1. **Read from a terminal using scanf function and print using printf function.**

**Program:-**

#include <stdio.h>

#include<string.h>

int main()

{

char n[15];

printf("enter input string : ");

scanf("%s",n);

printf("entered input is: \n");

printf("%s\n",n);

return 0;

}

**Output:-**

enter input string : hello

entered input is:

hello

1. **read a lines of text from a terminal using fgets function and print using puts function.**

**Program:-**

#include <stdio.h>

#include<string.h>

int main()

{

char n[15];

printf("enter input string : ");

fgets(n,sizeof(n),stdin);

printf("entered input is: \n");

puts(n);

return 0;

}

**Output:-**

enter input string : hey c

entered input is:

hey c

**3. convert**

**a. Upper case to Lower case**

**b. Lower case to Upper case**

**c. Toggle case**

**d. Sentence case**

**Program:-**

**a. Upper case to Lower case**

#include <stdio.h>

#include<string.h>

int main() {

char a[15];

int i;

printf("enter your string in upper case : ");

scanf("%s",a);

for(i=0;i<=strlen(a);i++)

{

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

a[i]=a[i]+32;

}

printf("lowercase is : %s",a);

return 0;

}

**OUTPUT:-**

enter your string in upper case : HELLO

lowercase is : hello

**b. Lower case to Upper case**

**Program:-**

#include <stdio.h>

#include<string.h>

int main() {

char a[15];

int i;

printf("enter your string in LOWER case : ");

scanf("%s",a);

for(i=0;i<=strlen(a);i++)

{

if (a[i]>=95&&a[i]<=122)

a[i]=a[i]-32;

}

printf("UPPERcase is : %s",a);

return 0;

}

**Output:-**

enter your string in LOWER case : hello

UPPERcase is : HELLO

**c. Toggle case**

**Program:-**

#include <stdio.h>

#include<string.h>

int main() {

char a[15];

int i;

printf("enter your string: ");

fgets(a,sizeof(a),stdin);

for(i=0;i<=strlen(a);i++)

{

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

a[i]=a[i]+32;

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

a[i]=a[i]-32;

}

printf("in toggle case is : %s",a);

return 0;

}

**Output:-**

enter your string in lower case : HEllo

upper case is : heLLO

**d. Sentence case**

**Program:-**

#include<stdio.h>

#include<string.h>

int main()

{

char str[30],i;

//READ A STRING

printf("Enter A String: ");

fgets(str,sizeof(str),stdin);

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

{

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

{

if(i==0 || str[i-1]==' ')

{

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

{

str[i]=str[i]-32;

}

}

else

{

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

{

str[i]=str[i]+32;

}

}

}

}

printf(" \n sentence case is : ");

puts(str);

return 0;

}

**Output:-**

Enter A String: how are you?

sentence case is : How Are You?

1. **perform String Concatenation (With and Without String Handling Functions).**

**Program:-(with)**

#include <stdio.h>

#include<string.h>

int main() {

char a[10]={'h','e','l','l','o','\0'};

char b[5]= {'c','\0'};

strcat(a,b);

puts(a);

return 0;

}

**Output:-**

helloc

**Program:-(without)**

#include<stdio.h>

int main()

{

char str1[15],str2[5];

int i=0,j=0;

printf("\nEnter First String: ");

gets(str1);

printf("\nEnter Second String: ");

gets(str2);

while(str1[i]!='\0')

i++;

while(str2[j]!='\0')

{

str1[i]=str2[j];

j++;

i++;

}

str1[i]='\0';

printf("Concatenated String is %s",str1);

return 0;

}

**Output:-**

Enter First String: hello

Enter Second String: c

Concatenated String is helloc

1. **perform String Reversal (With and Without String Handling Functions).**

**Program:-(with)**

#include<stdio.h>

#include<string.h>

int main()

{

char str[15] = "helloc";

printf("The given string is =%s\n",str);

printf("After reversing string is =%s",strrev(str));

return 0;

**Output:-**

After reversing string is =colleh

**Program:-(without)**

include<string.h>

#include<stdio.h>

int main()

{

char str[15] = "helloc";

int len,i;

printf("The given string is =%s\n",str);

len=strlen(str);

printf("After reversing the string is \n");

for(i=len-1;i>=0;i--)

{

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

}

return 0;

}

**Output:-**

The given string is =helloc

After reversing the string is

colleh

1. **perform Substring Extraction (With and Without String Handling Functions).**

**Program:-(with)**

#include <stdio.h>

#include<stdio.h>

void main()

{

char a[25]="i am a good boy in class.";

char \*sub;

sub=strstr(a,"good");

printf("substring is : %s",sub);0

}

**Output:-**

substring is : good boy in class.

