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#include <stdio.h>

#include <stdlib.h>

#include <string.h>

struct photo{

char name[20], cityName[20];

int size;

};

void load\_photos(struct photo\*, int);

void search\_photos(struct photo\*, char\*, int);

void delete\_photo(struct photo\*, char\*, int\*);

void save\_photos(struct photo\*, int);

int main(){

struct photo \*photos;

FILE \*inFile;

inFile = fopen("photos.txt","r");

if (inFile == NULL){

printf("Error occured while reading the file!");

exit(1);

}

int size = 0;

char line[1024];

while((fscanf(inFile,"%[^\n]\n",line))!=EOF) //for calculating the number of lines in the file

size++;

fclose(inFile);

photos = (struct photo\*)malloc(sizeof(struct photo)\*size);

if(photos == NULL){

printf("Error occured while allocating the memory!\n");

exit(1);

}

load\_photos(photos,size);

int option;

do{

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

printf("1. Search Photos\n");

printf("2. Delete Photos\n");

printf("3. Exit\n");

printf("\nEnter your option: ");

scanf("%d",&option);

if(option == 1){

char cityName[15];

printf("Enter the city name: ");

scanf("%s",&cityName);

search\_photos(photos, cityName, size);

}

else if(option == 2){

char photoName[15];

printf("Enter the photo name: ");

scanf("%s",&photoName);

delete\_photo(photos, photoName, &size);//size: pass by reference, we need to decrement it.

}

else{

if(option != 3)

printf("Please enter a valid option!");

}

}while(option != 3);

save\_photos(photos, size);

printf("The photos.txt file has been updated successfully!");

return 0;

}

void load\_photos(struct photo \*photos, int size){

int i=0;

FILE \*inFile;

inFile = fopen("photos.txt","r");

if (inFile == NULL){

printf("Error occured while reading the file!");

exit(1);

}

char \*token;

char line[1024];

while((fscanf(inFile,"%[^\n]\n",line))!=EOF){

token = strtok(line,";");

strcpy(photos[i].name,token);

photos[i].size = atoi(strtok(NULL,";"));

token = strtok(NULL,";");

strcpy(photos[i].cityName,token);

i++;

}

fclose(inFile);

printf("The photos.txt file has been loaded successfully!\n");

}

void search\_photos(struct photo \*photos, char \*cityName, int size){

int i, controller = 0;

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

if(strcmp(photos[i].cityName,cityName) == 0){

if(!controller)

printf("Photos taken at Nicosia are as follows:\n");

controller = 1;

printf("%s\n",photos[i].name);

}

}

if(controller == 0)

printf("There is not any available photo taken at city %s.\n",cityName);

}

void delete\_photo(struct photo \*photos, char \*photoName, int \*size){

int i, found = 0, position;

for(i=0; i<\*size; i++){

if(strcmp(photos[i].name,photoName) == 0){

found = 1;

position = i;

}

}

if(found == 0)

printf("That image is not in your store so cannot delete!\n");

else{

printf("%s deleted from the PhotoBook!\n",photos[position].name);

for(i=position; i<\*size; i++){

strcpy(photos[i].name,photos[i+1].name);

photos[i].size = photos[i+1].size;

strcpy(photos[i].cityName,photos[i+1].cityName);

}

(\*size)--;

}

}

void save\_photos(struct photo \*photos, int size){

int i = 0;

FILE \*outFile;

outFile = fopen("photos.txt","w");

if (outFile == NULL){

printf("Error occured while reading the file!");

exit(1);

}

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

fprintf(outFile,"%s;%d;%s\n",photos[i].name,photos[i].size,photos[i].cityName);

fclose(outFile);

}