1. read from a terminal using scanf function and print using printf function

```c
#include<stdio.h>
int main( )
   {
       char word1[50], word2[50], word3[50], word4[50];

       printf("enter the text:");
       scanf("%s", word1);
       scanf("%s", word2);
       scanf("%s", word3);
       scanf("%s", word4);

       printf("\n");
       printf("word1 = %s\nword2 = %s\nword3 = %s\nword4 = %s\n", word1, word2
,word3, word4);
      return 0;
   }
```

Output:-

enter the text:my name is koustav

word1 = my

word2 = name

word3 = is

word4 = koustav

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

```c
#include<stdio.h>
   int main()
   {
   char arr[20];
   printf("Enter your name: ");
   fgets(arr,20,stdin);
   puts(arr);
    return 0;
 }
```

Output:-

Enter your name: koustav

Koustav

3.convert

a. Upper case to Lower case

```c
#include<stdio.h>
int main(){
    char arr[20];
    int i=0;
   printf("enter a string in uppercase: ");
  scanf("%s",arr);
  while(arr[i] != '\0')
  {
     printf("%c",arr[i]+32);
     i++;
 }

   return 0;
}
```

OUTPUT:-

enter a string in uppercase: KOUSTAV

koustav

b. Lower case to Upper case

```c
#include<stdio.h>
int main(){
    char arr[20];
    int i=0;
   printf("enter a string in lowercase:");
  scanf("%s",arr);
  while(arr[i] != '\0')
  {
     printf("%c",arr[i]-32);
     i++;
 }

   return 0;
}
```

Output:-

enter a string in lowercase:koustav

KOUSTAV

c. Toggle case

```c
#include<stdio.h>
int main()
{
    char arr[20];
    int i=0;
   printf("enter a string: ");
  scanf("%s",arr);
  while(arr[i] != '\0')
  {
      if(arr[i] >= 65 && arr[i] <=90 )
      {
     printf("%c",arr[i]+32);
      }
      else
      {
          printf("%c",arr[i]-32);
      }
     i++;
 }
 return 0;
}
```

Output:-

enter a string: hello

HELLO

d. Sentence case

```
#include<stdio.h>
int main()
{
    char arr[20];
    int i=0;
   printf("enter a string:");
  gets(arr);
  while(arr[i] != '\0')
  {
      if(i==0 && arr[i] >= 97 && arr[i] <=122 )
      {
     printf("%c",arr[i]-32);
      }
      else if(i==0 && arr[i] >= 65 && arr[i] <=90 )
      {
          printf("%c",arr[i]);
      }
      if(arr[i]== ' ')
      {
          if(arr[i+1] >= 97 && arr[i+1] <=122 )
          {
              printf("%c",arr[i+1]-32);
          }
           else if(arr[i+1] >= 65 && arr[i+1] <=90 )
           {
          printf("%c",arr[i+1]);
      }
        i++;
      }
      i++;
     if(arr[i]>=65 && arr[i]<=90)
     {
         printf("%c",arr[i]+32);
     }
     else{
         printf("%c",arr[i]);
     }
 }

   return 0;
}
```

Output:-

enter a string:hello.how are you?

Hello.how Are You?

4. perform String Concatenation (With and Without String Handling Functions).

```c
#include<stdio.h>
int main()
{
    char arr[30],arr2[30];
    int i=0,j=0,c=0;
   printf("enter first string:");
  scanf("%s",arr);
printf("enter second string:");
scanf("%s",arr2);
while(arr[i] != '\0')
{
    c++;
    i++;
}
i=c;
while(arr2[j] != '\0')
{
    arr[i] = arr2[j];
    i++;
    j++;
}
  arr[i] = '\0';
printf("Concatination of the given strings are:-");
i=0;
while(arr[i] != '\0')
{
    printf("%c",arr[i]);
    i++;
}
   return 0;
}
```

Output:-

enter first string:good

enter second string:morning

Concatination of the given strings are:-goodmorning

5. perform String Reversal (With and Without String Handling Functions).

```c
#include<stdio.h>
int main()
{
    char arr[30];
    int i=0,c=0;
     printf("enter a string : ");
     scanf("%s",arr);
while(arr[i] != '\0')
{
    c++;
    i++;
}
i=0;
printf("Actual string :: ");
while(arr[i] != '\0')
{
    printf("%c",arr[i]);
    i++;
}
printf("\nreverse : ");
i=c;
while(arr[i] >= 0)
{
    printf("%c",arr[i]);
    i--;
}

 return 0;
}
```

