

C Programming Language

#Project - 9

In this project, you must create a music stack list which has The Turkish Five. The Turkish Five is a name used to identify five pioneers of western classical music in Turkey. The Turkish Five composers are listed below in the table.

Name (char [])	Surname (char [])	Musical_Work(char [])	age (int)
Cemal Reşit	Rey	Lüküs Hayat	80
Ahmed Adnan	Saygun	Yunus Emre	83
Ulvi Cemal	Erkin	Keloğlu	66
Hasan Ferit	Alnar	Sarı Zeybek	72
Necil Kazım	Akses	İkinci Senfoni	90

Create a stack that is implemented with a linked list. You must define **struct person** like;

```
struct person{  
  
    name (char[]);  
  
    surname (char[]);  
  
    musical_Work(char[]);  
  
    age(int);  
  
    struct person *next;  
  
} *top;
```

In your program, you have to create a menu which has the following operations.

1- Add a Person to the Stack

Take person's information with scanf, create a node and add the node to the stack using the function **addNode(char name[], char surname [], char creation [], int age)**.

2- Pop a Person from the Stack

Delete the last node of the stack. Create **deleteNode(...)** to pop a node.

3- Sort in Alphabetical Order

Write a method **Sort_Alphabetically(...)** to order the names of the people in the stack alphabetically. Use the **print_stack(...)** method to show the sorted stack.

4- Sort Age in Increasing Order

Write a method **Sort_Increasingly(...)** that sorts ages of people in the stack in increasing order. Use the **print_stack(...)** method to show the sorted stack.

5- Exit menu

Quit menu.

Example Output; (User entered values are written in bold.)

```
****MENU****
```

- 1- Add a Person to the Stack
- 2- Pop a Person from the Stack
- 3- Sort Alphabetical Order
- 4- Sort Age in Increasing Order
- 5- Exit menu

```
*****
```

Select your Choise: **1**

Name: **Cemal Reşit**

Surname: **Rey**

Creation: **Lukus Hayat**

Age: **80**

```
-----
```

1)Cemal Reşit

Rey

Lukus Hayat

80

```
****MENU****
```

- 1- Add a Person to the Stack
- 2- Pop a Person from the Stack
- 3- Sort in Alphabetical Order
- 4- Sort Age in Increasing Order
- 5- Exit menu

```
*****
```

Select your Choise: **1**

Name: **Ahmed Adnan**

Surname: **Saygun**

Creation: **Yunus Emre**

Age: **83**

```
-----
```

1) Ahmed

Adnan Saygun

Yunus Emre
83
2)Cemal Reşit
Rey
Lukus Hayat
80

****MENU****

- 1- Add a Person to the Stack
- 2- Pop a Person from the Stack
- 3- Sort in Alphabetical Order
- 4- Sort Age in Increasing Order
- 5- Exit menu

Select your Choise: **1**

Name: **Ulvi Cemal**
Surname: **Erkin**
Creation: **Keloğlu**
Age: **66**

1) Ulvi
Cemal Erkin
Keloğlu
66
2) Ahmed
Adnan Saygun
Yunus
Emre 83
3)Cemal Reşit
Rey
Lukus
Hayat 80

****MENU****

- 1- Add a Person to the Stack
- 2- Pop a Person from the Stack
- 3- Sort in Alphabetical Order
- 4- Sort Age in Increasing Order
- 5- Exit menu

Select your Choise: **1**

Name: **Hasan Ferit**
Surname: **Alnar**
Creation: **Sarı Zeybek**
Age: **72**

1) Hasan
Ferit Alnar
Sarı Zeybek
72
2) Ulvi
Cemal Erkin
Keloğlu
66
3) Ahmed
Adnan Saygun
Yunus
Emre 83
4)Cemal Reşit

Rey

Lukus Hayat

80

****MENU****

- 1- Add a Person to the Stack
- 2- Pop a Person from the Stack
- 3- Sort in Alphabetical Order
- 4- Sort Age in Increasing Order
- 5- Exit menu

Select your Choise: **2**

1) Ulvi

Cemal Erkin

Keloğlan

66

2) Ahmed

Adnan Saygun

Yunus

Emre 83

3)Cemal Reşit

Rey

Lukus

Hayat 80

****MENU****

- 1- Add a Person to the Stack
- 2- Pop a Person from the Stack
- 3- Sort in Alphabetical Order
- 4- Sort Age in Increasing Order
- 5- Exit menu

Select your Choise: **3**

Ahmed Adnan

Saygun

Yunus Emre

83

Cemal Reşit

Rey

Lukus Hayat

80

Ulvi Cemal

Erkin

Keloğlan

66

****MENU****

- 1- Add a Person to the Stack
- 2- Pop a Person from the Stack
- 3- Sort in Alphabetical Order
- 4- Sort Age in Increasing Order
- 5- Exit menu

Select your Choise: **4**

Ulvi Cemal

Erkin

Keloğlan

66

Cemal Reşit
Rey
Lukus Hayat
80
Ahmed Adnan
Saygun
Yunus Emre
83