GIT Department of Computer Engineering
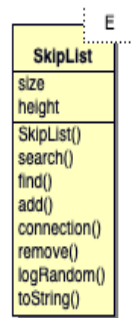
CSE 222/505 - Spring 2020

Homework 7 Report

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Q2

1. CLASS DIAGRAM

2. PROBLEM DEFINITION

The data is kept in three size arrays. Makes an insert taking into account the order from small to large. It can scroll arrays and create new nodes according to the situation. Likewise, while removing, it makes node arrangements according to the number of data in the arrays.

1. TEST CASE

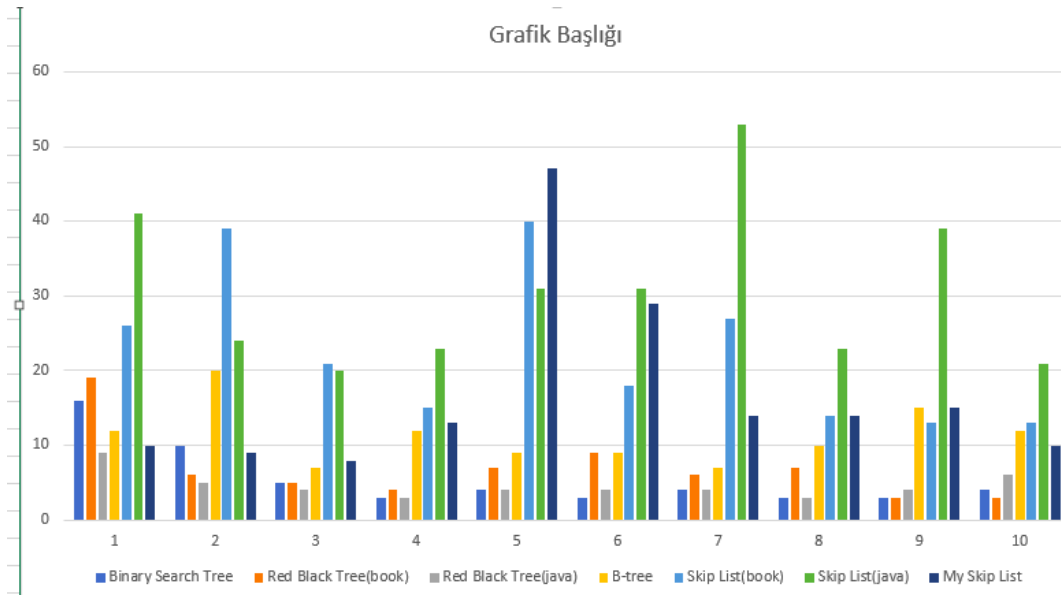| TEST CASE NAME	ACTION	TEST DATA	EXPEXTED	TEST RESULTS
ADD		1	Be added	pass
ADD	Add to the middle of the array	2	Adding to the middle and scrolling the array	pass
REMOVE	Remove to the middle of the array	25	Removing to the middle and scroling to array	pass
REMOVE	Deleting data from a single element array	273	should delete the array	pass
SEARCH	SEARCHING	20	Should find	pass
SEARCH	SEARCHING	200	Return null	pass