Output:-

enter a string : abcd

Actual string :: abcd

reverse : dcba

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

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

```c
#include<stdio.h>
int main()
{
    char arr[30],copy[30];
    int i=0,c=0,space=0;
   printf("enter a string:");
   fgets(arr,30,stdin);

while(arr[i] != '\0')
{
    copy[i] = arr[i];
    if(arr[i] == ' ')
    {
        space++;
    }
    c++;
    i++;
}

printf("Copy string :");
i=0;
while(copy[i] != 0)
{
    printf("%c",copy[i]);
    i++;
}

printf("\ntotal elements copy with spaces and NULL character :: %d\n",c);
printf("\ntotal elements copy with out spaces and NULL character :: %d\n",c-
(space+1));

  return 0;
}
```

Output:-

enter a string:my name is koustav

Copy string :my name is koustav

total elements copy with spaces and NULL character :: 19

total elements copy with out spaces and NULL character :: 15

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

```c
#include<stdio.h>
int main()
{
    char arr[30],rev[30];
    int i=0,j=0,c=0,s=0;
   printf("enter a string :");
   fgets(arr,30,stdin);

while(arr[i] != '\0')
{
    c++;
    i++;
}
i=0;
j=c-2;
while(i<c-1)
{
    if(arr[i] != arr[j])
    {
        s++;
        break;
    }
    j--;
    i++;
}
if(s==1)
{
    printf("%s is not a palindrom string.",arr);
}
else
{
    printf("%s is a palindrom string.",arr);
}
    return 0;
}
```

Output:-

enter a string :lenovo

lenovo

is not a palindrom string.

enter a string :wow

wow

is a palindrom string.

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

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

int main()
{
    char s[1000],w[1000];
    int n,a[1000],i,j,k=0,l,found=0,t=0;
    printf("Enter  the string : ");
    gets(s);
    printf("Enter word to be searched: ");
    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("word '%s' is occurred count=%d ",w,found);
 return 0;
}
```

Output:-

Enter the string : where there is a will there is a way

Enter word to be searched: is

word 'is' is occurred count=2

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

```
#include<stdio.h>
int main()
{
int arr[30],i=0,j=0,c=0,temp=0;
char arr2[30];
printf("Enter a string either upper case or lower case: ");
fgets(arr2,30,stdin);
while(arr2[i] != '\0')
{
    arr[i] = arr2[i];
    c++;
    i++;
}
for(i=0;i<c-1;i++){
    for(j=0;j<c-1;j++){
       if(arr[i] < arr[j])
       {
           temp = arr[i];
           arr[i] = arr[j];
           arr[j] = temp;
       }
    }
}
printf("String in alphabetical order : ");
for(i=0;i<c-1;i++){
    printf("%c",arr[i]);
}
    return 0;
}
```

Output:-

Enter a string either upper case or lower case: lenovo

String in alphabetical order : elnoov

11. Print the Words Ending with Letter S

```c
#include<stdio.h>
int main()
{
int i=0,j=0,c=0,k=0;
char arr[30],store[30];
printf("Enter a string :");
fgets(arr,30,stdin);
printf("\nwords ending with letter 's':");
while(arr[i] != '\0')
{
    if(arr[i] == ' ')
    {
        c = i;
        if(arr[i-1] == 's'
        ){

         for(;k<c;k++)
         {
             printf("%c",arr[k]);
         }
         k=c;
        }
    }
    i++;
}
if(arr[i]=='\0')
{
    if(arr[i-2]=='s')
    {
        i=c;
        while(arr[i] != '\0')
        {
            printf("%c",arr[i]);
            i++;
        }
    }
    else{
        printf("\nhere no words ending with letter 's'");
    }
}
    return 0;
}
```

Output:-

Enter a string :koustav

words ending with letter 's':

here no words ending with letter 's

Enter a string :students

words ending with letter 's':students

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

```c
#include<stdio.h>
  #include <string.h>
  int main()
   {
        char string[100], text[100], words[100][100];
        int i, j, k, n;
        i = j = k = n = 0;
        printf("enter the strings:");
        fgets(string, 256, stdin);
        string[strlen(string) - 1] = '\0';
        while (string[i] != '\0')
         {
                if (string[i] == ' ')
                 {
                        words[j][k] = '\0';
                        k = 0;
                        j++;
                }
                else
                 {
                        words[j][k++] = string[i];
                }
                i++;
        }
        words[j][k] = '\0';
        n = j;
        for (i = 0; i < n; i++)
        {
                for (j = i + 1; j <= n; j++)
                 {
                        if (strcmp(words[i], words[j]) == 0)
                         {
                                for (k = j; k < n; k++)
                                 {
                                        strcpy(words[k], words[k + 1]);
                                }
                                n--, j--;
                        }
                }
        }

        for (i = 0; i <= n; i++) {
                printf("%s ", words[i]);
        }
        printf("\n");
```

```
        return 0;
}
```

Output:-

enter the strings:my name is my name is koustav

my name is koustav