**Assignment-18**

1. Write a function to calculate length of the string

Ans-#include <stdio.h>

int str\_len(char s[]);

int main()

{

char str[30];

int i;

printf("enter a string: ");

fgets(str,30,stdin);

printf("%s length of the string is %d",str,str\_len(str));

return 0;

}

int str\_len(char s[])

{

int i;

for(i=0;s[i]!='\0';i++);

return (i-1);

}

1. Write a function to reverse a string.

Ans-#include <stdio.h>

int str\_len(char s[]);

void str\_rev(char a[]);

int main()

{

char str[30];

int i;

printf("enter a string: ");

fgets(str,30,stdin);

str\_rev(str);

printf("Reverse string is %s",str);

return 0;

}

void str\_rev(char a[])

{

int i,j,l;

char temp;

l=str\_len(a);

for(i=0,j=l;i<=j;i++,j--)

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

int str\_len(char s[])

{

int i;

for(i=0;s[i]!='\0';i++);

return (i-1);

}

1. Write a function to compare two strings.

Ans-#include <stdio.h>

int str\_len(char s[]);

int str\_cmp(char x[],char y[]);

int main()

{

char str1[30],str2[30];

int i;

printf("enter first string: ");

fgets(str1,30,stdin);

printf("enter second string: ");

fgets(str2,30,stdin);

if(str\_cmp(str1,str2))

printf("Strings are same");

else

printf("Strings are different");

return 0;

}

int str\_cmp(char x[],char y[])

{

int i,l1,l2,count=0;

l1=str\_len(x);

l2=str\_len(y);

if(l1==l2)

{

for(i=0;x[i]!='\0';i++)

{

if(x[i]==y[i])

count++;

}

if(count-1==l1)

return 1;

else

return 0;

}

else

{

return 0;

}

}

int str\_len(char s[])

{

int i;

for(i=0;s[i]!='\0';i++);

return (i-1);

}

1. Write a function to transform string into uppercase

Ans-#include <stdio.h>

void str\_upr(char s[]);

int main()

{

char str[30];

int i;

printf("enter string: ");

fgets(str,30,stdin);

str\_upr(str);

printf("%s in uppercase",str);

return 0;

}

void str\_upr(char s[])

{

int i;

for(i=0;s[i]!='\0';i++)

{

if(s[i]>=97&&s[i]<=122)

s[i]=s[i]-32;

}

}

5. Write a function to transform a string into lowercase

Ans-#include <stdio.h>

void str\_lwr(char s[]);

int main()

{

char str[30];

printf("enter first string: ");

fgets(str,30,stdin);

str\_lwr(str);

printf("%s in lowercase",str);

return 0;

}

void str\_lwr(char s[])

{

int i;

for(i=0;s[i]!='\0';i++)

{

if(s[i]>=65&&s[i]<=90)

s[i]=s[i]+32;

}

}

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)

Ans-#include <stdio.h>

int alphanumeric(char s[]);

int alphanumeric(char s[])

{

int i,alpha=0,digit=0;

for(i=0;s[i]!='\0';i++)

{

if((s[i]>=65&&s[i]<=90)||(s[i]>=97&&s[i]<=122))

{

alpha++;

}

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

{

digit++;

}

}

if((alpha>0)&&(digit>0))

return 1;

else

return 0;

}

int main()

{

char str[30];

printf("enter a string: ");

fgets(str,20,stdin);

if(alphanumeric(str))

{

printf("%s is alphanumeric",str);

}

else

{

printf("%s is not alphanumeric",str);

}

return 0;

}

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

Ans- #include <stdio.h>

#include<string.h>

int str\_len(char s[]);

int str\_cmp(char x[],char y[]);

int palindrome(char p[],char q[]);

void str\_rev(char a[]);

int main()

{

char str[30],s[30];

int i;

printf("enter a string: ");

fgets(str,30,stdin);

strcpy(s,str);

str\_rev(s);

if(palindrome(str,s))

printf("%s is palindrome",str);

else

printf("%s is not palindrome",str);

return 0;

}

int palindrome(char p[],char q[])

{

if(str\_cmp(p,q))

return 1;

else

return 0;

}

void str\_rev(char a[])

{

int i,j,l;

char temp;

l=str\_len(a);

for(i=0,j=l;i<=j;i++,j--)

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

int str\_len(char s[])

{

int i;

for(i=0;s[i]!='\0';i++);

return (i-1);

}

int str\_cmp(char x[],char y[])

{

int i,l1,l2,count=0;

l1=str\_len(x);

l2=str\_len(y);

if(l1==l2)

{

for(i=0;x[i]!='\0';i++)

{

if(x[i]==y[i+1])

count++;

}

if(count==l1)

return 1;

else

return 0;

}

else

{

return 0;

}

}

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

Ans-#include <stdio.h>

int words(char s[]);

int words(char s[])

{

int i,count=0;

for(i=0;s[i]!='\0';i++)

{

if(s[i]==' ')

count++;

}

count++;

return count;

}

int main()

{

char str[100];

printf("enter a string: ");

fgets(str,100,stdin);

printf("%s words in a given string is %d",str,words(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” )

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

Ans-#include <stdio.h>

char words(char s[],char);

char words(char s[],char x)

{

int i,count=0,f,j;

char temp;

for(i=0;s[i]!='\0';i++)

{

if(s[i]==x)

count++;

}

if(count>1)

return x;

else

return '\0';

}

int main()

{

char str[100];

int i,f;

printf("enter a string: ");

fgets(str,100,stdin);

for(i=0;str[i]!='\0';i++)

{

for(f=0;f<i;f++)

{

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

break;

}

if(f==i)

{

if(str[i]==words(str,str[i]))

printf("\n%c is repeated",str[i]);

}

}

return 0;

}