2. TEST RESULT

```
** ADD 1 **
 ***** [1, null, null] *****
** ADD 4 **
 ***** [1, 4, null] *****
** ADD 2 **
 ***** [1, 2, 4] *****
** ADD 20 **
 ***** [1, 2, 4] ***** ***** [20, null, null] *****
** ADD 24 **
 ***** [1, 2, 4] ***** ***** [20, 24, null] *****
** ADD 26 **
 ***** [1, 2, 4] ***** ***** [20, 24, 26] *****
** ADD 25 **
 ***** [1, 2, 4] ***** ***** [20, 24, 25] ***** ***** [26, null, null] *****
** ADD 28 **
 ***** [1, 2, 4] ***** ***** [20, 24, 25] ***** ***** [26, 28, null] *****
** ADD 27 **
 ***** [1, 2, 4] ***** ***** [20, 24, 25] ***** ***** [26, 27, 28] *****
** ADD 273 **
 ***** [1, 2, 4] ***** ***** [20, 24, 25] ***** ***** [26, 27, 28] ***** ***** [273, null, null] *****
** FIND 20 **
20
** FIND 200 **
null
** REMOVE 273 **
 ***** [1, 2, 4] ***** ***** [20, 24, 25] ***** ***** [26, 27, 28] *****
** REMOVE 27 **
 ***** [1, 2, 4] ***** ***** [20, 24, 25] ***** ***** [26, 28, null] *****
** REMOVE 28 **
 ***** [1, 2, 4] ***** ***** [20, 24, 25] ***** ***** [26, null, null] *****
```
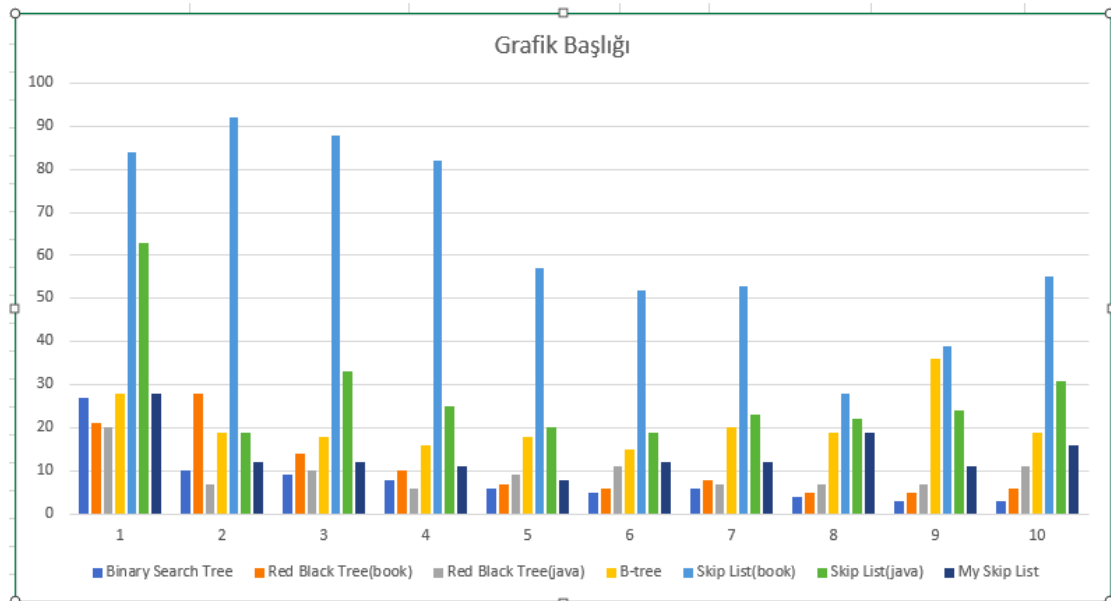
Q3

