Screenshots for the project working

Step 1: Running the run.java script
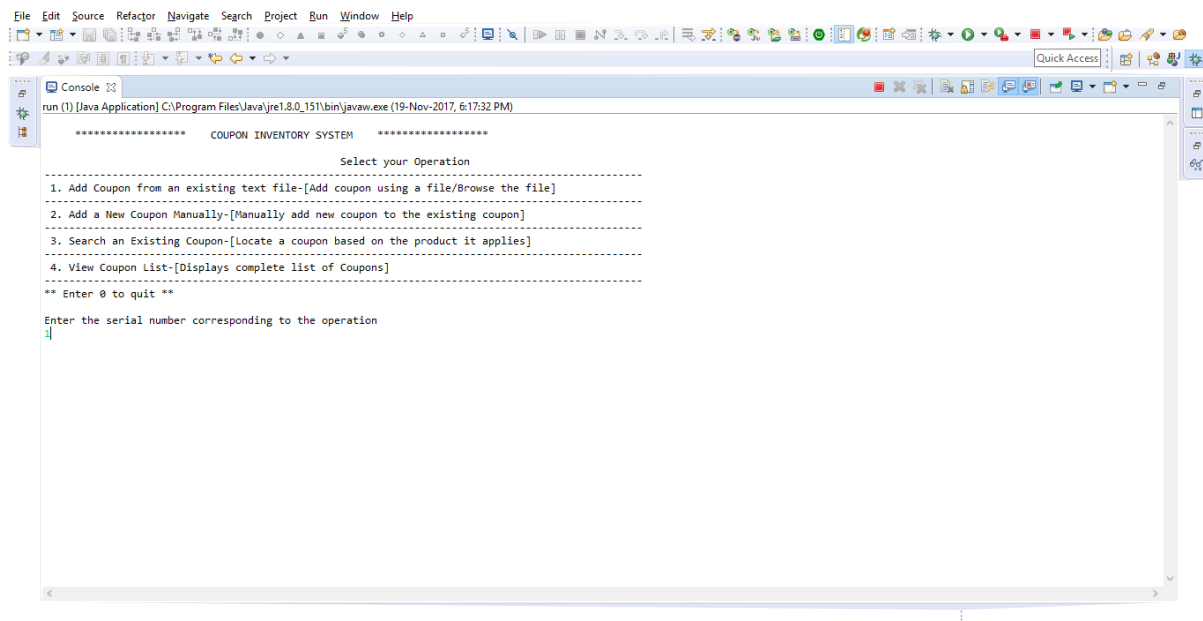

Step 2: Adding coupons from the file- Enter serial number-1

Step 3: As we press enter to 1, a dialog box opens to select the file from which you want to add coupons
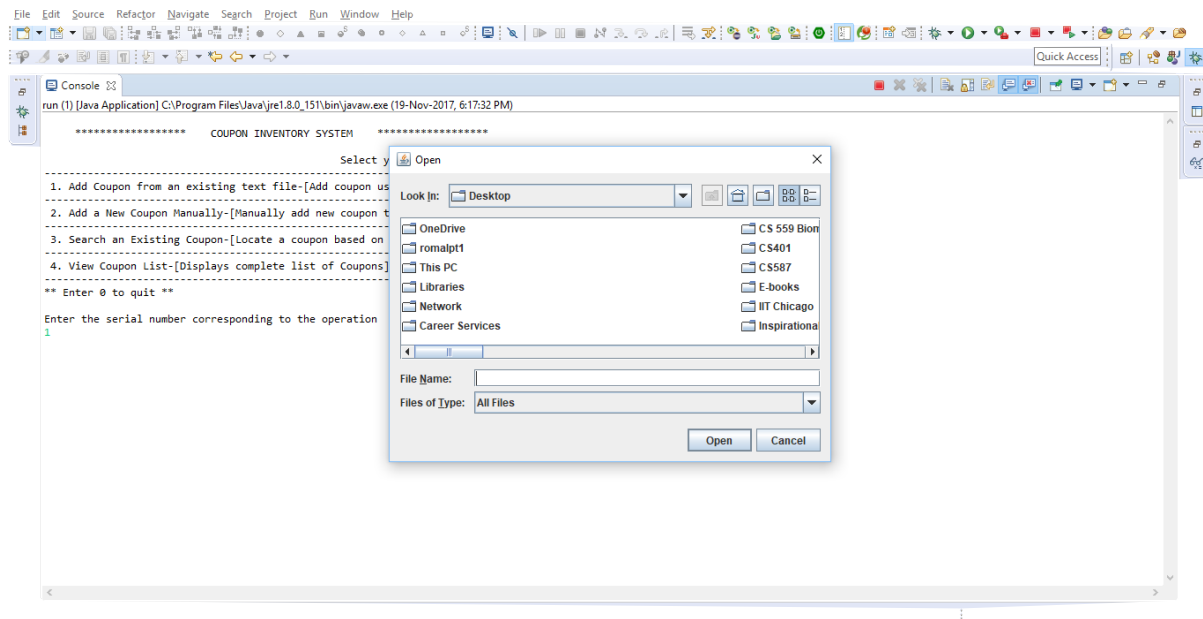
Step 4: Select the file that contains the coupon list

Step 5: After selecting the file to add the coupons, the output shows the number of coupons entered

Step 6: The system asks for next Operation. To view the coupons added, enter 4.

Step 7: To view coupons based on the final prices on a product, enter 4

Console
run (1) [Java Application] C:\Program Files\Java\jre1.8.0_151\bin\javaw.exe (19-Nov-2017, 6:25:49 PM)

