2017

USER MANUAL

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COUPON INVENTORY SYSTEM

Coupon Inventory System is designed where you can add the coupons manually or through a file. The coupons can be searched easily and we can get to know the search count of the binary and linear search. The coupons can be listed in the ascending order and most importantly it will be listed in the order based on the user's choice.

When the code is executed it displays a menu and performs functions like purchase coupon, search coupon and list all the coupons. The code asks the user to choose from the menu by entering the desired number.

MENU:

```
------------------------------------------------
WELCOME TO CS 401 COUPON INVENTORY SYSTEM
THIS IS THE MENU
------------------------------------------------
1. Purchase Coupons
2. Search Coupons
3. List of all the Coupons
4. Exit
------------------------------------------------
```

If the user selects "1" then the purchase coupon function is implemented. The user is given a choice to select the modes of input – file or manual. Based the input, the coupons are added into the unsorted linked list. If the file option is entered, the user is prompted to enter the path of the file name and the coupon gets added. If the user selects manual option, then the user gets to add all the coupons manually.

If the user selects "2" then the search coupon function is implemented. The user should type either the product name or the name of the coupon provider. The list of coupons is searched for this entry though binary and linear search. If it's found, then its displayed with the search count. If not, then no coupon found message is displayed along with the total search count taken. Note: The unsorted linked list is sorted accordingly before performing the binary search.

If the user selects "3" then the list coupon function is implemented. The user should enter the desired parameter of the coupon – coupon provider name or product name or price or discount or final price or expiration day or coupon status. The list of coupons will be displayed based on the user's choice.

If the user selects "4" then the program is exited.

STEPS TO RUN THIS PROGRAM:

    a. Go to the file location [Inside the directory in which the java files are located]
    b. Place the input data file name couponList.txt under the same directory.
    c. Run the below command to compile all the java file with package name.

        $ javac cs401_Project/CollectionInterface.java
        $ javac cs401_Project/Coupon_Inventory_System.java
        $ javac cs401_Project/Coupon.java
        $ javac cs401_Project/LinkedListArray.java
        $ javac cs401_Project/ListInterface.java
        $ javac cs401_Project/Sorted_LinkedList_Array.java

    d. Run the below command to execute the code
        $ java Coupon_Inventory_System

e. Enter the desired number when the below message is displayed in the console. Either 1 or 2 or 3 or 4.

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----

f. Type 1 – FOR PURCHASE COUPON. Then you will get the below message.

This is the section to input the data both manually or through a file

----
Enter the mode of input [FILE, MANUAL or EXIT]

1. Type FILE for adding the files though file mode. Then you will get the below message

ENTER THE PATH OF INPUT FILE
----

2. Enter the file path and then the coupons will be added to the unsorted linked list. And you will get the below message

Coupons from the input file has been updated successfully

3. And the below message will appear again.

This is the section to input the data both manually or through a file

----

4. Type MANUAL for manually adding the coupons.

5. Type NEXT for adding a new coupon. It will prompt the user to add the values of the parameter of the coupon. And displays a message when it adds the coupon to the unsorted linked list. You can continue to add any number of coupons. And type EXIT to stop adding the coupon.

6. Type exit to quit the purchase coupon module. And the main menu will be displayed again.

g. Type 2 – FOR SEARCH COUPON. Then you will get the below message.

This is the section to search for the coupon(s)

ENTER THE DETAIL OF THE COUPON [PRODUCT NAME OR PROVIDER NAME]

1. Enter the details of the product name or the provider name. Then the result message is displayed along with the serach count of both binary and linear search.

Ex.

COUPON IS FOUND
SEARCH COUNT FOR LINEAR SEARCH IS 8
And the coupon is: Coupon [coupon_provider = Groupon, product_name = SkyDiving, price = 1040.0, final_price = 936.0, discount = 10, expiration_date = 100, status_coupon = Unused]

The SEARCH COUNT IN BINARY SEARCH IS 4

h. Type 3 – FOR LISTING THE COUPON. Then you will get the below message.