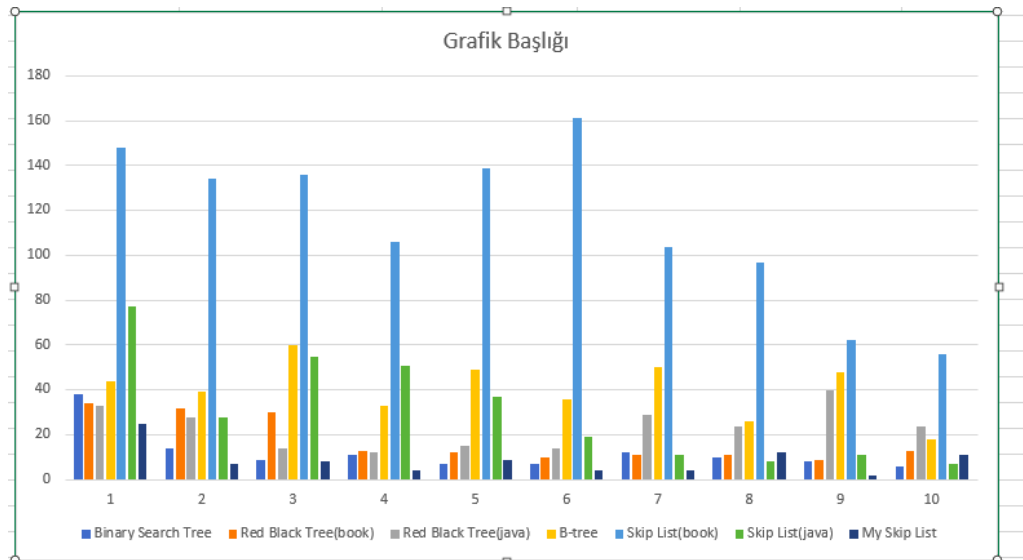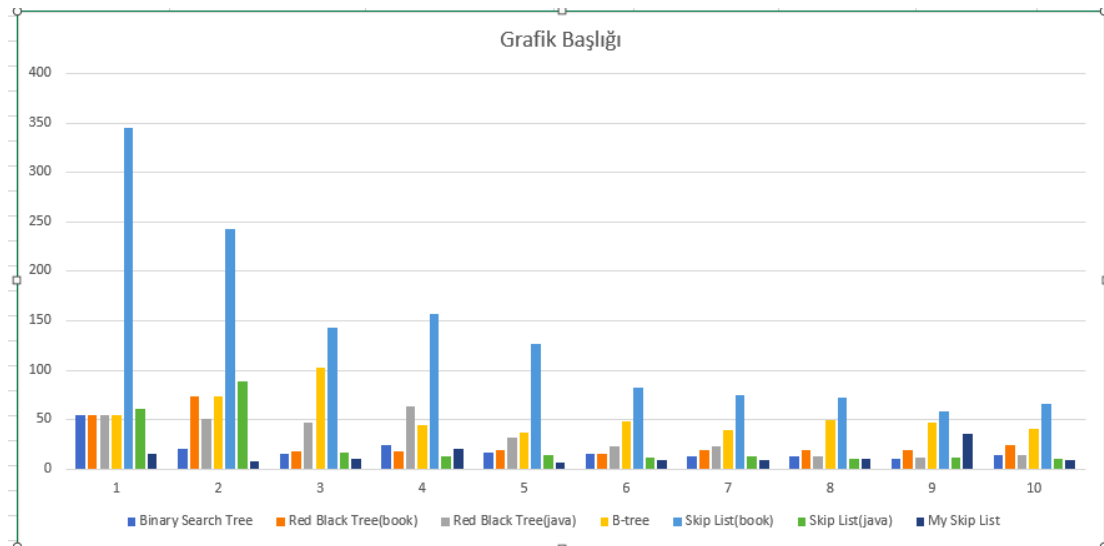Graphs is not clear, so they have been added to the file.

ADD 10.000

Grafik Başlığı

ADD 20.000

Grafik Başlığı

ADD 40.000

ADD 80.000

REMOVE 10.000

Grafik Başlığı

Binary Search Tree · Red Black Tree(java) · Skip List(book) · Skip List(java) · My Skip List

REMOVE 20.000

Grafik Başlığı

Binary Search Tree · Red Black Tree(java) · Skip List(book) · Skip List(java) · My Skip List

