**ASSIGNMENT NO.:**

**PROBLEM STATEMENT:**

Program in C to create a file that consist of some numbers and seperate that numbers in two consecutive files such that one contains the even numbers and other containing the odd ones.

**THEORY:**

A **file** represents a sequence of bytes on the disk where a group of related data is stored. File is created for permanent storage of data. It is a ready made structure.

In C language, we use a structure **pointer of file type** to declare a file. Using file Handling programs in C we can store the fetched information in a file. Different operations that can be performed on a file are:

1. Creation of a new file (fopen with attributes as “a” or “a+” or “w” or “w++”)
2. Opening an existing file (fopen)
3. Reading from file (fscanf or fgetc)
4. Writing to a file (fprintf or fputs)
5. Moving to a specific location in a file (fseek, rewind)
6. Closing a file (fclose)

**ALGORITHM:**

**Input:** Some numbers that will be stored in a file created by program named data.txt.

**Output:** Creation of two seperate files data\_even.txt and data\_odd.txt. One containing the even numbers and one containing the odd numbers

**Steps:**

1. Set f1 = FOPEN(“data.txt”, “w”) // ***FOPEN is a function that opens the file that is //given as its argument and “w” denotes that //the file should be opened in write mode.***
2. Repeat through STEP 3 to STEP 5 for i = 0 to n
3. If( t = -1) // ***t = total numbers the user want to store in file data.txt.***

Then

1. Break

Else

1. Write the numbers taken from user into opened file (data.txt).

[ End Of If Structure ]

1. FCLOSE(f1)
2. Set f1 = FOPEN("data.txt", "rb")
3. Set f2 = FOPEN("data\_even.txt", "w")
4. Set f3 = FOPEN("data\_odd.txt", "w")
5. Repeat through STEP 11 to STEP 13 While ( f1 pointer scans the EOF )
6. If (t mod 2 = 0 )

Then

1. Write the number in file data\_even.txt

Else

1. Write the number in file data\_odd.txt

[ End Of If Structure ]

1. FCLOSE(all)

**SOURCE CODE:**

#include <stdio.h>

int main(){

FILE \*f1, \*f2, \*f3;

int t, i, n;

printf("\nHow many numbers you want to store : ");

scanf("%d", &n);

printf("\nContent of data file : ");

f1 = fopen("data.txt", "w");

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

printf("\nEnter number : ");

scanf("%d", &t);

if(t == -1){

break;

}

else{

fprintf(f1, "%d ", t);

}

}

fclose(f1);

f1 = fopen("data.txt", "rb");

f2 = fopen("data\_even.txt", "w");

f3 = fopen("data\_odd.txt", "w");

while(fscanf(f1, "%d", &t) != EOF){ // read from data file

if(t % 2 == 0)

fprintf(f2, "%d ", t); // write to even file

else

fprintf(f3, "%d ", t); // write to odd file

}

fcloseall();

f2 = fopen("data\_even.txt", "rb");

f3 = fopen("data\_odd.txt", "rb");

printf("\nContents of odd file : \n");

while(fscanf(f3, "%d", &t) != EOF)

printf("%d ", t);

printf("\nContents of even file : \n");

while(fscanf(f2, "%d", &t) != EOF)

printf("%d ", t);

printf("\n");

return 0;

}

**INPUT AND OUTPUT:**

How many numbers you want to store : 4

Content of data file :

Enter number : 27

Enter number : 12

Enter number : 33

Enter number : 46

Contents of odd file :

27 33

Contents of even file :

12 46

**DISCUSSION:**

**1)** Here one disadvantage is that there is no such checking whether the data file consist of some numbers or not.

**2)** Even if we do not provide any number, the program creates two seperated files(data\_even.txt and data\_odd.txt) which is not necessary. If this control would have been done in our program to create no file when the user donot provide any number then this unnecessary creation of data\_even.txt and data\_odd.txt in disk could be terminated.