File: the file is a permanent storage medium in which we can store the data permanently.

Types of file can be handled

we can handle three type of file as

(1) sequential file

(2) random access file

(3) binary file

File Operation

opening a file:

Before performing any type of operation, a file must be opened and for this fopen() function is used.

syntax:

file-pointer=fopen(“FILE NAME ”,”Mode of open”);

example:

FILE *fp=fopen(“ar.c”,”r”);

If fopen() unable to open a file than it will return NULL to the file pointer.

File-pointer: The file pointer is a pointer variable which can be store the address of a special file that means it is based upon the file pointer a file gets opened.

Declaration of a file pointer:-

FILE* var;

Modes of open

The file can be open in three different ways as

Read mode ' r'/rt

Write mode 'w'/wt

Appened Mode 'a'/at

Reading a character from a file

getc() is used to read a character into a file

Syntax:

character_variable=getc(file_ptr);

Writing acharacter into a file

putc() is used to write a character into a file

puts(character-var,file-ptr);

ClOSING A FILE

fclose() function close a file.

fclose(file-ptr);

fcloseall () is used to close all the opened file at a time

File Operation

The following file operation carried out the file

(1)creation of a new file

(3)writing a file

(4)closing a file

Before performing any type of operation we must have to open the file.c, language communicate with file using A new type called **file pointer**.

Operation with fopen()

File pointer=fopen(“FILE NAME”,”mode of open”);

If **fopen()** unable to open a file then it will return **NULL** to the file-pointer.

Lecture Note: 30

Reading and writing a characters from/to a file

fgetc() is used for reading a character from the file

Syntax:

```
character variable= fgetc(file pointer);
```

fputc() is used to writing a character to a file

Syntax:

```
fputc(character,file_pointer);
```

```
/*Program to copy a file to another*/
#include<stdio.h>
void main()
{
FILE *fs,*fd;
char ch;
If(fs=fopen(“scr.txt”,”r”)==0)
{
printf(“sorry….The source file cannot be opened”);
return;
}
If(fd=fopen(“dest.txt”,”w”)==0)
{
printf(“Sorry…..The destination file cannot be opened”);
fclose(fs);
return;
}
while(ch=fgets(fs)!=EOF)
fputc(ch,fd);
fcloseall();
}
```

Reading and writing a string from/to a file

getw() is used for reading a string from the file

Syntax:

```
gets(file pointer);
```

putw() is used to writing a character to a file

Syntax:

```
fputs(integer,file_pointer);
```

```
#include<stdio.h>
#include<stdlib.h>
void main()
{
FILE *fp;
int word;
/*place the word in a file*/
fp=fopen(“dgt.txt”,”wb”);
If(fp==NULL)
{
printf(“Error opening file”);
exit(1);
}
word=94;
putw(word,fp);
If(ferror(fp))
printf(“Error writing to file\n”);
else
printf(“Successful write\n”);
fclose(fp);
/*reopen the file*/
fp=fopen(“dgt.txt”,”rb”);
If(fp==NULL)
{
printf(“Error opening file”);
exit(1);
}


/*extract the word*/
word=getw(fp);
If(ferror(fp))
printf(“Error reading file\n”);
else
printf(“Successful read:word=%d\n”,word);
/*clean up*/
fclose(fp);
}
```

Lecture Note: 31

Reading and writing a string from/to a file

fgets() is used for reading a string from the file

Syntax:

fgets(string, length, file pointer);

fputs() is used to writing a character to a file

Syntax:

fputs(string,file_pointer);

```
#include<string.h>
#include<stdio.h>
void main(void)
{
FILE*stream;
char string[]=”This is a test”;
char msg[20];
/*open a file for update*/
stream=fopen(“DUMMY.FIL”,”w+”);

/*write a string into the file*/
fwrite(string,strlen(string),1,stream);
/*seek to the start of the file*/
fseek(stream,0,SEEK_SET);
/*read a string from the file*/
fgets(msg,strlen(string)+1,stream);
/*display the string*/
printf("%s",msg);
fclose(stream);
}
```

BOOKS:

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2 Y. Kanetkar “Let Us C”. BPB publication

3 Ashok N. Kamthane “Programming with ANSI and TURBO C”. Pearson Education

4 Programming in C, a complete introduction to the programming language, Stephan G. Kocham, third edition

5 C in Depth, S.K Srivastava and Deepali Srivastava