

Name/Surname:

Date:

Number:

EHB208E

Data Structures & Programming 1st Homework

Spring 2022

- 1) Write a “C” program, which inputs and then saves school numbers, names and surnames (Figure 1) into the student automation system. Each record is stored by using a separate linked list, as shown in Figure 2. When a new school number is entered, a record is also added to the **stack(s)** to be able to sort the numbers **by ID** (the last four digits of the school numbers), **year**, and **faculty codes** (Figure 3). You can use as many stacks as you want. Your code should
- (A) Display the entered school numbers in ascending order by the **IDs**.
 - (B) Display the school numbers by the **years** in ascending order.
 - (C) Display the school numbers by the **faculty codes** in ascending order.
 - (D) Deletes a record by school number

The minimum time cost is important. Your data should be stored in sorted in the stack(s).

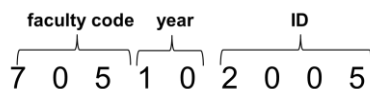


Figure 1. School number

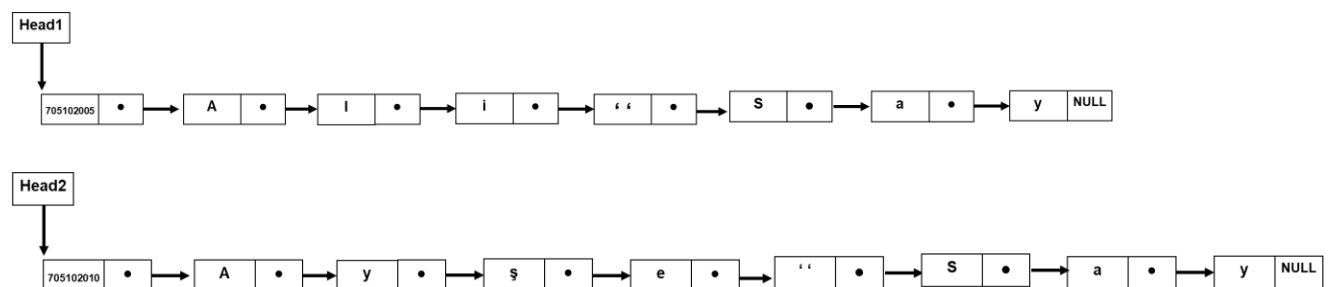


Figure 2. Sample linked lists

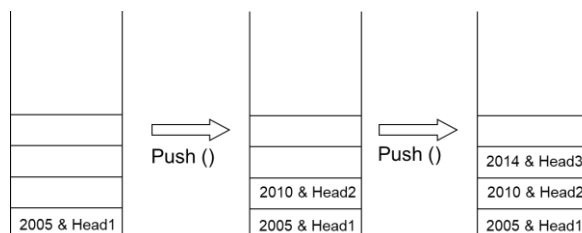


Figure 3. Sample stack

Upload your project's C source files to “EHB208E Homework” field in your Ninova system.

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A sample screen output:

```
1 - Enter school number
2 - Display school numbers sorted by ID.
3 - Display school numbers sorted by year
4 - Display school numbers sorted by the faculty codes
5 - Delete a record by school number
6 - Exit
Enter choice : 1
Enter school number: 705102005
Name & Surname: Ali_Say

Enter choice : 1
Enter school number: 705102010
Name & Surname: Ayşe_Say

Enter choice : 1
Enter school number: 706122022
Name & Surname: Mehmet_Yüce

Enter choice : 2
Sorted by ID:
705102005 Ali Say
705102010 Ayşe Say
706122022 Mehmet Yüce

Enter choice : 3
Sorted by faculty code:
705102010 Ayşe Say
705102005 Ali Say
706122022 Mehmet Yüce

Enter choice : 4
Sorted by year:
705102010 Ayşe Say
705102005 Ali Say
706122022 Mehmet Yüce

Enter choice :
```

Important: Your code should be properly commented. Uncommented code will get partial credit. You need to do your assignment alone. Code sharing among students or using code from any other source is not allowed.

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