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| **Ex No: 17** | **using sequential access file** |

**AIM**

To count the number of account holders whose balance is less than the minimum balance using sequential access file.

**ALGORITHM**

Step 1: Create a sequential access file  
Step 2: insert sufficient data into the file  
Step 3: read each record  
 Step 3.1 Increment the count by 1, if the balance is less than the minimum balance   
Step 4: Display the number of account holders whose balance is less than the minimum balance

**PRE-LAB QUESTIONS**

1. What is the syntax for using fseek()?
2. How do you open the sequential access file?
3. List out the error handling file functions
4. Illustrate the use of fprintf()
5. Illustrate the use of fscanf()

**PROGRAM**

#include <stdio.h>

void insert**();**

void count**();**

int main**(**void**)** **{**

int choice **=** 0**;**

**while** **(**choice **!=** 3**)**

**{**

printf**(**"\n1 insert records\n"**);**

printf**(**"2 Count min balance holders\n"**);**

printf**(**"3 Exit\n"**);**

printf**(**"Enter choice:"**);**

scanf**(**"%d"**,** **&**choice**);**

**switch(**choice**)**

**{**

**case** 1**:** insert**();** **break;**

**case** 2**:** count**();** **break;**

**}**

**}**

**}**

void insert**()**

**{**

unsigned int account**;** // account number

char name**[**30**];** // account name

double balance**;** // account balance

FILE**\*** cfPtr**;** // cfPtr = clients.dat file pointer

// fopen opens file. Exit program if unable to create file

**if** **((**cfPtr **=** fopen**(**"clients.dat"**,** "w"**))** **==** **NULL)** **{**

puts**(**"File could not be opened"**);**

**}** // end if

**else** **{**

int records**;**

printf**(**"How many new records ? "**);**

scanf**(**"%d"**,** **&**records**);**

puts**(**"Enter the account, name, and balance."**);**

// write account, name and balance into file with fprintf

**while** **(**records **>** 0**)** **{**

printf**(**"Enter record: "**);**

scanf**(**"%d%29s%lf"**,** **&**account**,** name**,** **&**balance**);**

fprintf**(**cfPtr**,** "%d %s %.2f\n"**,** account**,** name**,** balance**);**

records**--;**

**}** // end while

fclose**(**cfPtr**);** // fclose closes file

**}** // end else

**}**

void count**()**

**{**

unsigned int account**;** // account number

char name**[**30**];** // account name

double balance**;** // account balance

float minBal **=** 5000.00**;**

int count **=** 0**;**

FILE **\***cfPtr**;** // cfPtr = clients.dat file pointer

// fopen opens file; exits program if file cannot be opened

**if** **((**cfPtr **=** fopen**(**"clients.dat"**,** "r"**))** **==** **NULL)** **{**

puts**(**"File could not be opened"**);**

**}** // end if

**else** **{** // read account, name and balance from file

printf**(**"%-10s%-13s%s\n"**,** "Account"**,** "Name"**,** "Balance"**);**

fscanf**(**cfPtr**,** "%d%29s%lf"**,** **&**account**,** name**,** **&**balance**);**

// while not end of file

**while** **(!**feof**(**cfPtr**))** **{**

**if** **(**balance **<** minBal**)**

**{**

printf**(**"%-10d%-13s%7.2f\n"**,** account**,** name**,** balance**);**

count**++;**

**}**

fscanf**(**cfPtr**,** "%d%29s%lf"**,** **&**account**,** name**,** **&**balance**);**

**}** // end while

fclose**(**cfPtr**);** // fclose closes the file

printf**(**"The number of account holders whose balance is less than the minimum balance: "**);**

printf**(**"%d\n"**,** count**);**

**}** // end else

**}**

**OUTPUT**

1 insert records

2 Count min balance holders

3 Exit

Enter choice: 1

How many new records ? 3

Enter the account, name, and balance.

Enter record: 4001 John 15000.00

Enter record: 4002 Bob 230.00

Enter record: 4003 Alice 510.00

1 insert records

2 Count min balance holders

3 Exit

Enter choice: 2

Account Name Balance

4002 Bob 230.00

4003 Alice 510.00

The number of account holders whose balance is less than the minimum balance: 2

1 insert records

2 Count min balance holders

3 Exit

Enter choice: 3

**POST-LAB QUESTIONS**

1. Display the contents of a file on screen using a C program
2. Write the syntax of structure declaration in C program. Give example.

**RESULT**

Thus the C program To insert, update, delete and append telephone details of an individual or a company into a telephone directory using random access file was successfully written and executed.