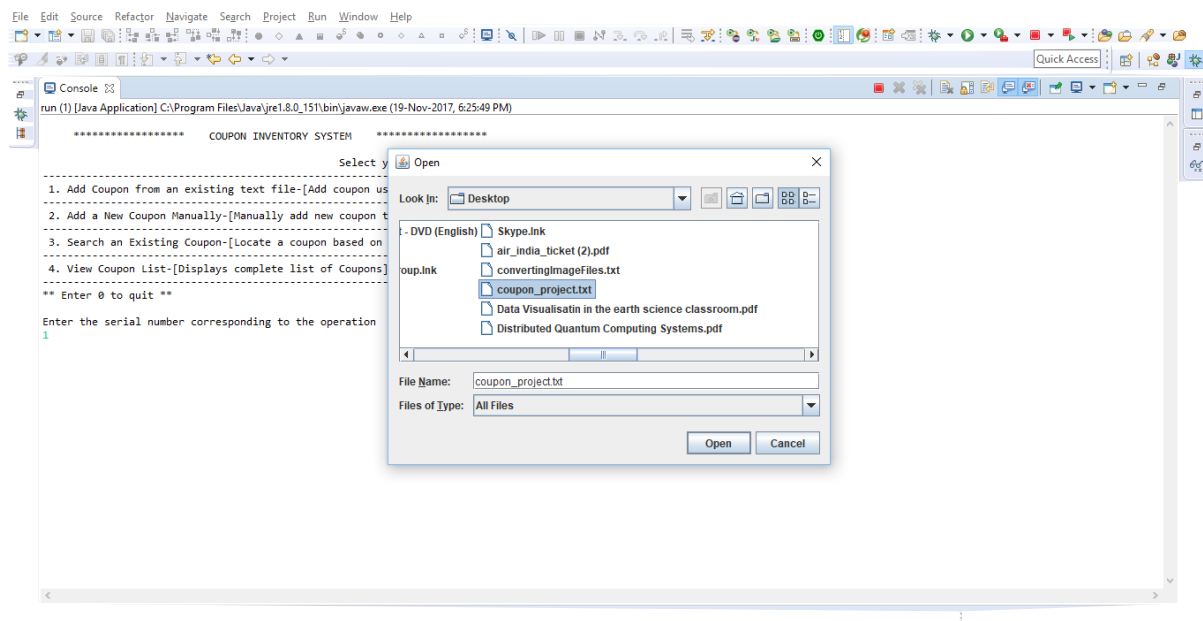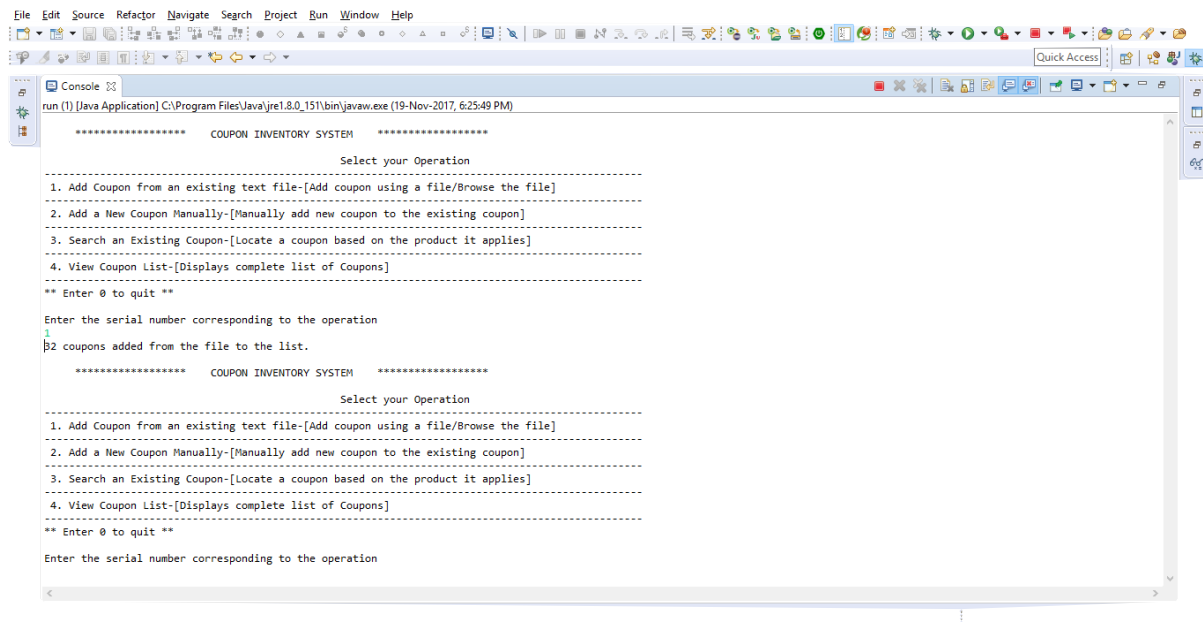```
       ******************   COUPON INVENTORY SYSTEM   ******************
                              Select your Operation
----
 1. Add Coupon from an existing text file-[Add coupon using a file/Browse the file]
----
 2. Add a New Coupon Manually-[Manually add new coupon to the existing coupon]
----
 3. Search an Existing Coupon-[Locate a coupon based on the product it applies]
----
 4. View Coupon List-[Displays complete list of Coupons]

** Enter 0 to quit **

Enter the serial number corresponding to the operation
4
****   VIEW COUPONS   ****

Sort using
1. Coupon Provider

2. Coupon Product

3. Coupon Discount Rates

4. Prices after coupon is redeemed

5. Coupons Redeemed/Unused

Enter 0 to Quit

Enter the appropriate number:
4
```

Step 8: The output console displays the                    List based
on final prices in an ascending order

Console
run (1) [Java Application] C:\Program Files\Java\jre1.8.0_151\bin\javaw.exe (19-Nov-2017, 6:25:49 PM)