REMOVE 40.000

Grafik Başlığı

REMOVE 80.000

Grafik Başlığı
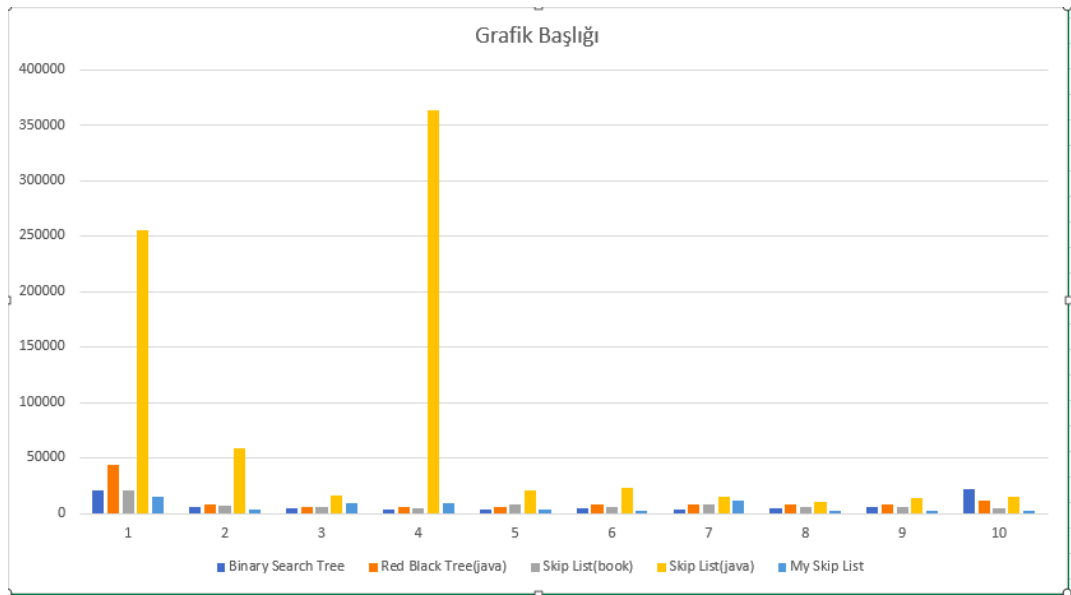