**Program:-(without)**

#include <stdio.h>

int main()

{

char str[100], sub[100];

int pos, len, c = 0;

printf("Input a string: ");

gets(str);

printf("Enter the starting position of substring: ");

scanf("%d", &pos);

printf("Enter the length of substring: ");

scanf("%d",&len);

while (c < len) {

sub[c] = str[pos+c-1];

c++;

}

sub[c] = '\0';

printf("Required substring is \"%s\"\n", sub);

return 0;

}

**Output:-**

Input a string: he is good doctor in our locality

Enter the starting position of substring: 5

Enter the length of substring: 15

Required substring is "s good doctor i"

**7. copy one string into another and count the no of elements copied. (With and Without String Handling Functions).**

**Program:-(with)**

#include <stdio.h>

#include<string.h>

int main() {

char a[15]="hello c";

char b[15];

int i,c=0;

strcpy(b,a);

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

{

c++;

}

printf("after copying string is : %s",b);

printf("\nno of element copied is %d",c);

return 0;

}

**Output:-**

after copying string is : hello c

no of element copied is 7

**Program:-(without)**

#include<stdio.h>

#include<string.h>

int main()

{

char s1[15],s2[20];

int i,c=0;

printf("input the string : ");

gets(s1);

for(i=0;s1[i]!='\0';i++) // or for(i=0;s1[i];i++)

{

s2[i]=s1[i];

c++;

}

s2[i]='\0';

printf("original string s1='%s'\n",s1);

printf("copied string s2='%s'",s2);

printf("\nelement copied : %d",c);

return 0;

}

**Output:-**

input the string : hello c

original string s1='hello c'

copied string s2='hello c'

element copied : 7

**8. read a string and prints if it is a palindrome or not.**

**Program:-**

#include <stdio.h>

#include <string.h>

int main()

{

char str[20];

int i, len;

int c= 0;

printf("Enter a string: ");

scanf("%s", str);

len = strlen(str);

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

{

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

{

c=1;

break;

}

}

if (c)

{

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

}

else

{

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

}

return 0;

}

**Output:-**

Enter a string: guug

is a palindrome

**9. read a line of text and count all occurrences of particular word.**

**Program:-**

#include<stdio.h>

#include <string.h>

int main()

{

char s[200],w[200];

int n,a[200],i,j,k=0,l,found=0,t=0;

printf("input the string : ");

gets(s);

printf("Enter word for serching inside the string: ");

gets(w);

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

{

if(s[i]==' ')

{

a[k++]=i;

}

}

a[k++]=i;

j=0;

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

{

n=a[i]-j;

if(n==strlen(w))

{

t=0;

for(l=0;w[l];l++)

{

if(s[l+j]==w[l])

{

t++;

}

}

if(t==strlen(w))

{

found++;

}

}

j=a[i]+1;

}

printf(" your word '%s' is occurred %d times in your inputed string.",w,found);

}

**Output:-**

input the string : i am going i am eating i am playing i am sleeping

Enter word for serching inside the string: am

your word 'am' is occurred 4 times in your inputed string.

**10. read a string and rewrite it in the alphabetical order.**

**Program:-**

#include<stdio.h>

#include<string.h>

int main()

{

char str[100],temp;

int i,j;

printf("Enter the string: ");

gets(str);

printf("%s in alphabetical order is: ",str);

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

{

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

{

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

{

temp=str[j];

str[j]=str[i];

str[i]=temp;

}

}

}

printf("%s\n",str);

return 0;

}

**Output:-**

Enter the string: zyxw

in alphabetical order is: wxyz

**11. Print the Words Ending with Letter S**

**Program:-**

#include <stdio.h>

#include <string.h>

void main()

{

char str[50];

int i, t, j, len;

printf("Enter a string : ");

fgets(str,sizeof(str),stdin);

len = strlen(str);

str[len] = ' ';

printf("words end with s : \n");

for (t = 0,i = 0; i <strlen(str); i++)

{

if ((str[i]==' ') && (str[i-1] == 's'))

{

for (j = t; j < i; j++)

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

t = i + 1;

printf("\n");

}

else

{

if (str[i] == ' ')

{

t = i + 1;

}

}

}

}

**Output:-**

Enter a string : cats mats rats pat

words end with s :

cats

mats

rats

**12. Delete All Repeated Words in the line of text.**

**Program:-**

#include <stdio.h>

#include <string.h>

int main()

{

char str[50];

int i, j, k;

printf("\ninput a String : ");

gets(str);

for(i = 0; i < strlen(str); i++)

{

for(j = i + 1; str[j] != '\0'; j++)

{

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

{

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

{

str[k] = str[k + 1];

}

}

}

}

printf("\n After Removing Duplicate Words = %s ", str);

return 0;

}

**Output:-**

input a String :

itally

After Removing Duplicate Words = italy