Count the number of the appearances of letters in the string.

Function details:

1. Function 1: Display a screen to prompt users to input a string.
 - Users input a string, then perform Function 2.
2. Function 2: The program counts the number of appearances of letters.
 - Based on the ASCII table, create an array with 26 elements which are corresponding to 26 letters.
 - If the character is a letter (convert to lower case if it is upper case), increase by 1 at the letter's position (Assume the letter 'a' is the first position in the 26-letter array)
 - Return the 26-letter array after finishing counting the appearances of each letter in the inputted string.
 - Perform Function 3.
3. Function 3: Output the letter and the number of its appearances.

Expectation of User interface:

```
Enter a string: This is the TEST data.  
a: 2  
d: 1  
e: 2  
h: 2  
i: 2  
s: 3  
t: 5
```

Guidelines

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 isupper (int c)** to check if a letter is uppercase.

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