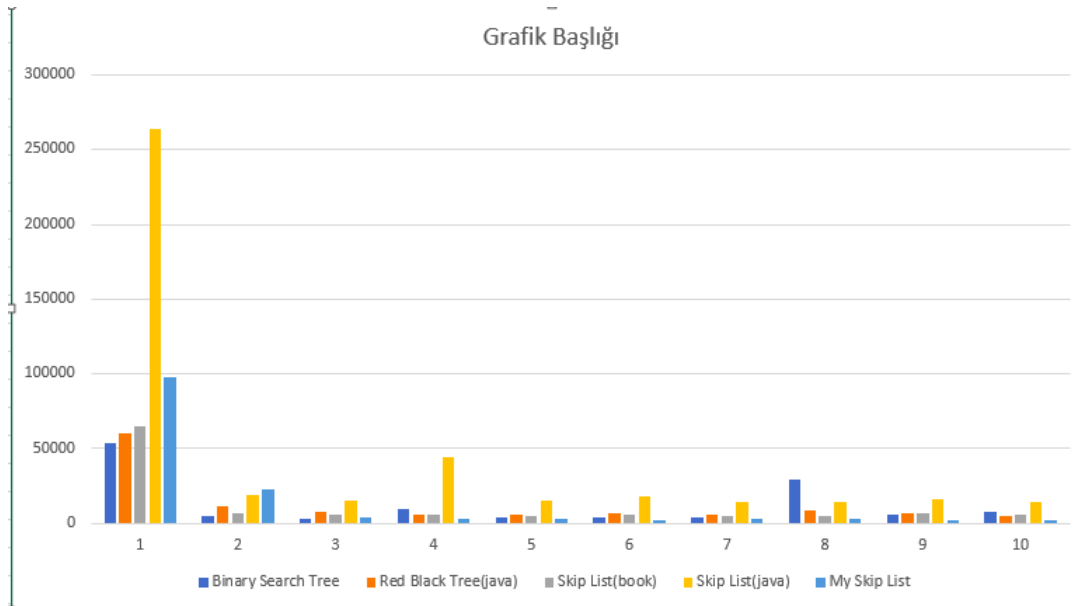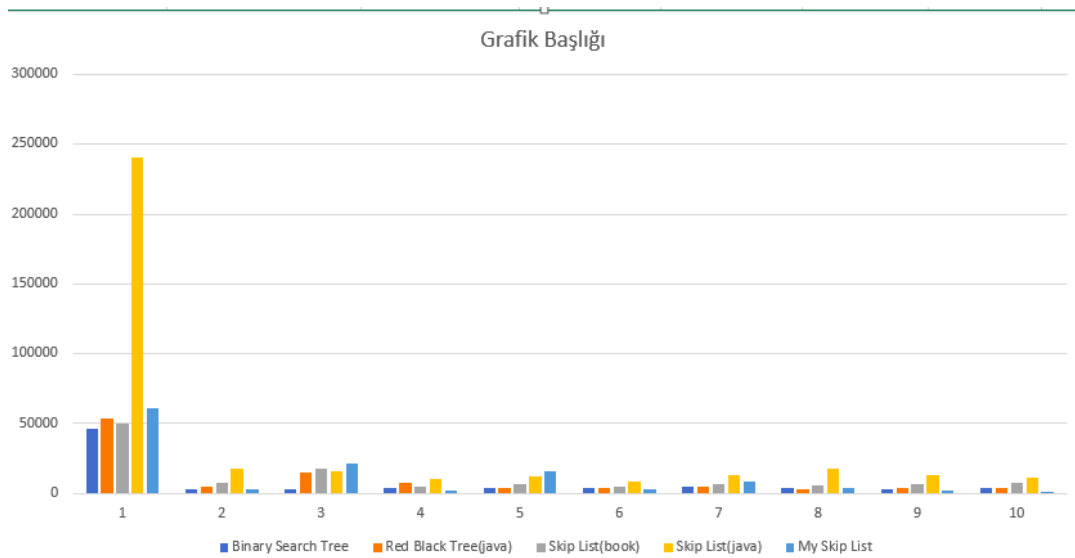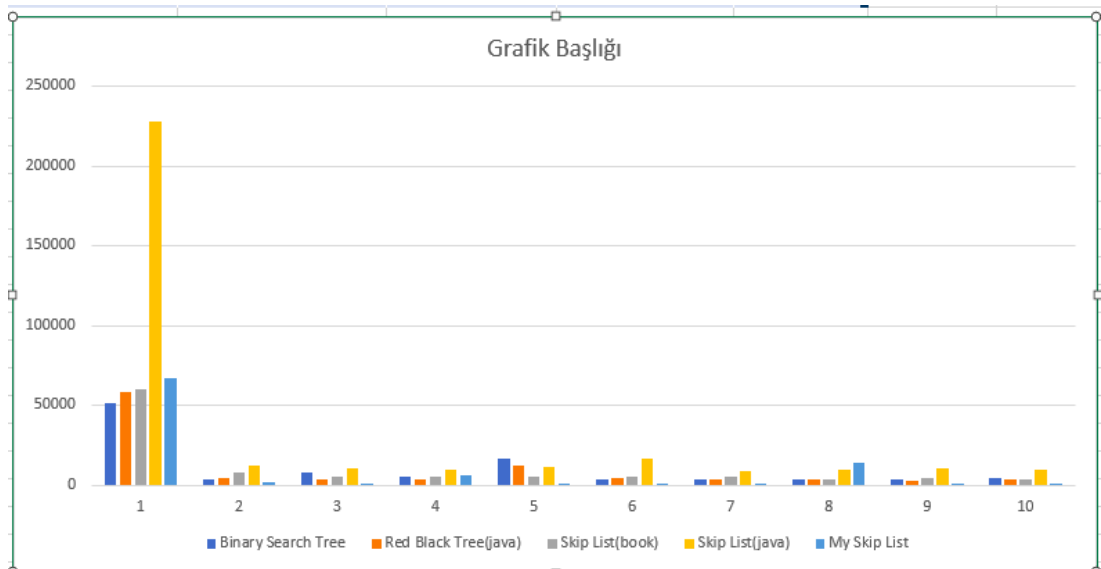
Q4

