UNIT-6 (FILE HANDLING)
(RAM GOPAL GUPTA- http://ramgopalgupta.com/)

PART-5

File Handling:

In this pdf, we will discuss few more useful operations which can be done using standard file handling functions:

- **fseek() -** It is used to moves the reading control to specified positions using fseek function.

  Syntax:

  int fseek(FILE *stream, long int offset, int whence)

  I. **stream** − This is the pointer to a FILE object that identifies the stream (file)
  II. **offset** − This is the number of bytes to offset from whence.
  III. **whence** − This is the position from where offset is added. It is specified by one of the following constants –
    a) SEEK_SET: Beginning of file
    b) SEEK_CUR: Current position of the file pointer
    c) SEEK_END: End of file

Example1:

```
// example1.c
Line 1-  #include <stdio.h>
Line 2-  int main () {
Line 3-  FILE *fp;
Line 4-  fp = fopen("file1.txt","w");
Line 5-  fprintf(fp,"Welcome to SMS, Varanasi");
Line 6-  fseek( fp, 11, SEEK_SET );
Line 7-  fprintf(fp,"C Programming Language");
Line 8-  fclose(fp);
Line 9-  return(0);
Line 10- }
```

Explanation:

Let us compile and run the above program

Line 4- It will create a file “file1.txt”
Line 5- Write the content “Welcome to SMS, Varanasi” in “file1.txt”.
Line 6- Using fseek(..), we had reset the write pointer at 11th position from the beginning in file “file1.txt”. position start from zero (‘0’).
Line 7- used fprintf() statement which over-write the file “file1.txt” with the following content – “C Programming Language” from position 11.

When the above program will finish its execution and then you will open “file1.txt”, the content inside the file will be:

file1.txt

Welcome to C Programming Language

- **ftell() -** The ftell() function returns the current file position of the specified stream. We can use ftell() function to get the total size of a file after moving file pointer at the end of file. We can use SEEK_END constant to move the file pointer at the end of file.

Syntax:

long int ftell(FILE *stream)
stream − This is the pointer to a FILE object that identifies the stream.

Example2:

//example2.c

```
Line 1-   #include <stdio.h>
Line 2-   void main (){
Line 3-   FILE *fp;
Line 4-   int length;
Line 5-   fp = fopen("file1.txt", "r");
Line 6-   fseek(fp, 0, SEEK_END);
Line 7-   length = ftell(fp);
Line 8-   fclose(fp);
Line 9-   printf("Size of file: %d bytes", length);
Line 10-  }
```

Explanation:

If you run the “example1.c” program first and then will execute above “example2.c” program

Line 5- Open file “file1.txt” in read mode created from program “example1.c”
Line 6- Using fseek(..), we had reset the pointer position at end of the file “file1.txt”
Line 7- ftell(..) will return the total bytes we moved from beginning.

Output:

Size of file: 33 bytes

- **rewind() -** It moves the control to beginning of a file.

  Syntax:

  void rewind(FILE *stream)
  stream − This is the pointer to a FILE object that identifies the stream.

Example3:

//example3.c

```
Line 1-   #include<stdio.h>
Line 2-   void main(){
Line 3-   FILE *fp;
Line 4-   char c;
Line 5-   fp=fopen("file1.txt","r");
Line 6-   while((c=fgetc(fp))!=EOF){
Line 7-   printf("%c",c);
Line 8-   }
Line 9-   rewind(fp);    //moves the file pointer at beginning of the file
Line 10-  while((c=fgetc(fp))!=EOF){
Line 11-  printf("%c",c);
Line 12-  }
Line 13-  fclose(fp);
Line 14-  }
```

Explanation:

The above program read the content from “file1.txt” and display them using Line 6 to 8 till EOF, once reached to end of file

Line 9 is execute function rewind(fp) which again moves the file pointer at the beginning of the file and

Line 10 to 12 display content from “file1.txt” from beginning.

---------- THE END ----------