**Unit 5: Files Programs in C**

Writing into file

#include<stdio.h>

#include<stdlib.h>

#include<string.h>

main ()

{

FILE \*file;

char s[100];

file=fopen("file2.txt","w");

if(file==NULL)

{

printf("File Not Found\n");

exit(0);

}

else

{

printf("Enter lines to write in file\n");

while(strlen(gets(s))>0)

{

fputs(s,file);

fputs("\n",file);

}

}

fclose(file);

}

**Unit 5: File Operations**

Reading a File and Printing on console

#include<stdio.h>

#include<stdlib.h>

main ()

{

FILE \*file;

char c;

file=fopen("file123.txt","r");

while(1)

{

if(file==NULL)

{

printf("File Not Found\n");

exit(0);

}

else

{

c=fgetc(file);

if(c==EOF)

{

break;

}

printf("%c",c);

}

}

fclose(file);

}

**To Copy text from one File to Another File**

#include<stdio.h>

#include<stdlib.h>

main ()

{

FILE \*file1,\*file2;

char c;

int tabs=0,lines=0,spaces=0,charcters=0;

file1=fopen("file7.txt","r");

if(file1==NULL)

{

printf("File 1 Not Found\n");

exit(0);

}

file2=fopen("file8.txt","w");

if(file2==NULL)

{

printf("File 2 Not Found\n");

exit(0);

}

while(1)

{

c=fgetc(file1);

if(c!=EOF)

{

fputc(c,file2);

}

else

{

break;

}

}

fclose(file1);

fclose(file2);

}

**To Append Text into a File**

#include<stdio.h>

#include<stdlib.h>

main ()

{

FILE \*file;

char c;

file=fopen("file3append.txt","w");

fprintf(file,"%s","Hello!");

fclose(file);

file=fopen("file3append.txt","r");

printf("After writing\n");

//To display after write operation to file

while(1)

{

if(file==NULL)

{

printf("File Not Found\n");

exit(0);

}

else

{

c=fgetc(file);

if(c==EOF)

{

break;

}

printf("%c",c);

}

}

fclose(file);

printf("\n");

file=fopen("file3append.txt","a");//opening file in append mode

fprintf(file,"%s","World");

fclose(file);

file=fopen("file3append.txt","r");

printf("After appending\n");

//To display after append operation to file

while(1)

{

if(file==NULL)

{

printf("File Not Found\n");

exit(0);

}

else

{

c=fgetc(file);

if(c==EOF)

{

break;

}

printf("%c",c);

}

}

fclose(file);

printf("\n");

}

**To print number of Spaces, lines, characters and Tabs in a File**

#include<stdio.h>

#include<stdlib.h>

main ()

{

FILE \*file;

char c;

int tabs=0,lines=0,spaces=0,charcters=0;

file=fopen("file123.txt","r");

printf("The file contains the following data\n");

printf("\n");

while(1)

{

if(file==NULL)

{

printf("File Not Found\n");

exit(0);

}

else

{

c=fgetc(file);

if(c==EOF)

{

break;

}

printf("%c",c);

}

}

fclose(file);

file=fopen("file123.txt","r");

while(1)

{

if(file==NULL)

{

printf("File Not Found\n");

exit(0);

}

else

{

c=fgetc(file);

if(c==EOF)

{

break;

}

if(c==' ')

{

spaces++;

}

if(c=='\n')

{

lines++;

}

if(c=='\t')

{

tabs++;

}

charcters++;

}

}

fclose(file);

printf("No of Charcters=%d\n",charcters);

printf("No of Spaces=%d\n",spaces);

printf("No of Lines=%d\n",lines);

printf("No of Tabs=%d\n",tabs);

}

**Command Line Argument**

1. C program to print all arguments given through command line.

Prg name: cm.c

#include <stdio.h>

int main(int argc, char \*argv[])

{

int counter;

for(counter=0; counter<argc; counter++)

printf("argv[%2d]: %s\n",counter,argv[counter]);

return 0;

}

./a.out Hello world "how are you?"

argv[ 0]: ./cm

argv[ 1]: Hello

argv[ 2]: world

argv[ 3]: how are you?

1. C program to find sum of two numbers using command line arguments.

#include<stdio.h>

#include<stdlib.h>

int main(int argc, char \* argv[]) {

   int i, sum = 0;

   if (argc != 3) {

       printf("You have forgot to specify two numbers.");

       exit(1);

   }

printf("The sum is : ");

sum= atoi(argv[1])+atoi(argv[2]);

printf("%d", sum);

return 0;

}

1. C program to find the sum of N integer numbers using command line arguments.

/\*

\* C Program to Find Sum of Numbers given in Command Line Arguments Recursively \*/

#include <stdio.h>

 int count, s = 0;

void sum(int \*, int \*);

 void main(int argc, char \*argv[])

{

int i, ar[argc];

count = argc;

for (i = 1; i < argc; i++)

{

ar[i - 1] = atoi(argv[i]);

}

sum(ar, ar + 1);

printf("%d", s);

}

 /\* computes sum of two numbers recursively \*/

void sum(int \*a, int \* b)

{

if (count == 1)

return;

s = s + \*a + \*b;

count -= 2;

sum(a + 2, b + 2);

}

1. C program to calculate addition, subtraction, multiplication using command line arguments.

#include <stdio.h>

int main(int argc, char \*argv[])

{

int a,b, result;

char opr;

if(argc!=4)

{

printf("Invalid arguments...\n");

return -1;

}

//get values

a = atoi(argv[1]);

b = atoi(argv[3]);

//get operator

opr=argv[2][0];

//calculate according to operator

switch(opr)

{

case '+':

result=a+b;

break;

case '-':

result=a-b;

break;

case '\*':

result=a\*b;

break;

default:

result=0;

break;

}

if(opr=='+' || opr=='-' || opr=='\*')

printf("Result: %d %c %d = %d\n",a,opr,b,result);

else

printf("Undefined Operator...\n");

return 0;

}