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

#include<stdio.h>

int main( )

{

char str[40];

printf("Enter text : \n");

scanf("%s", str);

printf("\n");

printf("Entered text = %s", str);

}

Enter text :

Abdul mujib

Entered text = Abdul

**Q2. Read lines of text from a terminal using fgets function and print using puts function.**

#include <stdio.h>

int main()

{

int b;

int size = 10;

char \*string;

printf ("Please enter a string: ");

string = (char \*) malloc (size);

b = getline (&string, &size, stdin); //stdin- standard input

if (b == -1)

{

puts ("ERROR!");

}

else

{

puts ("You entered the following string:");

puts (string);

}

return 0;

}

Please enter a string: abdul mujib khan

You entered the following string:

Abdul mujib khan

**Q3. Convert**

1. **Upper case to Lower case**
2. **Lower case to Upper case**
3. **Toggle case**
4. **Sentence case.**

**a.**

#include<stdio.h>

#include<string.h>

int main()

{

char str[25];

int i;

printf("Enter the string: ");

scanf("%s",str);

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

{

if(str[i]>=65&&str[i]<=90) // A-Z ASCII value(65-90)

str[i]=str[i]+32; // Upper case+32= lower case

}

printf("\nLower Case String is: %s",str);

return 0;

}

Enter the string: ABDUL                                                Lower Case String is: abdul

**b.**

#include<stdio.h>

#include<string.h>

int main()

{

char str[25];

int i;

printf("Enter the string:");

scanf("%s",str);

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

{

if(str[i]>=97&&str[i]<=122) //(a-z) ASCCI value 97-122

str[i]=str[i]-32; //lower case-32 = Upper case

}

printf("\nUpper Case String is: %s",str);

return 0;

}

Enter the string:abdul                                                 Upper Case String is: ABDUL

**c.**

#include <stdio.h>

#include <string.h>

int main()

{

char Str1[100];

int i;

printf("\n Please Enter any String to Toggle : ");

gets(Str1);

for (i = 0; Str1[i]!='\0'; i++)

{

if(Str1[i] >= 'a' && Str1[i] <= 'z')

{

Str1[i]=Str1[i]-32;

}

else if(Str1[i]>= 'A' && Str1[i]<= 'Z')

{

Str1[i]=Str1[i]+32;

}

}

printf("\n The Given String after Toggling Case of all Characters = %s", Str1);

return 0;

}

Please Enter any String to Toggle : aBduL KhaN

 The Given String after Toggling Case of all Characters = AbDUl kHAn

**d.**

#include <stdio.h>

#include <string.h>

int main()

{

char str[50]={0};

int length=0,i=0,j=0,k=0;

printf("\nEnter the string : ");

gets(str);

length = strlen(str);

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

{

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

{

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

}

else if(str[i]=='.')

{

if(string[i+1] == ' ')

{

if(str[i+2]>='a' && str[i+2]<='z')

{

str[i+2] = str[i+2] - 32;

}

}

else

{

if(str[i+1]>='a' && str[i+1]<='z')

{

str[i+1] = str[i+1] - 32;

}

}

}

}

printf("Final string is : %s",str);

}

Enter the string : abdul khan

Final string is : Abdul khan

**Q4. Perform string Concatenation(With and without string handling functions).**

**Without:**

#include <stdio.h>

int main()

{

char str1[50], str2[50],i,j;

printf("Enter first string: ");

scanf("%s",str1);

printf("Enter second string: ");

scanf("%s",str2);

for(i=0; str1[i]!='\0'; ++i);

for(j=0; str2[j]!='\0'; ++j, ++i)

{

str1[i]=str2[j];

}

str1[i]='\0';

printf("Output: %s",str1);

return 0;

}

Enter first string: Abdul

Enter second string: khan

Output: Abdulkhan

**With:**

#include <stdio.h>

#include<string.h>

int main()

{

char s1[20];

char s2[20];

printf("Enter the first string : ");

scanf("%s", s1);

printf("\nEnter the second string :");

scanf("%s",s2);

strcat(s1,s2);

printf("The concatenated string is : %s",s1);

return 0;

}

Enter the first string : Abdul                                         Enter the second string :Gopal                                         The concatenated string is : AbdulGopal

**Q5. Perform String Reversal (With and without string handling function)**

**Without:**

#include<stdio.h>

#include<conio.h>

int main()

{

int i, j, k;

char str[100];

char rev[100];

printf("Enter a string:\t");

scanf("%s",str);

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

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

{

k = i-1;

}

for(j = 0; j <= i-1; j++)

{

rev[j] = str[k];

k--;

}

printf("The reverse string is %s\n", rev);

return 0;

}

Enter a string: Abdul

The original string is Abdul

The reverse string is ludbA

**With:**

#include<stdio.h>

#include<string.h>

int main()

{

char name[30] = "Hello";

printf("String before strrev: %s\n",name);

printf("String after strrev: %s",strrev(name));

return 0;

}

**Q6. Perform Substring Extraction (With and Without String Handling Functions)**

**Without:**

#include <stdio.h>

int main()

