Homework #7 part-4 Report

For running in commend line:

İn src file type: javac -cp . com/company/*java

Then type: java -cp . com/company/Main

In my design there 2 type of user, admin and user class and also I declare a person class because both admin and user can search in system, so I declare search method in person class and user and admin class extends person class, so both of them can use search method.

Admin has add,delete,update,addQuantity,deleteQuantity and enterSystem methods.

Firstly admin must use enterSystem method for entering system with password. This password is a datafield in mySystem class. If admin enter correct password then he/she enter system and can call other methods. If it try call add,delete,update,addQuantity or deleteQuantity methods without entering system an exception will be thrown and program finish.

With add method admin can add a new software product to the system.

With delete method admin can delete a software product that already in system.

With addQuantity method admin can increase quantity of a software that already in system.

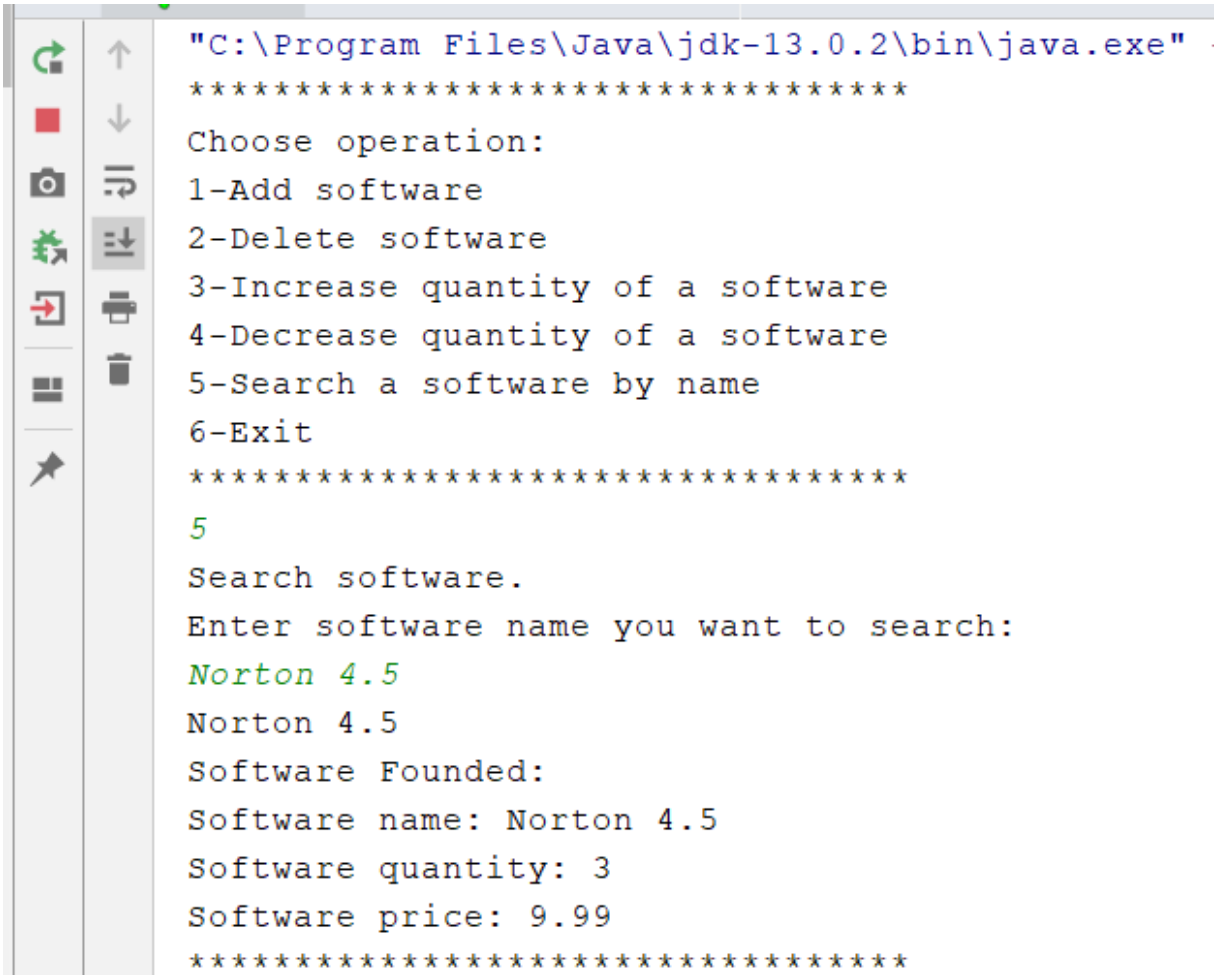
With deleteQuantity method admin can decrease quantity of a software that already in system.