```
### Enter 0 to Quit ###

Enter the appropriate number:
4
----------------------COUPONS LIST------------------------

The total number of coupons in the systems is 32

coupon [Provider=Groupon, product=Food , price=$20.0, dis_rate=20%, exp_period=90days, Used=false, Final Price =$16.0]
the coupon number in list is 1
coupon [Provider=LikeaCoupon, product=Food, price=$50.0, dis_rate=50%, exp_period=15days, Used=false, Final Price =$25.0]
the coupon number in list is 2
coupon [Provider=Papa Johns, product=Food , price=$30.0, dis_rate=15%, exp_period=30days, Used=false, Final Price =$25.5]
the coupon number in list is 3
coupon [Provider=Living Social , product=Massage, price=$75.0, dis_rate=60%, exp_period=5days, Used=false, Final Price =$30.0]
the coupon number in list is 4
coupon [Provider=Walmart , product=Groceries, price=$35.0, dis_rate=10%, exp_period=30days, Used=false, Final Price =$31.5]
the coupon number in list is 5
coupon [Provider=Coupon Cabin, product=Food, price=$35.0, dis_rate=5%, exp_period=90days, Used=false, Final Price =$33.25]
the coupon number in list is 6
coupon [Provider=Coupon Cabin , product=Garments , price=$50.0, dis_rate=27%, exp_period=30days, Used=false, Final Price =$36.5]
the coupon number in list is 7
coupon [Provider=Living Social, product=Courses, price=$285.0, dis_rate=86%, exp_period=7days, Used=false, Final Price =$39.900000000000006]
