

## CSE115L – Computing Concepts Lab

### String declaration, input and output:

```
#include<stdio.h>
int main()
{
    char
str[5]={'E','X','I','T','\0'};
    char st[]="world";
    printf("%s\n",str);
    printf("%s",st);
    return 0;
}
```

```
#include<stdio.h>
int main()
{
    char str[10];
    char s[10];
    gets(str);
    scanf("%s",s);
    puts(str);
    printf("%s\n",s);
    return 0;
}
```

```
#include<stdio.h>
int main()
{
    char str[10];
    int i;
    for(i=0;i<5;i++)
    {
        scanf("%c",&str[i]);
    }

    for(i=0;i<5;i++)
    {
        printf("%c",str[i]);
    }

    return 0;
}
```

### String length, string copying, string concatenation and string comparison:

```
#include<stdio.h>
#include<string.h>
int main()
{
    char str1[10];
    char str2[10];
    char str3[20];
    int len;

    gets(str1);
    gets(str2);

    /* copy str1 into str3 */
    strcpy(str3,str1);
    printf("strcpy(str3,str1):
%s\n",str3);

    /* concatenates str1 and str2 */
    strcat(str1,str2);
    printf("strcat(str1,str2):
%s\n",str1);

    /* total length of str1 after
concat */
    len=strlen(str1);
    printf("strlen(str1) : %d\n",
len);

    return 0;
}
```

```
#include<stdio.h>
#include<string.h>

int main()
{
    char str1[10];
    char str2[10];
    char str3[20];
    int chk;

    gets(str1);
    gets(str2);

    chk = strcmp(str1,str2);
    printf("%d",chk);
    if(chk == 0)
        printf("Same");
    if(chk < 0)
        printf("str1 is
smaller");
    if(chk>0)
        printf("str2 is
smaller");
    return 0;
}
```

### Passing string as function argument:

```
#include<stdio.h>
void printString(char s[]);
int main()
{
    char str1[10];
    gets(str1);
    printString(str1);
    return 0;
}
```

```
void printString(char s[])
{
    int i=0;
    while(s[i]!='\0')
    {
        printf("%c",s[i]);
        i++;
    }
}
```

### Problems:

1. Write a function that returns the length of a string without using the **strlen()** library function. Take string as input in main and pass it to the function.

```
int length(char arr[]);
```

#### Sample Output:

```
Enter string: hello world
Length is: 11
```

2. Write a function that searches for a character in a string. The function should print true if found false otherwise.

```
void search(char arr[], char key);
```

#### Sample Output 1:

```
Enter String: bangladesh
Search Key: g
Found
```

#### Sample Output 2:

```
Enter String: bangladesh
Search Key: v
Not found
```

3. Write a function that shows the number of vowels and consonants in a string.

```
void count(char arr[]);
```

#### Sample Output 1:

```
Enter string: Bangladesh
Vowels: 3
Consonants: 7
```

#### Sample Output 2:

```
Enter string: Programming
Vowels: 3
Consonants: 8
```

4. Implement the following function which reverses a string without using library function.

```
void reverse(char arr[]);
```

Take string as input in main and pass it to the **reverse** function.

**Sample Output:**

```
Enter string: logical
Reverse order: lacigol
```

**Sample Output:**

```
Enter string: madam
Reverse order: madam
```

5. Implement the following function which compares two strings without using library function.

```
int compare(char str1[], char str2[]);
```

The **compare** function returns 0 if **str1** is equal to **str2**, returns 1 if **str1** is greater than **str2** and returns -1 if **str2** is greater than **str1**.

**Sample Output 1:**

```
Enter str1: Simple
Enter str2: Temple
-1
```

**Sample Output 2:**

```
Enter str1: Normal
Enter str2: Hard
1
```

6. Implement the following function which replaces all the occurrences of one character with another character in a string and shows the modified string.

```
void Replace(char arr[],char oldChar, char newChar);
```

The **Replace** function replaces all the occurrences of **oldChar** is with **newChar** in the string **arr**.

**Sample Output 1:**

```
Enter string: Logical
Old char: g
New char: n
Modified string: Lonical
```

**Sample Output 2:**

```
Enter string: University
Old char: i
New char: e
Modified string: Uneversety
```