I use update method in addQuantity and deleteQuantity methods. So update method update software quantities and if a software quantity became 0 or smaller update method will delete this software in my structure automatically.

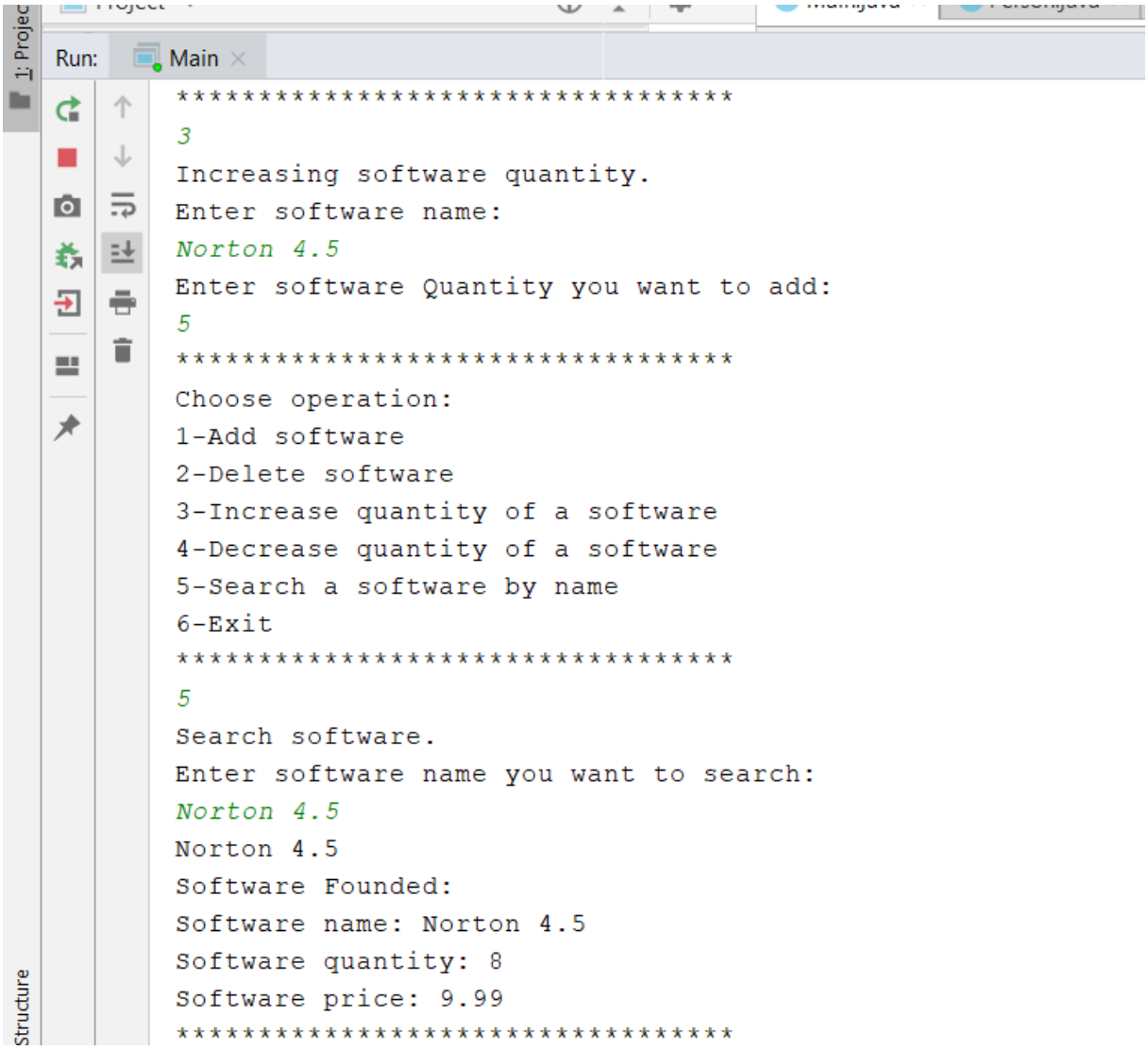
MyStructure class implement SearchTree class and override its methods, so you can use other structures that implements searchTree class.And I use this myStructure object in mySystem class.