the coupon number in list is 8
coupon [Provider=Living Social, product=Phone Repairs, price=$200.0, dis_rate=67%, exp_period=120days, Used=false, Final Price =$66.0]
the coupon number in list is 9
coupon [Provider=Meijer , product=Pharmacy, price=$80.0, dis_rate=15%, exp_period=120days, Used=false, Final Price =$68.0]
the coupon number in list is 10
coupon [Provider=Groupon , product=Clothing , price=$80.0, dis_rate=10%, exp_period=90days, Used=false, Final Price =$72.0]
the coupon number in list is 11
coupon [Provider=Amazon, product=Electronics, price=$80.0, dis_rate=10%, exp_period=20days, Used=false, Final Price =$72.0]
the coupon number in list is 12
coupon [Provider=Coupon Chef, product=Clothing, price=$80.0, dis_rate=10%, exp_period=60days, Used=false, Final Price =$72.0]
the coupon number in list is 13
coupon [Provider=Coupon Cabin , product=Shoes, price=$80.0, dis_rate=10%, exp_period=20days, Used=false, Final Price =$72.0]
the coupon number in list is 14
```

Step 9: The output has main menu asking for next operation. To quit enter
0.

Step 10: The program terminates

To search a coupon

Step 1: Add coupon to the list from the file
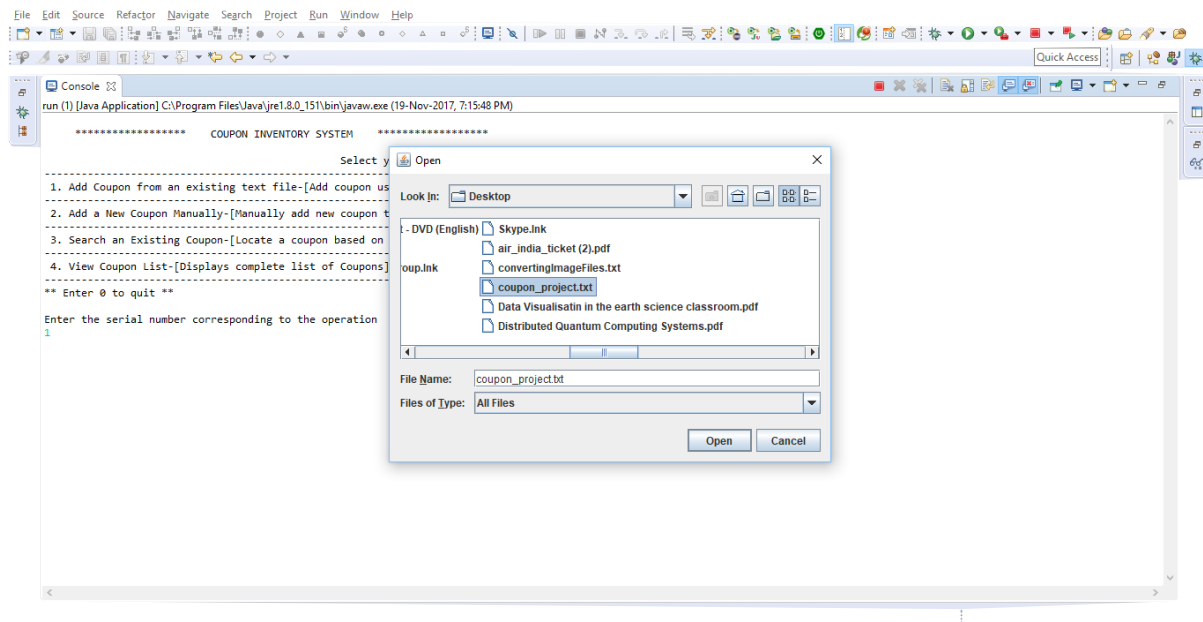
Step 2: Coupons have been added to the list
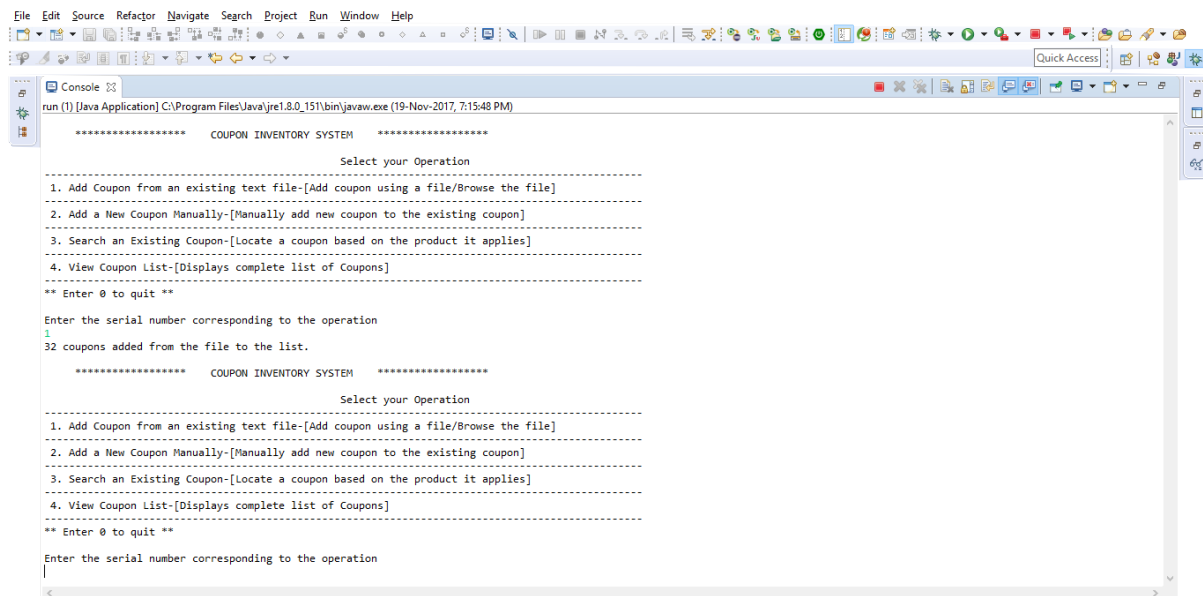
Step 3: To search a coupon enter 3

