**String and Functions in C Language**

**Assignment – 18**

1. Write a function to calculate length of the string

#include<stdio.h>

#include<string.h>

#define siz 100

int len(char [],int);

int main()

{

char str[siz];

printf("ENTER STRING=");

fgets(str,siz,stdin);

printf("LENGTH OF STRING=%d",len(str,siz));

}

int len(char str[],int size)

{

int count=-1;

for(int i=0;str[i];i++)

count++;

return count;

}

2. Write a function to reverse a string.

#include<stdio.h>

#include<string.h>

#define siz 100

int rev(char [],int);

int main()

{

char str[siz];

printf("ENTER STRING=");

fgets(str,siz,stdin);

rev(str,siz);

}

int rev(char str[],int size)

{

printf("REVERSE OF STRING=%s",strrev(str));

}

3. Write a function to compare two strings.

#include<stdio.h>

#include<string.h>

#define siz 100

int comp(char [],char [],int);

int main()

{

char str1[siz],str2[siz];

printf("ENTER STRING1=");

fgets(str1,siz,stdin);

printf("ENTER STRING2=");

fgets(str2,siz,stdin);

comp(str1,str2,siz);

}

int comp(char str1[],char str2[],int size)

{

if(strcmp(str2,str1)==0)

printf("BOTH STRING SAME");

else

printf("BOTH STRING NOT SAME");

}

4. Write a function to transform string into uppercase

#include<stdio.h>

#include<string.h>

#define siz 100

int up(char [],int);

int main()

{

char str[siz];

printf("ENTER STRING=");

fgets(str,siz,stdin);

up(str,siz);

}

int up(char str[],int size)

{

printf("STRING IN UPPER CASE=%s",strupr(str));

}

5. Write a function to transform a string into lowercase

#include<stdio.h>

#include<string.h>

#define siz 100

int low(char [],int);

int main()

{

char str[siz];

printf("ENTER STRING=");

fgets(str,siz,stdin);

low(str,siz);

}

int low(char str[],int size)

{

printf("STRING IN UPPER CASE=%s",strlwr(str));

}

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

#include<stdio.h>

#include<string.h>

#define siz 100

int alpha(char [],int);

int main()

{

char str[siz];

printf("ENTER STRING=");

fgets(str,siz,stdin);

alpha(str,siz);

}

int alpha(char str[],int size)

{

int temp1,temp2;

for(int i=0;str[i];i++)

{

if(str[i]>='a' && str[i]<='z' || str[i]>='A' && str[i]<='Z')

temp1=1;

if(str[i]>='0' && str[i]<='9')

temp2=1;

}

if(temp1==1 && temp2==1)

printf("ALPHA NUMERIC STRING");

else

printf("NOT ALPHA NUMERIC STRING");

}

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

#include<stdio.h>

#include<string.h>

#define siz 100

int pal(char [],int);

int main()

{

char str[siz];

printf("ENTER STRING=");

fgets(str,siz,stdin);

pal(str,siz);

}

int pal(char str[],int size)

{

int l=strlen(str),i;

for(i=0;i<l/2;i++)

{

if(str[i]!=str[l-1-i])

{

printf("NOT A PALINDROM");

break;

}

}

if(i==l/2)

printf("PALINDROM");

}

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

#include<stdio.h>

#include<string.h>

#define siz 100

int word(char [],int);

int main()

{

char str[siz];

printf("ENTER STRING=");

fgets(str,siz,stdin);

word(str,siz);

}

int word(char str[],int size)

{

int count=1;

for(int i=0;str[i];i++)

if(str[i]==' ')

count++;

printf("NO OF WORDS ARE=%d",count);

}

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

#include<stdio.h>

#include<string.h>

#define siz 100

int rep(char [],int);

int main()

{

char str[siz];

printf("ENTER STRING=");

fgets(str,siz,stdin);

rep(str,siz);

return 0;

}

int rep(char str[],int size)

{

int i,j,c,count;

for(i=0;str[i];i++)

{

for(j=i+1;str[j];j++)

{

if(str[i]==str[j])

{

count=1;

break;

}

}

if(count==1)

{

count=0;

for(int k=i;k>=0;k--)

{

if(str[i]==str[k])

{

c++;

}

}

if(c==1)

{

printf("%c",str[i]);

c=0;

}

}

}

}