Lastly there is SoftwarePackage class. This is class for my softwares. İt has name,quantity and price datafields and it implements Comparable interface and override compareTo methods. Because for searchTree my items must be comparable.

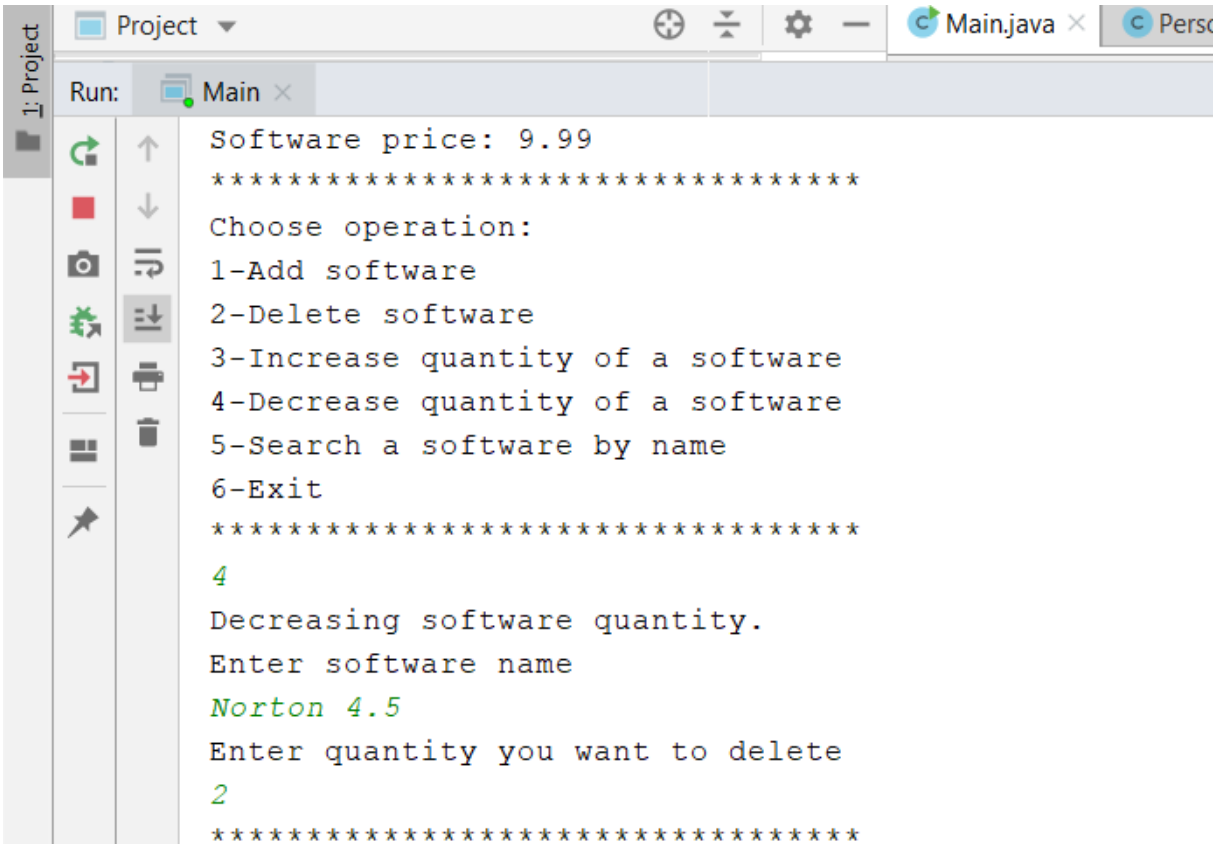
Simple Test ScreenShots:



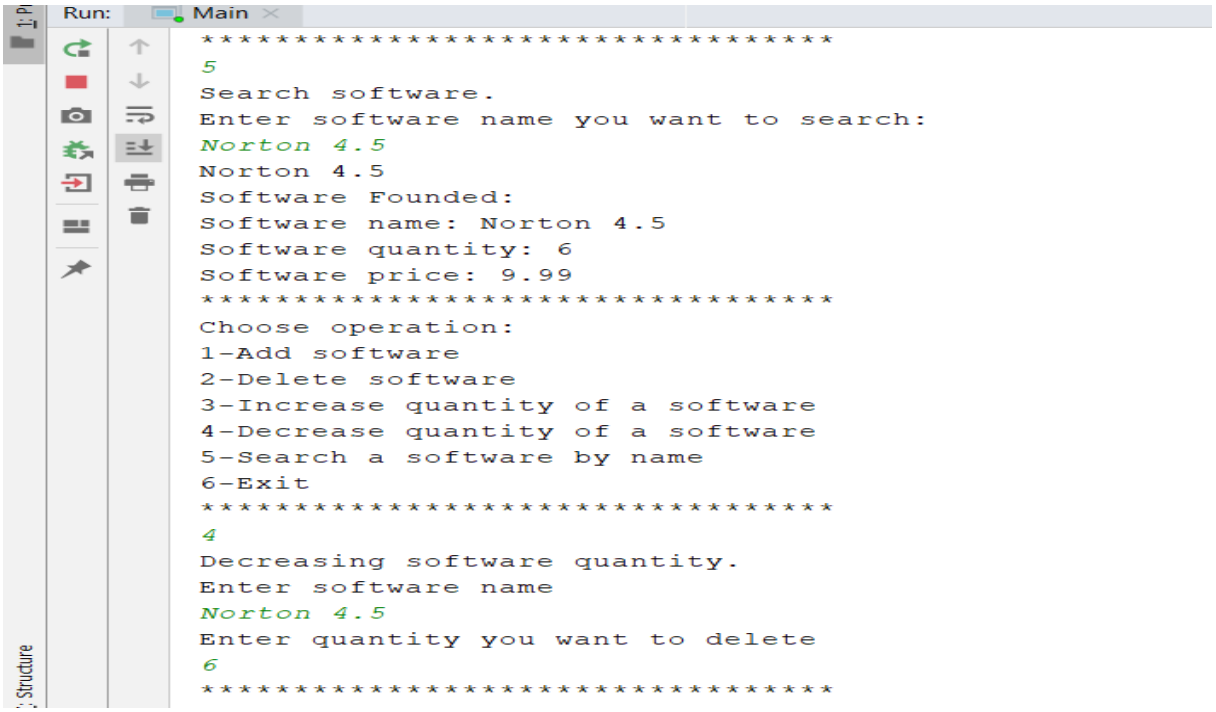
I write a menu-driven program. Firstly I enter 5 for search a software. In the beginning my system has Adobe Photoshop 6.0, Adobe Photoshop 6.2, Norton 4.5, Norton 5.5, Adobe Flash 3.3, Adobe Flash 4.0 softwares, so after entering 5 I enter Norton 4.5 to Show my system has these softwares and it prints informations about Norton 4.5. Here as you can see software name is Norton 4.5, software quantity is 3 and sorftware price is 9.99.



Then I enter 3 to choose Increase a software quantity. After entering 3 I enter Norton 4.5 and 5. After that Norten 4.5 quantity will be increased by 5. For showing this again I enter 5 and search Norton 4.5. Here you can see its quantity increased from 3 to the 8.

