



DATA STRUCTURES PROJECT

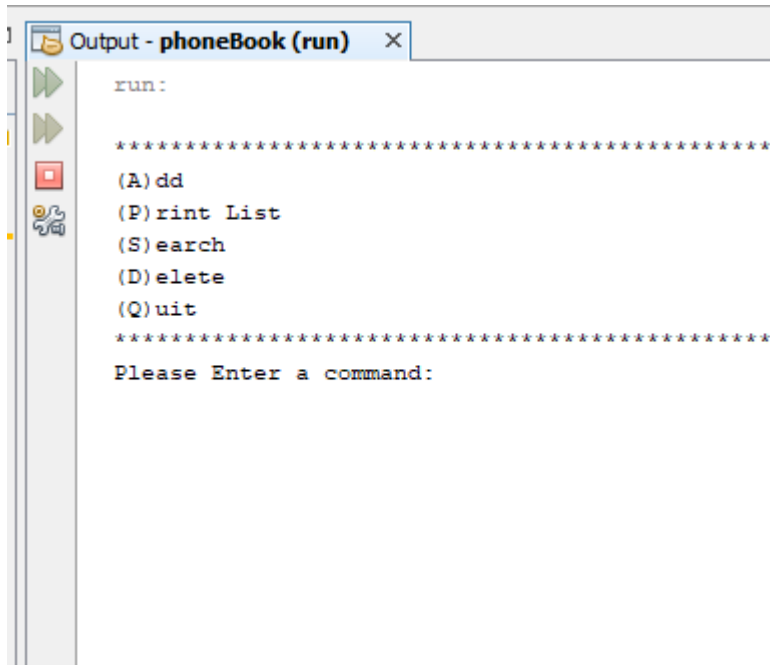
DİDEM ABİDİN

FATMA KURTULUŞ

170316064

Phone Book Class

I take command from user. Commands are add person, delete person, list all phone book, phone number search, name search and exit. I did these operations by using switch-case.



```
Output - phoneBook (run) x
run:

*****

(A)dd
(P)rint List
(S)earch
(D)eleate
(Q)uit

*****

Please Enter a command:
```

Contact Class

I create serialization so files can be written and read in byte form. I use singly linked list.

Add Method

I made head null so new entry automatically becomes the head and length increases by one. I compare to entries for priority. If name entered goes before what's stored in the head, new entry becomes the head. This section cycles through the "body" of the nodes if

it's not the tail. If the entry replaces node at the tail, this entry becomes the new tail.

```
(A)dd
(P)rint List
(S)earch
(D)eleate
(N)umber search
(Q)uit
*****
Please Enter a command: a
```

Printlist Method

Start at the head and check if there's anything there go through list and print in order.

```

*****
(A)dd
(P)rint List
(S)earch
(D)elete
(Q)uit
*****

Please Enter a command: p
Print Phonebook
Index = 1 Name = ali bayer Phone Number = 256 896 45 12
Index = 2 Name = ahmet kaya Phone Number = 589 645 89 23
Index = 3 Name = derya kurtulus Phone Number = 234 569 45 78
Index = 4 Name = fatma kurtulu□ Phone Number = 123 456 78 89

*****

```

IsEmpty Method

This method to use if the linked list is empty.

NameSearch and PhoneSearch Method

method used to search through the names in the string.check to see if the list is empty, is not empty check to see if input matches anything in the string.if first string doesn't have desired search value go to the next node.if statement to show if there are no matches found

```

(A)dd
(P)rint List
(S)earch
(D)elete
(N)umber search
(Q)uit
*****

Please Enter a command: a
Add an entry
Enter a FIRST and LAST Name: fatma kurtulus
Enter a PHONE NUMBER: 123 456 78 89

*****

(A)dd
(P)rint List
(S)earch
(D)elete
(N)umber search
(Q)uit
*****

Please Enter a command: n
Enter an Phone number to search for: 123 456 78 89
Index = 1 Name = fatma kurtulus Phone Number = 123 456 78 89
.....

```

```

*****
(A)dd
(P)rint List
(S)earch
(D)elete
(N)umber search
(Q)uit
*****
Please Enter a command: s
Enter a Name to search for: fatma
Index = 3 Name = fatma kurtulus Phone Number = 545453211
*****

```

Delete Method

I create method to delete entries by index and first check to see if list is empty. List not empty than iterates over and finds the index and deletes it and notification of successful deletion of index

```

(P)rint List
(S)earch
(D)elete
(N)umber search
(Q)uit
*****
Please Enter a command: d
Enter index number to delete: 2
Successfully deleted index 2

```

```

) elete
***
ST N

(P)rint List
(S)earch
(D)elete
(N)umber search
(Q)uit
*****
Please Enter a command: p
Print Phonebook
Index = 1 Name = ahmet bayer Phone Number = 1124254532,1
Index = 2 Name = fatma kurtulus Phone Number = 545453211
Index = 3 Name = derya kurtulus Phone Number = 5435131

```

Node Class

In construct i identified leaf node andi idetified get and set method for variables.

