**Pre-requisite Practical 1**

**Definition: Write a program to print the string “This is the practical session of system programming”**

**Code:**

#include<stdio.h>

#include<conio.h>

void main(){

char s1[80];

clrscr();

printf("Enter string:");

gets(s1);

puts(s1);

getch();

}

/\*

Output

Enter string:This is first practical session of system programming

This is first practical session of system programming

\*/

**Pre-requisite Practical 2**

**Definition: Write a program to print the paragraph**

**Code:**

#include<stdio.h>

#include<conio.h>

void main(){

char p1[80];

clrscr();

printf("Enter the paragraph ending with $:");

scanf("%[^$]s",&p1);

printf("\n %s",p1);

getch();

}

/\*

Output

Enter the paragraph ending with $:C language provides facility of file input-out

put operations$

C language provides facility of file input-output operations

\*/

**Pre-requisite Practical 3**

**Definition: Write a program to implement following user defined functions**

**Length of string**

**Copy one string to another**

**Concatenate two strings**

**Compare two strings**

**Reverse the string**

**Code:**

#include<stdio.h>

#include<conio.h>

int len1(char[]);

void copy1(char[],char[]);

void concat1(char[],char[]);

int comp1(char[],char[]);

void rev1(char[]);

void main() {

char s1[20],s2[20],c1[20],c2[20],r[20];

int c,d;

clrscr();

printf("Enter the string:");

gets(s1);

c = len1(s1);

printf("\n Length is %d",c);

printf("\n Enter second string:");

gets(s2);

copy1(s2,s1);

printf("\n Copied string is %s",s2);

printf("\n Enter string to concate:");

gets(c1);

concat1(s1,c1);

printf("\n Enter two strings to compare:");

gets(c2);

gets(r);

printf("\n Comparison:");

if(comp1(c2,r) == 0)

printf("\n Same");

else

printf("\n Different");

printf("\n Reversed string: ");

rev1(s1);

getch();

}

int len1(char s1[]){

int i;

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

return i;

}

void copy1(char s2[],char s1[]){

int i;

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

s2[i] = s1[i];

}

s2[i] = '\0';

}

void concat1(char s1[],char c1[]){

int i,j;

for(i=len1(s1), j=0; c1[j]!='\0';i++,j++){

s1[i] = c1[j];

}

s1[i] = '\0';

printf("\n Concated string is %s",s1);

}

int comp1(char c2[], char r[]){

int c = 0;

while(c2[c] == r[c]){

if(c2[c] == '\0'|| r[c] == '\0')

break;

c++;

}

if(c2[c] == '\0' && r[c] == '\0')

return 0;

else

return -1;

}

void rev1(char s1[]){

int i;

for(i=len1(s1); i>=0; i--){

printf("%c",s1[i]);

}

}

/\*

Output

Enter the string:Rahul

Length is 5

Enter second string:soni

Copied string is Rahul

Enter string to concate:soni

Concated string is Rahulsoni

Enter two strings to compare:hello

rahul

Comparison:

Different

Reversed string: inosluhaR

\*/

**Pre-requisite Practical 4**

**Definition: Write a program to count characters and spaces from given string.**

**Code:**

#include<stdio.h>

#include<conio.h>

void main(){

char s1[50];

int c;

clrscr();

printf("Enter string till $:");

scanf("%[^$]s",&s1);

c=len1(s1);

printf("Total number of characters and spaces are %d",c);

getch();

}

int len1(char s1[]){

int i;

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

return i;

}

/\*

Output

Enter string:hello world

Total number of characters and spaces are 11

\*/

**Pre-requisite Practical 5**

**Definition: Write a program to read data from keyboard, write it to a file called STUDENT.txt. Again read the data from the file STUDENT.txt and display on the screen**

**Code:**

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

struct stud

{

int rno;

char nm[100];

};

void main()

{

struct stud \*s;

int n,i;

char ch;

FILE \*fp;

clrscr();

printf("Enter record numbers: ");

scanf("%d",&n);

s=(struct stud \*)malloc(n\*sizeof(struct stud));

fp=fopen("STUDENT.txt","w");

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

{

printf("\n\tInformation for student : %d\n",i+1);

printf("Enter Roll No : ");

scanf("%d",&s[i].rno);

printf("Enter Name : ");

fflush(stdin);

gets(s[i].nm);

fprintf(fp,"%5d %-20s\n",s[i].rno,s[i].nm);