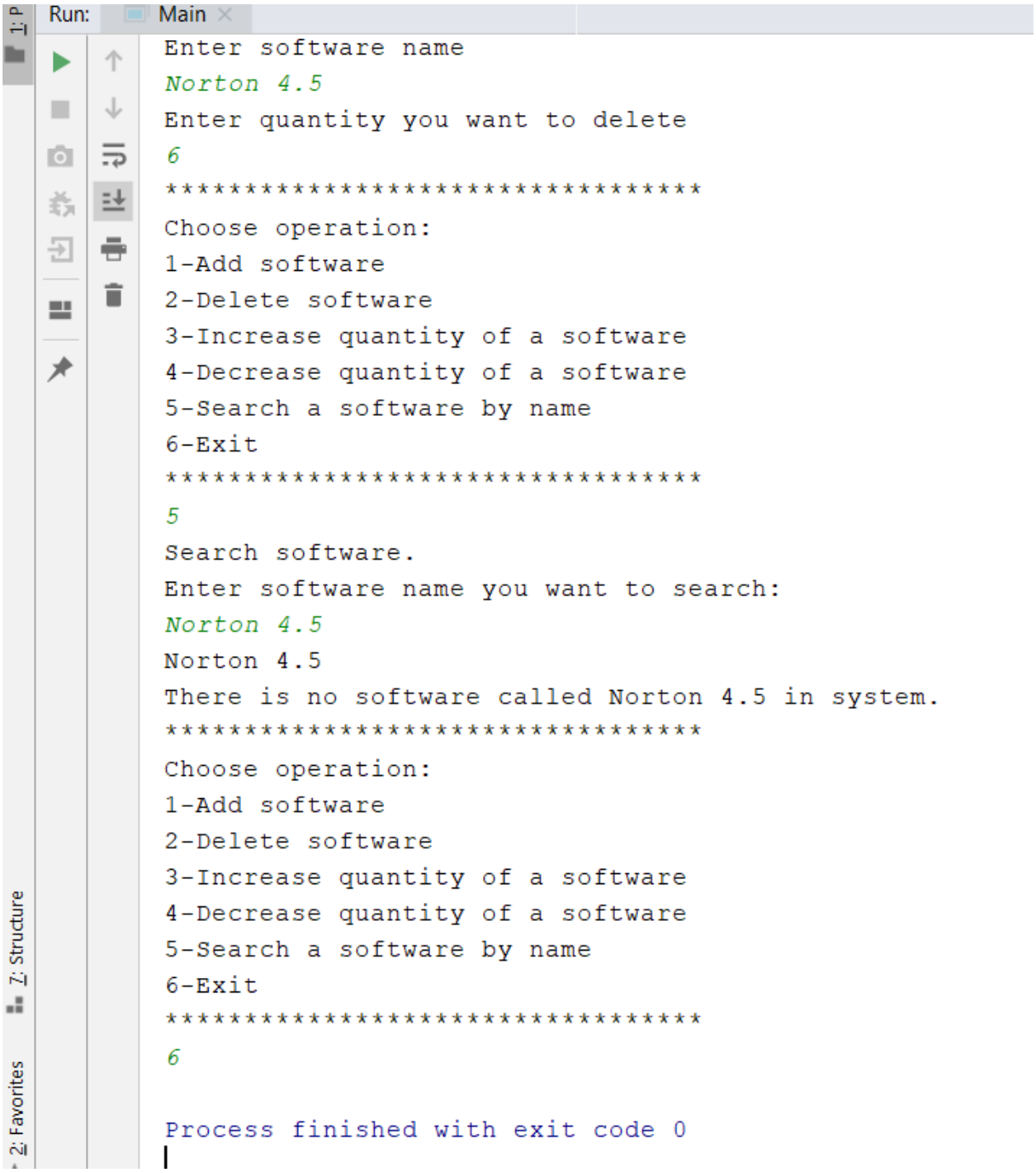


Then I choose 4 to delete quantity of a software. Again I enter Norton 4.5 and enter 2, it will decrease to the norten 4.5 quantity by 2.



