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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 occurred 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 occurred 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);  
}
```