OBJECTIVES

1. Introduction to character array processing with simple functions.
2. Learn how to write functions that accept character pointers.

GENERAL INFORMATION

Standard C library functions include many character array handling functions. We are to learn some of these functions in this lab hour; gets(), islower(), isupper() and strlen().

char *gets(char *str); : retrieves characters from terminal up to enter character and stores them into the array given with the pointer, returns the pointer. Use gets instead of scanf if you want to retrieve entire user entered string (no formatting).

example: gets(A); /* retrieve everything the user entered */

int islower(int ch); : returns TRUE if ch is a lowercase character, otherwise returns FALSE. 
example: if(islower(A[i])) A[i]=toupper(A[i]); /* convert to uppercase */

int isupper(int ch); : returns TRUE if ch is an uppercase character, otherwise returns FALSE.

int strlen(char *str); : returns the number of characters up to the terminating NULL character. 
example: printf("Length of the string=%d",strlen(A));

EXPERIMENT

1. Write a program that asks the user to enter a string. The program shall print out the numbers of uppercase and lowercase characters.

Example screen; (user entered text is shown bold)

Enter string : Osmangazi University MMF 1970
Size=29  Uppercase=5  Lowercase=17

2. Using toupper() and tolower() functions, invert the case of the characters in the string user has entered. Print out the result.

Example; (user entered text is shown bold)

Enter string : Osmangazi University MMF 1970
Case-Inverted string : oSMANGAZI uNIVERSITY mmf 1970

QUESTIONS:

1. How do you write a function that accepts two character pointers and inverts the cases of all alphabetic characters in the first string, puts the result into the second array, copying the rest of the characters as is and returning the number of characters altered? Do it.

2. How would you write a function that accepts a character pointer and a character, returns the number of occurrences of the character in the character array.