#include <stdio.h>

#include <string.h>

#include <stdlib.h>

#include <ctype.h>

#include <time.h>

#define BUFFER\_SIZE 1000

// Defining all functions

void optionSelecter(int number);

struct User getAccount(char email[], char dob[]);

void openAccount();

void checkAccountBalance();

void getAccountDetails();

void delay(unsigned int mseconds);

// Defining a structure name User

struct User

{

int flag;

char name[50];

char email[50];

char dob[15];

int accountNumber;

int balance;

int age;

int verify;

int row;

};

// Main Function

int main()

{

int select;

int choose;

printf("\n\n\n\n\tUser Dashboard\n\n");

printf("\tSELECT ONE OF THE OPTION FROM THIS [1-2]\n");

printf("\n\t[1] Create Account\n");

printf("\t[2] Login to Banking System\n");

printf("\n\tSelect one of the option provided above : ");

scanf("%d", &choose);

if (choose == 1)

{

openAccount();

}

else

{

system("cls");

char email[50];

char dob[15];

int balance, wait;

printf("\t### You are gonna visit the most secure online transactions portal :) ###\n\tLogin with your credentials\n\n");

printf("\n\n\tEnter Account Holder's Email address to login : ");

scanf("%s", email);

printf("\tAccount Holder's DOB [dd/mm/yyyy] for verification : ");

scanf("%s", dob);

struct User verifyAccount = getAccount(email, dob);

if (verifyAccount.verify != 1)

{

printf("\n\tAccount Not Found or Invalid Credentials :( ");

printf("\n\n\tPRESS INTEGER KEY TO CLEAR THE SCREEN.....");

scanf("%d", &wait);

system("cls");

}

else

{

system("cls");

printf("\t Welcome %s to online Banking System , Please Wait we are loging you in... :)", verifyAccount.name);

delay(3000);

system("cls");

while (1)

{

printf("\n\n\n\t\t ### WELCOME TO ONLINE BANKING SYSTEM ###\n\n");

printf("\tSELECT ONE OF THE OPTION FROM THIS [1-5]\n");

printf("\t[1] Open a account\n");

printf("\t[2] Check account balance\n");

printf("\t[3] Get account information\n");

printf("\t[4] Exit\n\n");

printf("\tSelect one of the option provided above : ");

scanf("%d", &select);

optionSelecter(select);

}

}

}

return 0;

}

/\*

This function find account from the database , if present then will return all the data

or will thorw null

\*/

struct User getAccount(char email[], char dob[])

{

FILE \*fp = fopen("database.csv", "r");

if (!fp)

{

printf("404 FILE NOT FOUND\n");

}

char buffer[1024];

int row = 0;

int line = 0;

int column = 0;

while (fgets(buffer, 1024, fp))

{

column = 0;

row++;

struct User data;

if (row == 1)

{

continue;

}

char \*value = strtok(buffer, ", ");

while (value)

{

if (column == 0)

{

strcpy(data.name, value);

}

if (column == 1)

{

data.accountNumber = atoi(value);

}

if (column == 2)

{

strcpy(data.dob, value);

}

if (column == 3)

{

data.age = atoi(value);

}

if (column == 4)

{

data.balance = atoi(value);

}

if (column == 5)

{

value = strtok(value, "\n");

if (strcmp(dob, data.dob) == 0 && strcmp(email, value) == 0)

{

data.verify = 1;

data.row = row;

return data;

}

else if (strcmp(email, value) == 0)

{

data.flag = 1;

line = row;

strcpy(data.email, value);

data.row = row;

return data;

}

}

value = strtok(NULL, ", ");

column++;

}

}

fclose(fp);

}

void openAccount()

{

system("cls");

printf("Let Open a account Whooo!!\n\n");

struct User accountCreate;

printf("\tAccount Holder's Name : ");

scanf("%s", &accountCreate.name);

printf("\tAccount Holder's Age : ");

scanf("%d", &accountCreate.age);

if (accountCreate.age < 18)

{

printf("\n\n\tYou are not eligible to open a account ( minimum age to open a account is 18 )");

printf("\n\tFailed to create Account :( \n\tRestart the procedure");

delay(5000);

system("cls");

}

else

{

FILE \*fp = fopen("database.csv", "a+");

if (!fp)

{

printf("Can't open file\n");

}

printf("\tAccount Holder's Email-address : ");

scanf("%s", &accountCreate.email);

printf("\tAccount Holder's DOB ( Date of Birth )[dd/mm/yyyy] : ");

scanf("%s", &accountCreate.dob);

printf("\tAccount Holder's Intial Balance amount : ");

scanf("%d", &accountCreate.balance);

accountCreate.accountNumber = rand();

fprintf(fp, "%s, %d, %s, %d ,%d ,%s\n", accountCreate.name,

accountCreate.accountNumber, accountCreate.dob, accountCreate.age,

accountCreate.balance, accountCreate.email);

system("cls");

printf("\n\tSuccessfully created new account !!");

printf("\n\tEnjoy a great experience using our online banking service");

fclose(fp);

delay(5000);

system("cls");

}

}

void checkAccountBalance()

{

system("cls");

printf("\t### View your Account Balance ###\n\n");

char email[50];

int wait;

printf("\n\n\tEnter Account Holder's Email address to view the balance : ");

scanf("%s", email);

struct User data = getAccount(email, "");

if (data.flag != 1)

{

printf("\n\tAccount Not Found 404 :(");

printf("\n\n\n\n\tPRESS INTEGER KEY TO CLEAR THE SCREEN.....");

scanf("%d", &wait);

system("cls");

}

else

{

printf("\n\n\t### Account's Details ###\n");

printf("\n\tAccount Holder's Name : %s", data.name);

printf("\n\tAccount Holder's account Number : %d", data.accountNumber);

printf("\n\tAccount Current Balance : %d", data.balance);

printf("\n\n\n\n\tPRESS INTEGER KEY TO CLEAR THE SCREEN.....");

scanf("%d", &wait);

system("cls");

}

}

void getAccountDetails()

{

system("cls");

printf("\tGet your account Information\n\n");

char email[50];

int wait;

printf("\tEnter Account Holder's Email address to get account details: ");

scanf("%s", email);

struct User data = getAccount(email, "");

if (data.flag != 1)

{

printf("\n\tAccount Not Found 404 :(");

printf("\n\n\tPRESS INTEGER KEY TO CLEAR THE SCREEN.....");

scanf("%d", &wait);

system("cls");

}

else

{

printf("\n\tAccount Holder's Name : %s", data.name);

printf("\n\tAccount Holder's Account Number : %d", data.accountNumber);

printf("\n\tAccount Holder's Email-address : %s", data.email);

printf("\n\tAccount Holder's Age : %d", data.age);

printf("\n\tAccount Holder's DOB ( Date of Birth ) : %s", data.dob);

printf("\n\tAccount Holder's Current Balance : %d", data.balance);

printf("\n\n\n\n\tPRESS INTEGER KEY TO CLEAR THE SCREEN.....");

scanf("%d", &wait);

system("cls");

}

}

void optionSelecter(int number)

{

switch (number)

{

case 1:

openAccount();

break;

case 2:

checkAccountBalance();

break;

case 3:

getAccountDetails();

break;

case 4:

makeTransactions();

break;

case 5:

system("cls");

printf("\n\n\t:P Have a nice day bye!! :)\n\n");

exit(0);

default:

system("cls");

printf("\n\n\tPlease select the correct number [1-5]\n");

delay(3000);

system("cls");

break;

}

}

void delay(unsigned int mseconds)

{

clock\_t goal = mseconds + clock();

while (goal > clock())

;

}