

## Assignment 18

## String and function in C-language

① write a function to calculate length of the string.

```
#include <stdio.h>
#include <string.h>
void input (char[]);
void output (char[]);
int main()
{
    printf("Enter a string\n");
    char str[50];
    input (str);
    output (str);
    return 0;
}

void input (char str[])
{
    gets (str);
}

void output (char str[])
{
    printf("Length of string is %d", strlen(str));
}
```

② write a function to reverse a string.

```
#include <stdio.h>
#include <string.h>
void input (char[]);
void output (char[]);
int main()
{
    printf("Enter a string\n");
    char str[50];
    input(str);
    output(str);
    return 0;
}
void input (char str[])
{
    gets(str);
}
void output (char str[])
{
    printf("Reverse of string is = %s", storev(str));
}
```

③ write a function to Compare two strings.

```
#include <stdio.h>
#include <string.h>
void output (char[], char[]);
int main()
{
    printf("Enter 2 strings\n");
    char str[50], str1[50];
    scanf("%s", str);
    scanf("%s", str1);
    output(str, str1);
    return 0;
}
void output (char str[], char str1[])
{
    printf("Result is = %d", strcmp(str, str1));
}
```

④ write a function to transform string into uppercase.

```
#include <stdio.h>
#include <string.h>
void output (char[]);
int main()
{
    printf("Enter a string = ");
    char str[40];
    gets(str);
    output(str);
    return 0;
}
void output (char str[])
{
    printf("Upper string is = %s",strupr(str));
}
```

⑤ write a function to transform a string into lowercase.

```
#include <stdio.h>
#include <string.h>
void output(char[]);
int main()
{
    printf("Enter a string = ");
    char str[40];
    gets(str);
    output(str);
    return 0;
}
void output(char str[])
{
    printf("Lower string is = %s", strtolower(str));
}
```

⑥ write a function to check whether a given string is an alphanumeric string or not.

```
#include <stdio.h>
#include <string.h>
void output(char[]);
int main()
{
    int i;
    char str[50];
    printf("Enter a string = ");
    gets(str);
    output(str);
    return 0;
}
void output(char str[])
{
    int i, a, b;
    for (i=0; i<str[i]; i++)
    {
        if (str[i] >= 'a' && str[i] <= 'z' || str[i] >= 'A' && str[i] <= 'Z')
            a = 1;
        if (str[i] >= '0' && str[i] <= '9')
            b = 1;
    }
    if (a == 1 && b == 1)
        printf("Alphanumeric string");
    else
        printf("Not an Alphanumeric string");
}
```

⑦ write a function to check whether a given string is palindrome or not.

```
#include <stdio.h>
#include <string.h>
void output(char[]);
int main()
```

```

{
    char str[50];
    printf("Enter a string = ");
    gets(str);
    output(str);
    return 0;
}

void output(char str[])
{
    int l, i, j;
    for (l = 0; str[l]; l++)
        for (i = 0; i < l/2; i++)
        {
            if (str[i] == str[l-1-i])
            {
                printf("palindrome string");
                break;
            }
            else
            {
                printf("Not an palindrome string");
                break;
            }
        }
}

```

⑧ write a function to count words in a given string.

```

#include <stdio.h>
void output(char s[]);
int main()
{
    char s[50];
    printf("Enter a string = ");
    gets(s);
    output(s);
}

void output(char s[])
{
    int i = 0, c = 0, check = 0;
    while (s[i])
    {
        if (s[i] == ' ')
        {
            if (check != 0)
            {
                c++;
                check = 0;
            }
            else
            {
                check++;
            }
            i++;
        }
        else
        {
            i++;
        }
    }
    if (check != 0)
    {
        c++;
    }
    printf("Total number of word = %d", c);
}

```

- ⑨ write a function to reverse a string word wise. (for example if the given string is "my sing Education services" then the resulting string should be "services education my sing").

```

#include <stdio.h>
#include <string.h>
void output(char[], int, int);
int main()
{
    int i=0, a=0, e=0, c=0;
    char str[50] = "my name is Arish kushawaha";
    while (str[i] != '\0')
    {
        while (str[i] != ' ')
        {
            if (str[i] == '\0')
            {
                c++;
                break;
            }
            e++;
            i++;
        }
        output(str, a, e-1);
        if (c == 0)
            break;
        a = e++;
        i++;
    }
    output(str, 0, i-1);
    printf("%s", str);
    return 0;
}

void output(char str[], int a, int e)
{
    char t;
    while (a <= e)
    {
        t = str[a];
        str[a] = str[e];
        str[e] = t;
        a++;
        e--;
    }
}

```

- ⑩ write a function to find the repeated character in a given string.

```

#include <stdio.h>
#include <string.h>
void output(int[], int);
int main()
{
    int i=0;
    char str[100];
}

```

```

printf("enter a string = ");
gets(str);
int s[256] = {0};
while (str[i] != '\0')
{
    s[str[i++]]++;
}
output(s, i);
return 0;
}

void output(int s[], int i)
{
    printf("repeated characters are = ");
    for (i = 0; i < 256; i++)
    {
        if (s[i] != 0)
        {
            printf("%2c ==> %d\n", i, s[i]);
        }
    }
}
}

```