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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>

struct acc**{**

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

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

double balance**;** // account balance

**};**

void insert**();**

void count**(**float**);**

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

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

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

**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**(**minBal**);** **break;**

**}**

**}**

**}**

void insert**()**

**{**

FILE **\***fp**;**

struct acc account**;**

int records**;**

fp **=** fopen**(**"clients.txt"**,** "w"**);**

**if** **(**fp **==** **NULL)** perror **(**"Error opening file"**);**

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

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

puts**(**"\nEnter the account number, name, and balance.\n"**);**

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

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

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

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

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

records**--;**

**}** // end while

fclose**(**fp**);**

**}**

void count**(**float minBal**)**

**{**

FILE **\***fp**;**

struct acc account**;**

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

fp **=** fopen**(**"clients.txt"**,** "r"**);**

**if** **(**fp **==** **NULL)** perror **(**"Error opening file"**);**

printf**(**"\nThe account holders whose balance is less than the minimum balance\n"**);**

printf**(**"AccNumber AccountHolderName Balance\n"**);**

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

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

**while** **(!**feof**(**fp**))** **{**

// "%d:%[^:]:%lf\n"

**if** **(**account**.**balance **<** minBal**)**

**{**

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

count**++;**

**}**

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

**}** // end while

printf**(**"\nNumber of accounts :"**);**

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

fclose**(**fp**);**

**}**

**OUTPUT**

1 insert records

2 Count min balance holders

3 Exit

Enter choice: 1

How many new records ? 3

Enter the account number, name, and balance.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Enter record : 4001 John 15000.00

Enter record : 4002 Bob 150.00

Enter record : 4003 Alice 250.00

1 insert records

2 Count min balance holders

3 Exit

Enter choice: 2

The account holders whose balance is less than the minimum balance

AccNumber AccountHolderName Balance

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

4002 Bob 150.00

4003 Alice 250.00

Number of accounts :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.