This is the section to list all the coupons based on user's choice
----
ENTER THE PARAMETER OF COUPON AND IT WILL LISTED ACCORDINGLY [provider, price, final_ price, discount, expiration, product or status]

Type the desired parameter from the list in the message. And the coupon list will be displayed.

ENTER THE PARAMETER OF COUPON AND IT WILL LISTED
ACCORDINGLY
provider
1. Coupon [coupon_provider=ABCo, product_name=UCB,
price=100.0, final_price=-210.0, discount=310, expiration_date=70,
status_coupon=Unused]
2. Coupon [coupon_provider=BestDeal, product_name=Forever21,
price=1050.0, final_price=945.0, discount=10, expiration_date=50,
status_coupon=Used]
3. Coupon [coupon_provider=BestDeal, product_name=Addidas,
price=600.0, final_price=480.0, discount=20, expiration_date=40,
status_coupon=Unused]
4. Coupon [coupon_provider=DealDaddy, product_name=Puma,
price=1050.0, final_price=105.0, discount=90, expiration_date=100,
status_coupon=Unused]
5. Coupon [coupon_provider=Groupon, product_name=Movie,
price=1020.0, final_price=918.0, discount=10, expiration_date=15,
status_coupon=Used]
6. Coupon [coupon_provider=LivingMax, product_name=Icecream,
price=1600.0, final_price=960.0, discount=40, expiration_date=90,
status_coupon=Used]
7. Coupon [coupon_provider=LivingSocial,
product_name=RockClimbing, price=154.0, final_price=46.2,
discount=70, expiration_date=100, status_coupon=Unused]

And the main menu will be displayed again.

i. Type 4 – FOR EXITING THE PROGRAM. Then you will get the below
   message.

   THANK YOU. EXITING THE PROGRAM

- When you run the code by following the above steps you will get the output like the following:

```
------------------------------------------------
WELCOME TO CS 401 COUPON INVENTORY SYSTEM
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------------------------------------------------
1

This is the section to input the data both manually or through a file

------------------------------------------------------------------------------
Enter the mode of input[FILE, MANUAL or EXIT]
file
ENTER THE PATH OF INPUT FILE
------------------------------------------------
/Users/mounagiri/Desktop/CouponList.txt
Coupons from the input file has been updated successfully
-----------------------------------------------------------
Enter the mode of input[FILE, MANUAL or EXIT]
MANUAL
Enter NEXT for adding new coupon and EXIT to stop adding manually
next
------------------------------------------------
Enter the values of the coupons
Enter the input for Coupon provider
Groupon
Enter the input for the product name
Movie
Enter the input for price
30
Enter the input for discount
10
Enter the input for expiration days
30
Enter the status of the coupon
unused
The new coupon has been added successfully
------------------------------------------------
Enter NEXT for adding new coupon and EXIT to stop adding manually
exit
Enter the mode of input[FILE, MANUAL or EXIT]
exit
------------------------------------------------
WELCOME TO CS 401 COUPON INVENTORY SYSTEM
THIS IS THE MENU
------------------------------------------------
1. Purchase Coupons
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------------------------------------------------
2
This is the section to search for the coupon(s)
```

This is the section to search for the coupon(s)

ENTER THE DETAIL OF THE COUPON [LIST ANY PARAMETER]

SkyDiving
COUPON IS FOUND
THE SEARCH COUNT BY LINEAR SEARCH ALGORITHM AND THE COUPONS:
SEARCH COUNT FOR LINEAR SEARCH IS 8
 And the coupon is :Coupon [coupon_provider=Groupon, product_name=SkyDiving, price=1040.0,
final_price=936.0, discount=10, expiration_date=100, status_coupon=Unused]
The SEARCH COUNT IN BINARY SEARCH IS4

