



Sheet 6 (Strings)

Class Work

- 1- Write a program that contains a function that takes a string as a parameter and returns the number of spaces in this string.
- 2- Write a program that contains a function that takes a string as a parameter, and converts all characters to uppercase letters.
Note that:
 - Changes must be in the original string.
 - '<', '?', have no uppercase form.
 - ASCII code of 'A' = 65, while the ASCII code of 'a' = 97.
 - Read the string from the user, and print the string before and after calling the function.
- 3- Write a program that contains a function that takes two strings as parameters and prints them in alphabetical order.

Home Work

- 1- Write a program that contains a function that gets a string as a parameter and returns an integer value represents the number of uppercase letters in this string.
Example:
Input: "AbcDeFgh" Output: 3
- 2- Write a function that gets two parameters: string and character. This function returns an integer value represents the number of occurrences of this character in the string.
- 3- Write function that gets a string as a parameter then reverses this string.
Example:
Input: "ABCD" Output: "DCBA"
- 4- Write a function that takes a string as a parameter, and returns the number of words in this string. Assume that words are separated by one or more spaces, tab ('\t', ASCII = 09) or '.' (do not use the ASCII of '.' = 46).

5- Write a function that takes a string as a parameter and returns the number of non alphabet characters (uppercase or lowercase).

Alphabet characters are "A..Z" , "a..z".

Example:

Input: "Ab?c-d." Output: 3

6- Write a function for each of the following:

- a) Read 5 names from the user (each 30 character) and put them in an array of strings.
- b) Take a name as a parameter, returns the value (*I*) if the name exists in the array, and returns the value (*0*) if the name is not found.
- c) Print the names in ascending order.

7- Trace the Following program:

```
a) include<stdio.h>
int main ()
{
    char s1[20]="green plants";
    char s2[15]="hamburger";
    char s3[10]="and";

    printf("%s \n %c %c \n %s \n %c %c \n", s1, s2[6], s2[0], s3, s1[0],s2[2]+2);

    return 0;
}
```

```
b) include<stdio.h>
int main ()
{
    char s [20] = "Test yourself";
    int i , j, n = strlen(s);

    puts(s);
    printf(" %d \n", n);
    for (i=0 ; i < n ; i++)
    {   for (j =0 ; j < i ; j++)
        printf(" ");
        printf("%c \n", s [i]) ;
    }
    printf("\n Surprise \n");
    return 0;
}
```