1. CLASS DIAGRAM

3. <u>PROBLEM DEFINITION</u>

An class has been created in our software store. Class only works with data structures implemented in the search tree. User firstly states that he/she entered the system as user or admin
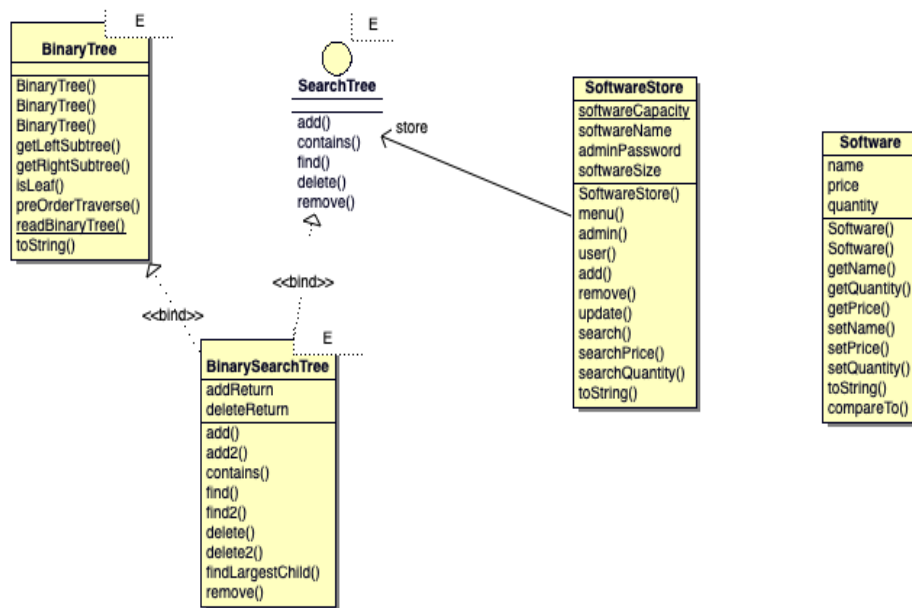
It requests password at admin login. Password is automatically assigned. It is assumed that the guy knows this. After the entered password is accepted, one is asked to choose one of the jobs that the step can do. These jobs are: ADD, REMOVE, UPDATE INFORMATION, SEARCH.

ADD: It requests software name and price from the program step. 10 is set as automatic quantity.

REMOVE: The user enters the name of the software to be removed. When quantity is 0, it deletes the software completely from the tree.

UPDATE: The user can update any information he or she wants.

SEARCH: It asks for what to search, after the user enters the desired one, the packages that fit the search press the screen.

4. TEST CASE

TEST CASE NAME	ACTION	TEST DATA	EXPEXTED	TEST RESULTS
ADMIN LOGIN STORE 1	ENTER ADMIN	admin	System should accepts admin	pass
USER LOGIN STORE 1	ENTER USER	user	Sytem should accepts user	pass
ADMIN LOGIN STORE 2	ENTER PASSWORD	123	System should accepts password	pass
USER LOGIN STORE 2	ENTER ACTION	search	System should accepts action	pass
ADMIN LOGIN STORE 2.1	ENTER ACTION	add	System should accepts action	pass
USER LOGIN STRORE 2.1.1	ENTER NAME	xxxxx	System should lists software	pass
ADMIN LOGIN STORE 2.1.1	ENTER NAME, PRICE	XXXX	System should adds software	pass
USER LOGIN STORE 2.1.2	ENTER PRICE	xxxx	System should lists software	pass
ADMIN LOGIN STORE 2.2	ENTER ACTION	remove	System should accepts action	pass
ADMIN LOGIN STORE 2.2.1	ENTER NAME	xxxx	If software is found, deletion takes place.	pass
ADMIN LOGIN STORE 2.3	ENTER ACTION	update	System should accepts action	pass
ADMIN LOGIN STORE 2.3.1	ENTER NAME OR PRICE OR QUANTİTY	xxxx	System should update for selected information	pass
USER LOGIN STORE 2	ENTER ACTION	search quantity	System should accepts action	pass
USER LOGIN STORE 2.1.2	ENTER QUANTITY	xxxx	System should lists software	pass

(Incorrect inputs are also successful.)