WELCOME TO CS 401 COUPON INVENTORY SYSTEM
THIS IS THE MENU
----
1. Purchase Coupons
2. Search Coupons
3. List of all the Coupons
4. Exit

3
This is the section to list all the coupons based on user's choice
----
ENTER THE PARAMETER OF COUPON AND IT WILL LISTED ACCORDINGLY
provider
1. Coupon [coupon_provider=ABCo, product_name=UCB, price=100.0, final_price=-210.0, discount=310,
expiration_date=70, status_coupon=Unused]
2. Coupon [coupon_provider=ABCo, product_name=Zara, price=1700.0, final_price=1190.0, discount=30,
expiration_date=100, status_coupon=Unused]
3. Coupon [coupon_provider=BestDeal, product_name=Forever21, price=1050.0, final_price=945.0,
discount=10, expiration_date=50, status_coupon=Used]
4. Coupon [coupon_provider=BestDeal, product_name=Fashion, price=105.0, final_price=52.5,
discount=50, expiration_date=50, status_coupon=Used]
5. Coupon [coupon_provider=BestDeal, product_name=Addidas, price=600.0, final_price=480.0,
discount=20, expiration_date=40, status_coupon=Unused]
6. Coupon [coupon_provider=DealDaddy, product_name=Puma, price=1050.0, final_price=105.0,
discount=90, expiration_date=100, status_coupon=Unused]
7. Coupon [coupon_provider=DealDaddy, product_name=Painting, price=16.0, final_price=9.6,
discount=40, expiration_date=100, status_coupon=Unused]
8. Coupon [coupon_provider=DealDaddy, product_name=Nike, price=1070.0, final_price=321.0,
discount=70, expiration_date=30, status_coupon=Unused]
9. Coupon [coupon_provider=Groupon, product_name=Ballet, price=700.0, final_price=630.0,
discount=10, expiration_date=100, status_coupon=Unused]
10. Coupon [coupon_provider=Groupon, product_name=Movie, price=30.0, final_price=27.0,
discount=10, expiration_date=30, status_coupon=unused]
11. Coupon [coupon_provider=Groupon, product_name=Urban, price=90.0, final_price=54.0,
discount=40, expiration_date=50, status_coupon=Unused]
12. Coupon [coupon_provider=Groupon, product_name=Converse, price=330.0, final_price=198.0,
discount=40, expiration_date=50, status_coupon=Unused]
13. Coupon [coupon_provider=Groupon, product_name=SkyDiving, price=1040.0, final_price=936.0,
discount=10, expiration_date=100, status_coupon=Unused]
14. Coupon [coupon_provider=Groupon, product_name=Movie, price=1020.0, final_price=918.0,
discount=10, expiration_date=15, status_coupon=Used]
15. Coupon [coupon_provider=LivingMax, product_name=Icecream, price=1600.0, final_price=960.0,
discount=40, expiration_date=90, status_coupon=Used]
16. Coupon [coupon_provider=LivingMax, product_name=Skating, price=65.0, final_price=32.5,
discount=50, expiration_date=90, status_coupon=Used]
17. Coupon [coupon_provider=LivingMax, product_name=Express, price=1500.0, final_price=1350.0,
discount=10, expiration_date=100, status_coupon=Used]

```
18. Coupon [coupon_provider=LivingSocial, product_name=RockClimbing, price=154.0,
final_price=46.2, discount=70, expiration_date=100, status_coupon=Unused]
19. Coupon [coupon_provider=LivingSocial, product_name=RockClimbing, price=1200.0,
final_price=360.0, discount=70, expiration_date=100, status_coupon=Unused]
20. Coupon [coupon_provider=LivingSocial, product_name=Restaurant, price=1030.0,
final_price=206.0, discount=80, expiration_date=10, status_coupon=Unused]
-----------------------------------------------
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4. Exit
-----------------------------------------------
4
THANK YOU. EXITING THE PROGRAM
-----------------------------------------------
```