}

fclose(fp);

fp=fopen("STUDENT.txt","r");

printf("\nContent of the STUDENT.txt file is\n");

printf("Roll No Name\n");

printf("---------------------------\n");

do{

ch = fgetc(fp);

putchar(ch);

}

while(ch != EOF);

fcloseall();

getch();

}

/\*

Output

Enter record numbers: 3

Information for student : 1

Enter Roll No : 1

Enter Name : rahul

Information for student : 2

Enter Roll No : 2

Enter Name : yash

Information for student : 3

Enter Roll No : 3

Enter Name : vikash

Content of the STUD.txt file is

Roll No Name

---------------------------

1 rahul

2 yash

3 vikash

\*/

**Practical 1**

**Definition:** Write a program to count words from a paragraph. (using simple string array and pointer both)

**Code: (Simple string array)**

#include<stdio.h>

#include<conio.h>

void main(){

char s1[50];

int i=0,space=0,words=0,l=0,charac=0;

clrscr();

printf("\nWrite your Paragraph till $ : ");

scanf(" %[^$]s",s1);

printf("\nEntered paragraph is : ") ;

puts(s1);

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

l++;

if(s1[i]==' ')

space++;

}

printf("\n length==%d",l);

charac=l-space;

printf("\n No of characters are=%d",charac);

words=space+1;

printf("\n No of words are=%d",words);

getch();

}

/\*

Output

Write your Paragraph till $ : hello this is the new world$

Entered paragraph is : hello this is the new world

length==27

No of characters are=22

No of words are=6

\*/

**Practical-1.2**

**Code: (Pointer)**

#include<stdio.h>

#include<conio.h>

void main(){

char \*s1, \*s2;

int space=0,words=0,l=0,charac=0;

clrscr();

printf("\nWrite your Paragraph : ");

gets(s2);

puts(s2);

s1=s2;

for(;\*s2!=NULL;s2++){

if(\*s2==' ')

space++;

}

l=s2-s1;

printf("\n len==%d",l);

charac=l-space;

printf("\n No of chars are=%d",charac);

words=space+1;

printf("\n No of words are=%d",words);

getch();

}

/\*

Output

Write your Paragraph : hello this is the new world

hello this is the new world

len==27

No of chars are=22

No of words are=6

\*/

**Practical-2**

**Definition: Implement file handling program**

**Code: (Write to a file and read from it)**

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

void main(){

char ch;

FILE \*fp;

clrscr();

fp=fopen("name.txt","w");

printf("Enter string till $");

while(1){

scanf("%c",&ch);

if(ch == '$')

break;

fputc(ch,fp);

}

fclose(fp);

fp=fopen("name.txt","r");

printf("\nContent of the name.txt file is\n");

printf("String\n");

do{

ch = fgetc(fp);

putchar(ch);

}

while(ch != EOF);

fcloseall();

getch();

}

/\*

Output

Enter string till $hello world is too common$

Content of the name.txt file is

String

hello world is too common

\*/

**Practical-2.1**

**Code: (Take integers as input from user, store it to a file and sort them as odd and even in two separate files, name odd and even respectively and display it to the user.)**

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

void main(){

FILE \*fp,\*o1,\*e1;

int numbers,n,i;

clrscr();

printf("Enter n");

scanf("%d",&n);

fp=fopen("Numbers.txt","w");

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

printf("\n Enter numbers:");

scanf("%d",&numbers);

putw(numbers,fp);

}

fclose(fp);

fp = fopen("Numbers.txt","r");

printf("\nNumbers are:");

while((numbers = getw(fp)) != EOF)

printf(" %4d",numbers);

fp = fopen("Numbers.txt","r");

o1 = fopen("Odd.txt","w");

e1 = fopen("Even.txt","w");

while((numbers = getw(fp)) != EOF){

if(numbers %2 == 0)

putw(numbers, e1);

else

putw(numbers, o1);

}

fcloseall();

o1 = fopen("Odd.txt","r");

e1 = fopen("Even.txt","r");

printf("\n Odd numbers are:");

while((numbers = getw(o1)) != EOF)

printf("%4d",numbers);

printf("\n Even numbers are:");

while((numbers = getw(e1)) != EOF)

printf("%4d",numbers);

fcloseall();

getch();

}

/\*

Output

Enter n5

Enter numbers:10

Enter numbers:2

Enter numbers:8

Enter numbers:1

Enter numbers:12

Numbers are: 10 2 8 1 12

Odd numbers are: 1

Even numbers are: 10 2 8 12

\*/