

## Assignment – 18

1. Write a function to calculate length of the string.

```
#include<stdio.h>
#include<string.h>
int length(char *str)
{
    int i;
    for(i=0;str[i];i++);
    return i;
}
int main()
{
    char str[100];
    printf("Enter string : ");
    gets(str);
    printf("Length of string is %d",length(str));
    return 0;
}
```

2. Write a function to reverse a string.

```
#include<stdio.h>
#include<string.h>
void reverse(char *str)
{
    int i,j;
    for(i=0;str[i];i++);
    for(j=i-1;j>=0;j--)
        printf("%c",str[j]);
}
int main()
{
    char str[100];
    printf("Enter string : ");
    gets(str);
    reverse(str);
    return 0;
}
```

3. Write a function to compare two strings.

```
#include<stdio.h>
#include<string.h>
int compare(char *str1,char *str2)
{
    int i;
    for(i=0;str1[i];i++)
    {
        if(str1[i]==str2[i])
            continue;
        else if (str1[i]>str2[i])
```

```

        return 1;
    else
        return -1;
    }
}
int main()
{
    char str1[100],str2[100];
    printf("Enter 1st string: ");
    gets(str1);
    printf("Enter 2nd string: ");
    gets(str2);
    if(compare(str1,str2) == 1)
        printf("%s' comes before '%s' in alphabetic order",str2,str1);
    else
        printf("%s' comes before '%s' in alphabetic order",str1,str2);
    return 0;
}

```

4. Write a function to transform string into uppercase.

```

#include<stdio.h>
#include<string.h>
void upper(char *str)
{
    int i;
    for(i=0;str[i];i++)
    {
        if(str[i]>='a' && str[i]<='z')
            str[i] = str[i] - 32;
    }
}
int main()
{
    char str[100];
    printf("Enter string : ");
    gets(str);
    upper(str);
    printf("%s",str);
    return 0;
}

```

5. Write a function to transform a string into lowercase.

```

#include<stdio.h>
#include<string.h>
void lower(char *str)
{
    int i;
    for(i=0;str[i];i++)
    {
        if(str[i]>='A' && str[i]<='Z')
            str[i] = str[i] + 32;
    }
}

```

```

}
int main()
{
    char str[100];
    printf("Enter string : ");
    gets(str);
    lower(str);
    printf("%s",str);
    return 0;
}

```

6. Write a function to check whether a given string is an alphanumeric string or not.  
(Alphanumeric string must contain at least one alphabet and one digit)

```

#include<stdio.h>
#include<string.h>
int alphanumeric(char *str)
{
    int i,a=0,d=0;
    for(i=0;str[i];i++)
    {
        if(str[i]>='a' && str[i]<='z' || str[i]>='A' && str[i]<='Z')
        {
            a++;
        }
        else if (str[i]>='0' && str[i]<='9')
        {
            d++;
        }
    }
    if((a>0) && (d>0))
        return 1;
    else
        return 0;
}
int main()
{
    char str[100];
    printf("Enter string : ");
    gets(str);
    if(alphanumeric(str))
        printf("Given string is alphanumeric");
    else
        printf("Given string is not alphanumeric");
    return 0;
}

```

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

```

#include<stdio.h>
#include<string.h>
int palindrome(char *str)
{
    int i,n;

```

```

    for(n=0;str[n];n++);
    for(i=0;i<=(n/2);i++)
    {
        if(str[i]==str[n-1-i])
            continue;
        else
            return 0;
    }
    return 1;
}
int main()
{
    char str[100];
    printf("Enter string : ");
    gets(str);
    if(palindrome(str))
    {
        printf("%s is Palindrome",str);
    }
    else
    {
        printf("%s is not Palindrome",str);
    }
    return 0;
}

```

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

```

#include<stdio.h>
#include<string.h>
int count(char *str)
{
    int i,total=1;
    for(i=0;str[i];i++)
    {
        if(str[i]==' ')
            total++;
    }
    return (total);
}
int main()
{
    char str[100];
    printf("Enter string : ");
    gets(str);
    printf("Number of words in given string is %d",count(str));
    return 0;
}

```

9. Write a function to reverse a string word wise. (For example if the given string is “Mysirg Education Services” then the resulting string should be “Services Education Mysirg” )

```

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

```

```

void reverse(char *str)
{
    int i,b=1,x,y;
    int a[1000]={-1};
    for(i=0;str[i];i++)
    {
        if(str[i]==' ')
        {
            a[b]=i;
            b++;
        }
    }
    a[b]=i;
    for(i=b-1;i>=0;i--)
    {
        x=a[i];
        y=a[i+1];
        while(x!=y)
        {
            printf("%c",str[x+1]);
            x++;
        }
    }
}

int main()
{
    char str[100];
    printf("Enter string : ");
    gets(str);
    reverse(str);
    return 0;
}

```

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

```

#include<stdio.h>
#include<string.h>
void count(char *str)
{
    int a[26]={0},i,total=0;
    for(i=0;str[i];i++)
    {
        if(str[i]>='A' && str[i]<='Z')
            str[i] = str[i] + 32;
    }
    for(i=0;str[i];i++)
    {
        a[str[i]-97]++;
    }
    printf("Repeated character in given string is : ");
    for(i=0;i<26;i++)
    {
        if(a[i]>1)
            printf("%c ", 'a'+i);
    }
}

```

```
}  
int main()  
{  
    char str[100];  
    printf("Enter string : ");  
    gets(str);  
    count(str);  
    return 0;  
}
```