{

char string[1000], sub[1000];

int position, length, c = 0;

printf("Input a string\n");

gets(string);

printf("Enter the position and length of substring\n");

scanf("%d%d", &position, &length);

while (c < length) {

sub[c] = string[position+c-1];

c++;

}

sub[c] = '\0';

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

return 0;

}

Input a string                                                         Abdul Mujib Khan

Enter the position and length of substring                             2

1                                                                      Required substring is "o"

**With:**

#include <stdio.h>

#include <string.h>

int main()

{

const char\* lineConst = "Abdul\"Mujib\" Khan";

char line[256];

char \*subString;

strcpy(line, lineConst);

subString = strtok(line,"\"");

subString=strtok(NULL,"\"");

printf("the thing in between quotes is '%s'\n", subString);

return 0;

}

the thing in between quotes is 'Mujib'

**Q7. Copy one string into another and count the no of elements copied. (With and without string handling function).**

**Without:**

#include <stdio.h>

int main()

{

char s1[100], s2[100], i;

int count;

printf("Enter string s1: ");

fgets(s1, sizeof(s1), stdin);

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

s2[i] = s1[i];

count++;

}

s2[i] = '\0';

printf("String s2: %s", s2);

printf("Number of string copied:%d",count);

return 0;

}

O/p:

Enter string s1: Abdul

String s2: Abdul

Number of string copied: 6

**With:**

#include<stdio.h>

#include<string.h>

int main()

{

char c[100];

char o[100];

printf("\n\nEnter the string: ");

gets(o);

strcpy(c,o);

printf("\n\nThe copied string is: %s\n\n", c);

return 0;

}

O/p

Enter the string: Abdul

The copied string is: Abdul

**Q8. Read a string and prints if it is a palindrome or not.**

#include <stdio.h>

#include <string.h>

int main()

{

char string1[20];

int i, length;

int flag = 0;

printf("Enter a string:");

scanf("%s", string1);

length = strlen(string1);

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

{

if(string1[i] != string1[length-i-1])

{

flag = 1;

break;

}

}

if(flag)

{

printf("%s is not a palindrome", string1);

}

else

{

printf("%s is a palindrome", string1);

}

return 0;

}

O/p:

Enter a string: It’s Devil

It’s Devil is not a palindrome

**Q9. Read a line of text and count all occurrences of particular word.**

#include<stdio.h>

#include<string.h>

int main()

{

int strln,wordln,i,j,k,flag,count=0;

char str[200],word[20];

printf("Enter line of text:n");

gets(str);

printf("Enter the word to count:n");

scanf("%s",word);

strln=strlen(str);

wordln=strlen(word);

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

{

if(str[i]==word[0]&&((str[i-1]==' '||i==0)&&(str[i+wordln]==' '||str[i+wordln]=='')))

{

for(flag=0,k=i+1,j=1;j<wordln;j++,k++)

{

if(str[k]==word[j])

{

flag++;

}

}

if(flag==wordln-1)

{

count++;

}

}

}

printf("Number of occurence of '%s' = %dn",word,count);

return 0;

}

**Q10. Read a string and rewrite it in the alphabetical order.**

#include <stdio.h>

#include <string.h>

int main ()

{

char string[100];

printf("\n\t Enter the string : ");

scanf(“%s”,string);

char temp;

int i, j;

int n = strlen(string);

for (i = 0; i < n-1; i++) {

for (j = i+1; j < n; j++) {

if (string[i] > string[j]) {

temp = string[i];

string[i] = string[j];

string[j] = temp;

}

}

}

printf(“The sorted string is : %s”, string);

return 0;

}

**Q11. Print the words ending with letter S.**

#include <stdio.h>

#include <string.h>

char str[100];

int main()

{

int i, t, j, len;

printf("Enter a string : ");

scanf("%[^\n]s", str);

len = strlen(str);

str[len] = ' ';

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;

}

}

}

return 0;

}

Enter a string :  Abdul mujib khan Gopals

Gopals

**Q12. Delete all repeated words in the line of text.**

#include <stdio.h>

#include <string.h>

#define SIZE 500

void duplicateRemover(char \*, const int);

int main(void)

{

char someString[SIZE];

puts("Enter text: ");

fgets(someString, SIZE, stdin);

someString[strcspn(someString, "\n")] = 0;

printf("\n%s", "Text without repeated words: ");

duplicateRemover(someString, SIZE);

}

void duplicateRemover(char \*arrayPtr, const int sizeP)

{

char wordTable[sizeP][sizeP], \*tokPtr;

size\_t i, j, k, l;

tokPtr = strtok(arrayPtr, " ");

strcpy(wordTable[0], tokPtr);

for(i = 1; (tokPtr = strtok(NULL, " ")) != NULL; i++)

strcpy(wordTable[i], tokPtr);

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

for(k = j + 1; k <= i; k++)

if(strcmp(wordTable[j], wordTable[k]) == 0)

{

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

strcpy(wordTable[l], wordTable[l + 1]);

k = j;

i--;

}

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

printf("%s ", wordTable[l]);

}

Enter text:

Gopal Abdul Abhi Gopal Abdul

Text without repeated words: Gopal Abdul Abhi