#include<stdio.h>

#include <sys/types.h>

#include <sys/stat.h>

#include <fcntl.h>

#include <unistd.h>

char filename[] = "file.txt";

typedef struct employee

{

int empid;

char name[30];

int salary;

}emp;

int search(int);

void insert();

void display();

void delete(int);

void modify(int);

int main()

{

int ch = 0;

int fd1, fd2;

int i,n;

fd1 = open(filename, O\_CREAT, 0777);

close(fd1);

do

{

printf("MENU\n"

"1) Insert a record \n"

"2) Display the file \n"

"3) Search a record \n"

"4) Modify a record \n"

"5) Delete a record \n"

"6) Exit \n");

printf("\nEnter Your Choice::");

scanf("%d", &ch);

switch (ch)

{

case 1:

printf("\nEnter How many Record to be inserted::");

scanf("%d",&n);

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

{

insert();

}

break;

case 2:

display();

break;

case 3:

{

int i;

printf("Enter empid tp search :: ");

scanf("%d", &i);

search(i);

}

break;

case 4:

{

int id;

printf("Enter empid to modify :: ");

scanf("%d", &id);

modify(id);

}

break;

case 5:

{

int id;

printf("Enter empid to delete :: ");

scanf("%d", &id);

delete(id);

}

break;

case 6:

printf("Exit from program\n");

break;

default:

printf("Wrong input \n");

}

}while(ch <= 5);

return 0;

}

int search(int id)

{

emp e;

int fd = open(filename, O\_RDONLY);

int count = 0;

while( read(fd, &e, sizeof(emp)) > 0)

{

if(e.empid == id)

{

close(fd);

printf("Record Is Present\n");

printf("empid = %d\tname = %s\tsalary = %d\n", e.empid, e.name, e.salary);

return count;

}

count++;

}

close(fd);

return -1;

}

void insert(){

emp e;

here:

printf("Enter empid :: ");

scanf("%d", &e.empid);

if(search(e.empid) >= 0)

{

printf("already exists\n");

goto here;

}

printf("Enter name ::");

scanf("%s", e.name);

printf("Enter salary :: ");

scanf("%d", &e.salary);

int fd = open(filename, O\_WRONLY | O\_APPEND);

if( write(fd, &e, sizeof(e)) < 0){

printf("Didnt write to file :");

}

close(fd);

}

void display()

{

emp e;

int fd = open(filename, O\_RDONLY);

printf("-----------------------------------------------------------------------\n");

printf("| empid\t|\tname\t|\tsalery\t|\n");

while( read(fd, &e, sizeof(emp)) > 0)

{

printf("| %d \t| %s \t| %d \t|\n", e.empid, e.name, e.salary);

}

printf("------------------------------------------------------------------------\n");

close(fd);

}

void delete(int id)

{

char tempFilename[] = "temp";

int fd1 = open(filename, O\_RDONLY);

int fd2 = open(tempFilename, O\_WRONLY | O\_CREAT, 0777);

emp e;

if(search(id) == -1){

printf("Record not present.\n");

return;

}

while( read(fd1, &e, sizeof(emp)) > 0)

{

if(e.empid != id)

{

write(fd2, &e, sizeof(e));

}

}

remove(filename);

rename("temp", "file.txt");

close(fd1);

close(fd2);

printf("Record deleted !");

}

void modify(int id)

{

int fd = open(filename, O\_RDWR);

int count = search(id);

if(count < 0)

{

printf("Record not found\n");

close(fd);

return;

}

else

{

emp e;

e.empid=id;

printf("Enter name :: ");

scanf("%s", e.name);

printf("Enter salary :: ");

scanf("%d", &e.salary);

lseek(fd, count\*sizeof(emp), SEEK\_SET);

if( write(fd, &e, sizeof(emp) ) < 0)

{

printf("Didnt write to file :/ \n");

}

else

{

printf("Modified :)");

}

close(fd);

return;

}

}