```
                            Select your Operation
--------------------------------------------------------------------
 1. Add Coupon from an existing text file-[Add coupon using a file/Browse the file]
--------------------------------------------------------------------
 2. Add a New Coupon Manually-[Manually add new coupon to the existing coupon]
--------------------------------------------------------------------
 3. Search an Existing Coupon-[Locate a coupon based on the product it applies]
--------------------------------------------------------------------
 4. View Coupon List-[Displays complete list of Coupons]
--------------------------------------------------------------------
** Enter 0 to quit **

Enter the serial number corresponding to the operation
1
32 coupons added from the file to the list.

        ******************    COUPON INVENTORY SYSTEM    ******************

                            Select your Operation
--------------------------------------------------------------------
 1. Add Coupon from an existing text file-[Add coupon using a file/Browse the file]
--------------------------------------------------------------------
 2. Add a New Coupon Manually-[Manually add new coupon to the existing coupon]
--------------------------------------------------------------------
 3. Search an Existing Coupon-[Locate a coupon based on the product it applies]
--------------------------------------------------------------------
 4. View Coupon List-[Displays complete list of Coupons]
--------------------------------------------------------------------
** Enter 0 to quit **

Enter the serial number corresponding to the operation
3
SEARCH COUPON- (Enter product name to show coupons)
```

Step 4: Enter the name of the coupon product to   search- say "clothing"

```
 1. Add Coupon from an existing text file-[Add coupon using a file/Browse the file]
--------------------------------------------------------------------
 2. Add a New Coupon Manually-[Manually add new coupon to the existing coupon]
--------------------------------------------------------------------
 3. Search an Existing Coupon-[Locate a coupon based on the product it applies]
--------------------------------------------------------------------
 4. View Coupon List-[Displays complete list of Coupons]
--------------------------------------------------------------------
** Enter 0 to quit **

Enter the serial number corresponding to the operation
3
SEARCH COUPON- (Enter product name to show coupons)
clothing
coupon [Provider=DealDaddies, product=clothing, price=$100.0, dis_rate=25%, exp_period=90days, Used=false, Final Price =$75.0]

 COUPON PRESENT IN THE SYSTEM
Using linear Algorithm found in 3th count AND using BST found in 6the count

        ******************    COUPON INVENTORY SYSTEM    ******************

                            Select your Operation
--------------------------------------------------------------------
 1. Add Coupon from an existing text file-[Add coupon using a file/Browse the file]
--------------------------------------------------------------------
 2. Add a New Coupon Manually-[Manually add new coupon to the existing coupon]
--------------------------------------------------------------------
 3. Search an Existing Coupon-[Locate a coupon based on the product it applies]
--------------------------------------------------------------------
 4. View Coupon List-[Displays complete list of Coupons]
--------------------------------------------------------------------
** Enter 0 to quit **