4.TEST RESULT

```
****WELCOME THE SOFTWARE STORE****
 Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}
  Software{name='Adobe Flash 3.3', price='300$', quantity=10}
   null
    Software{name='Adobe Flash 4.0', price='320$', quantity=10}
     null
     null
  Software{name='Adobe Photoshop 6.2', price='200$', quantity=10}
   null
    Software{name='Norton 4.5', price='100$', quantity=10}
   null
     Software{name='Norton 5.5', price='150$', quantity=10}
      null
      null


Enter the user, admin or exit
admin
Enter the password (The system identified the password as 123. The admin is assumed to know this.)
123
 Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}
  Software{name='Adobe Flash 3.3', price='300$', quantity=10}
   null
    Software{name='Adobe Flash 4.0', price='320$', quantity=10}
     null
     null
  Software{name='Adobe Photoshop 6.2', price='200$', quantity=10}
   null
    Software{name='Norton 4.5', price='100$', quantity=10}
     null
     Software{name='Norton 5.5', price='150$', quantity=10}
      null
      null


Enter the you want to do (add)(sell)(update)(search)(exit)
add
Enter the software name:
dilara
Enter the software price:
500$
 Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}
  Software{name='Adobe Flash 3.3', price='300$', quantity=10}
   null
```

```
  Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}
   Software{name='Adobe Flash 3.3', price='300$', quantity=10}
    null
    Software{name='Adobe Flash 4.0', price='320$', quantity=10}
     null
     null
   Software{name='Adobe Photoshop 6.2', price='200$', quantity=10}
    null
    Software{name='Norton 4.5', price='100$', quantity=10}
     null
     Software{name='Norton 5.5', price='150$', quantity=10}
      null
      Software{name='dilara', price='500$', quantity=10}
       null
       null


Enter the you want to do (add)(sell)(update)(search)(exit)
update
Enter the package name you want to update:
dilara
Enter what you want to update (price)(name)(quantity)
quantity
Enter the updated quantity:
1
  Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}
   Software{name='Adobe Flash 3.3', price='300$', quantity=10}
    null
    Software{name='Adobe Flash 4.0', price='320$', quantity=10}
     null
     null
   Software{name='Adobe Photoshop 6.2', price='200$', quantity=10}
    null
    Software{name='Norton 4.5', price='100$', quantity=10}
     null
     Software{name='Norton 5.5', price='150$', quantity=10}
      null
      Software{name='dilara', price='500$', quantity=1}
       null
       null
```

```
Enter the you want to do (add)(sell)(update)(search)(exit)
sell
Enter the software name:
dilara
  Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}
   Software{name='Adobe Flash 3.3', price='300$', quantity=10}
    null
    Software{name='Adobe Flash 4.0', price='320$', quantity=10}
     null
     null
   Software{name='Adobe Photoshop 6.2', price='200$', quantity=10}
    null
    Software{name='Norton 4.5', price='100$', quantity=10}
     null
     Software{name='Norton 5.5', price='150$', quantity=10}
      null
      null
```

```
Enter the you want to do (add)(sell)(update)(search)(exit)
search
Enter the search item (name)(price)(quantity) :
price
Enter the software price:
150$
1) Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}

2) Software{name='Norton 5.5', price='150$', quantity=10}

 Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}
  Software{name='Adobe Flash 3.3', price='300$', quantity=10}
   null
   Software{name='Adobe Flash 4.0', price='320$', quantity=10}
    null
    null
  Software{name='Adobe Photoshop 6.2', price='200$', quantity=10}
   null
   Software{name='Norton 4.5', price='100$', quantity=10}
    null
    Software{name='Norton 5.5', price='150$', quantity=10}
     null
     null
```

```
Enter the you want to do (add)(sell)(update)(search)(exit)
exit
****WELCOME THE SOFTWARE STORE****
 Software{name='Adobe Photoshop 6.0', price='150$', quantity=10}
  Software{name='Adobe Flash 3.3', price='300$', quantity=10}
   null
   Software{name='Adobe Flash 4.0', price='320$', quantity=10}
    null
    null
  Software{name='Adobe Photoshop 6.2', price='200$', quantity=10}
   null
   Software{name='Norton 4.5', price='100$', quantity=10}
    null
    Software{name='Norton 5.5', price='150$', quantity=10}
     null
     null

Enter the user, admin or exit
user
Enter you want to do (search)(exit)
search
Enter the search item (name)(price)(quantity) :
name
Enter the software name:
Norton 5.5

Package included: Software{name='Norton 5.5', price='150$', quantity=10}

Enter you want to do (search)(exit)
exit
```