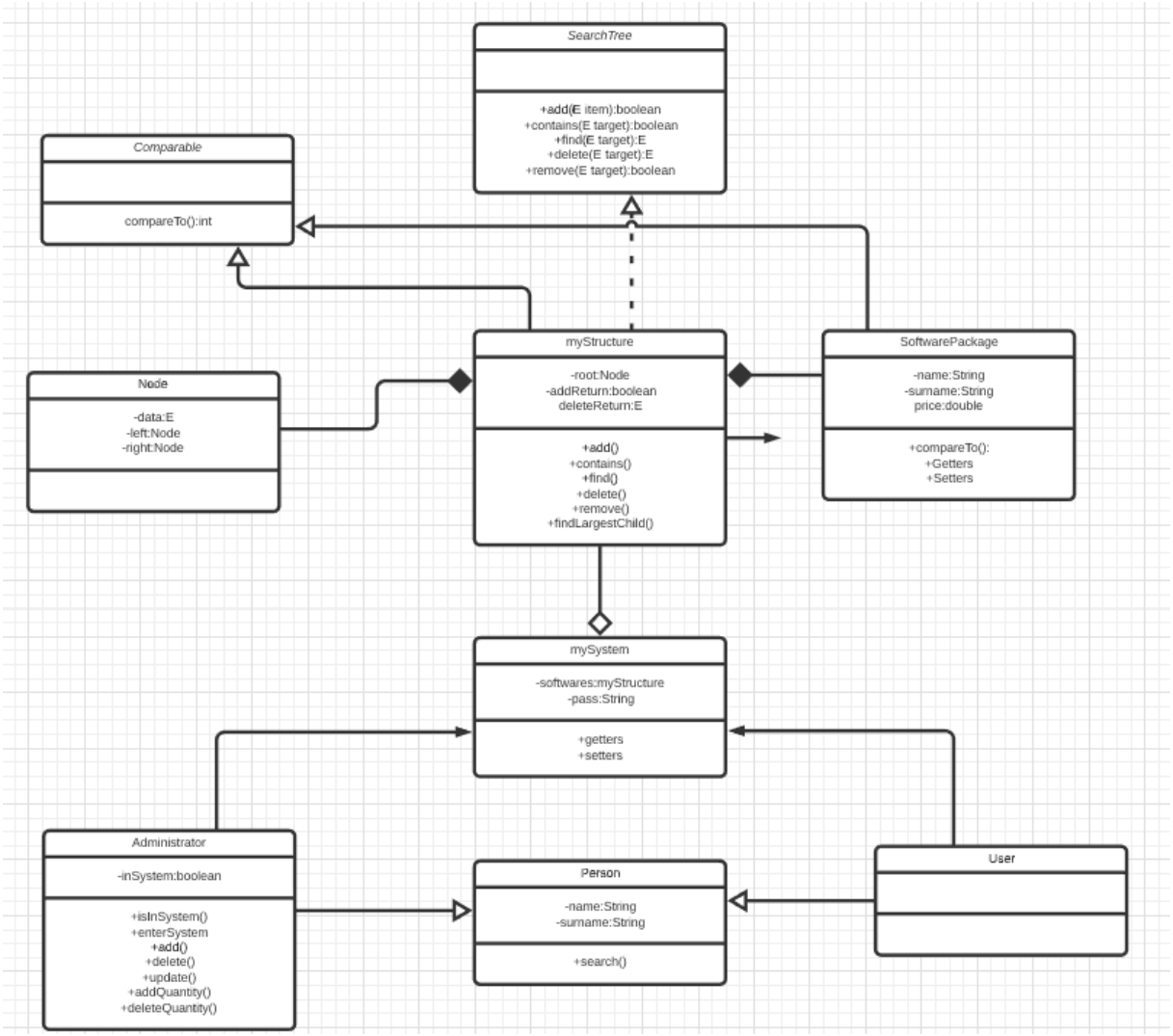
Then again I search Norton 4.5 to Show its quantity has changed. Here you can see its quantity decreased from 8 to 6.Then again I choose Delete quantity of a software. And enter

Norton 4.5 and 6, so this will be decrease Norton 4.5 quantity by 6. But its quantity already 6 so after this operation Norton 4.5 new quantity will be 0. It means its sold out we must delete it in the system.



Then I search Norton 4.5 and as you can see it sprint there is no software called Norton 4.5 in system. Because its quantity decreased to 0.

UML DIAGRAM


SearchTree
+add(E item):boolean
+contains(E target):boolean
+find(E target):E
+delete(E target):E
+remove(E target):boolean
Comparable
compareTo():int
myStructure
-root:Node
-addReturn:boolean
deleteReturn:E
+add()
+contains()
+find()
+delete()
+remove()
+findLargestChild()
SoftwarePackage
-name:String
-surname:String
price:double
+compareTo():
+Getters
+Setters
Node
-data:E
-left:Node
-right:Node
mySystem
-softwares:myStructure
-pass:String
+getters
+setters
Administrator
-inSystem:boolean
+isInSystem()
+enterSystem
+add()
+delete()
+update()
+addQuantity()
+deleteQuantity()
Person
-name:String
-surname:String
+search()
User