Enter the serial number corresponding to the operation
```
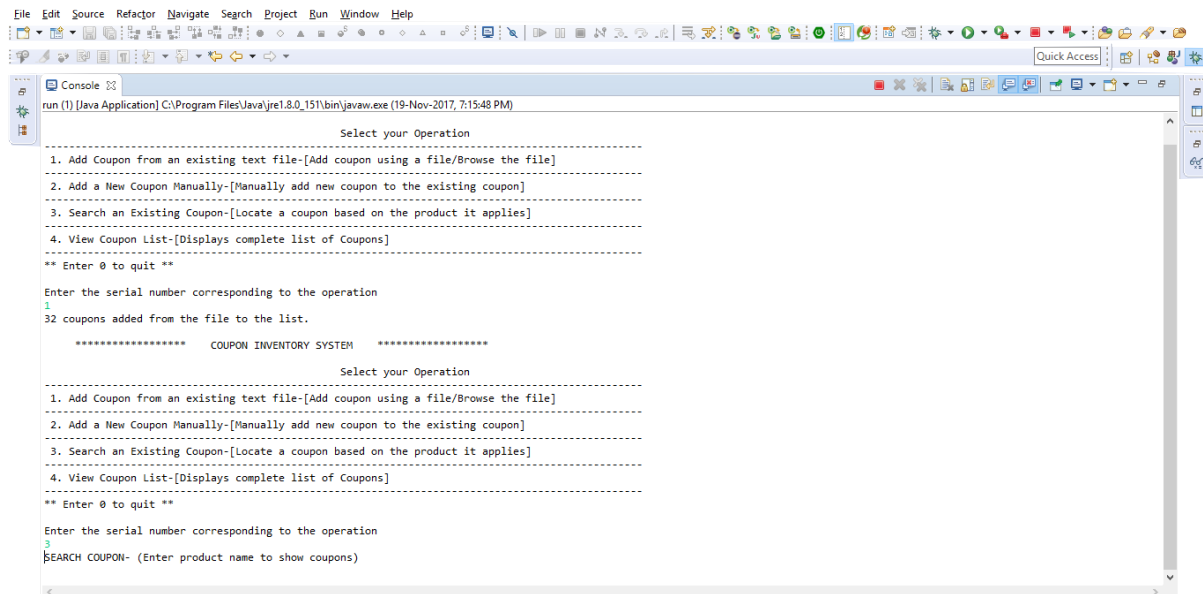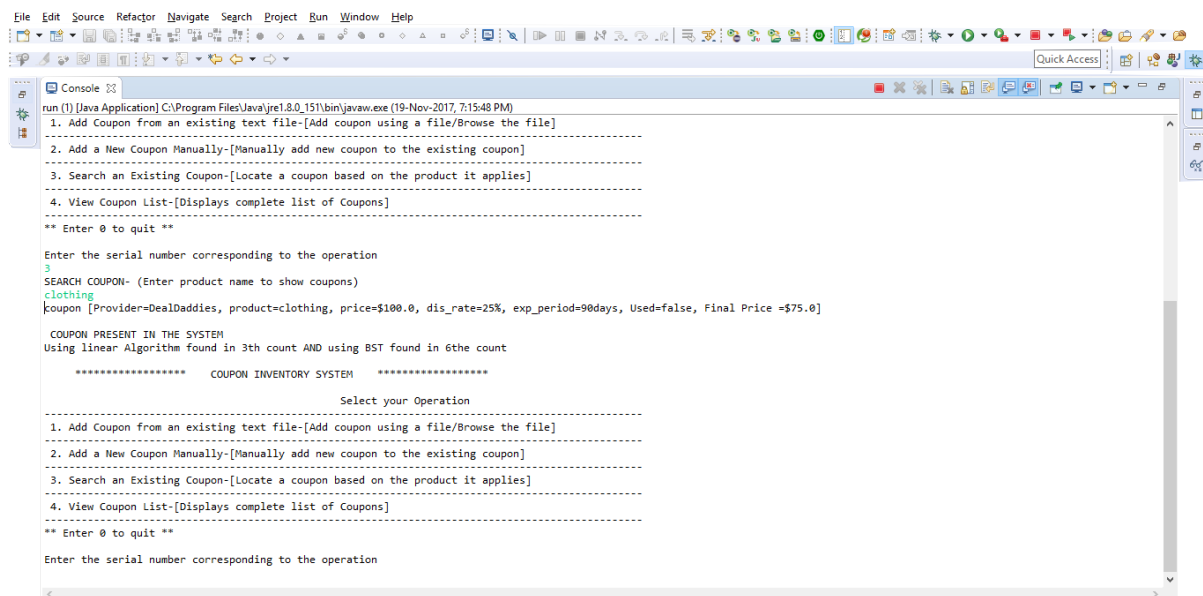
Returns the coupon if present and also the counts for linear and BST searches.