

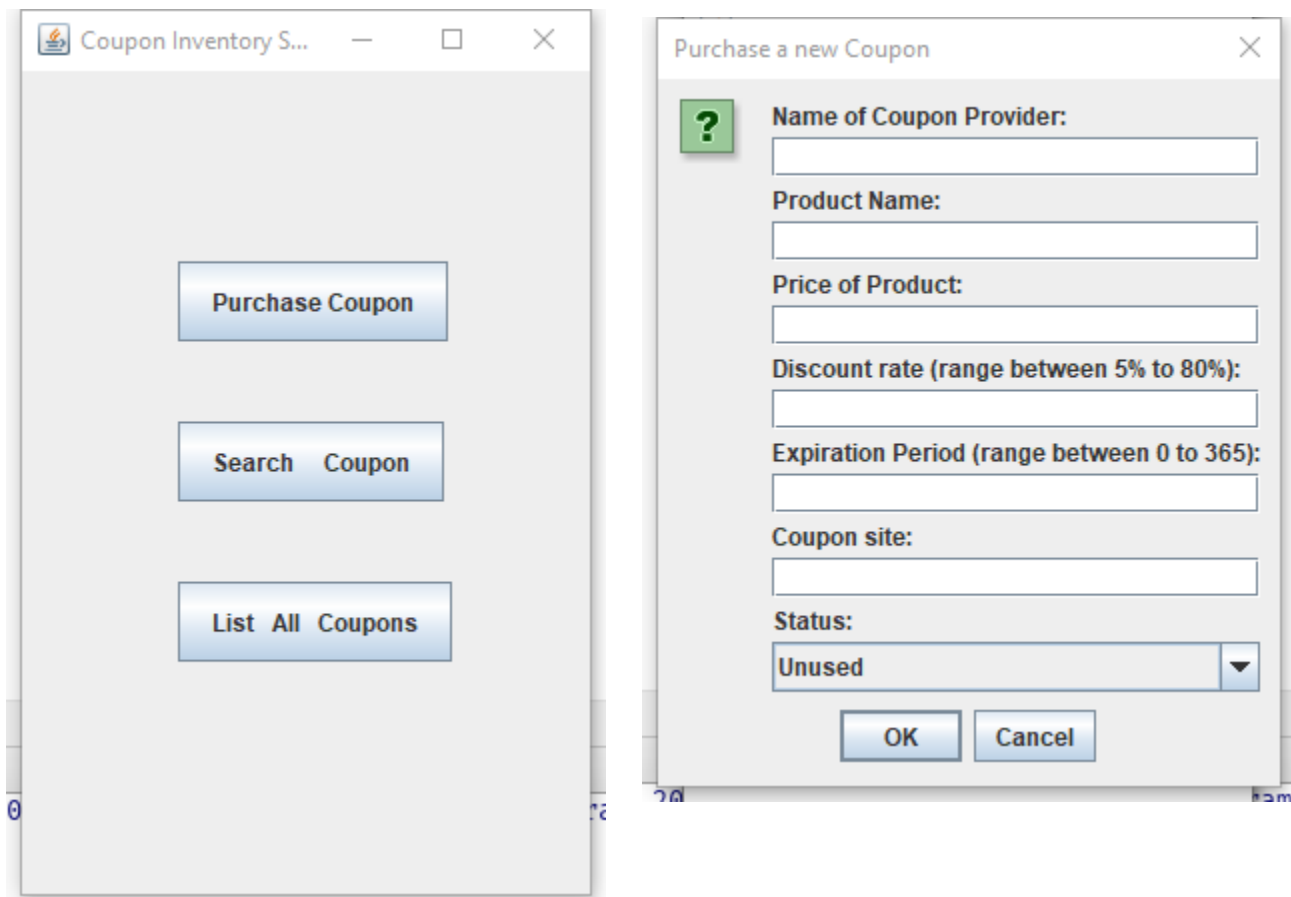
Testing Document

Test 1: Fault Tolerance

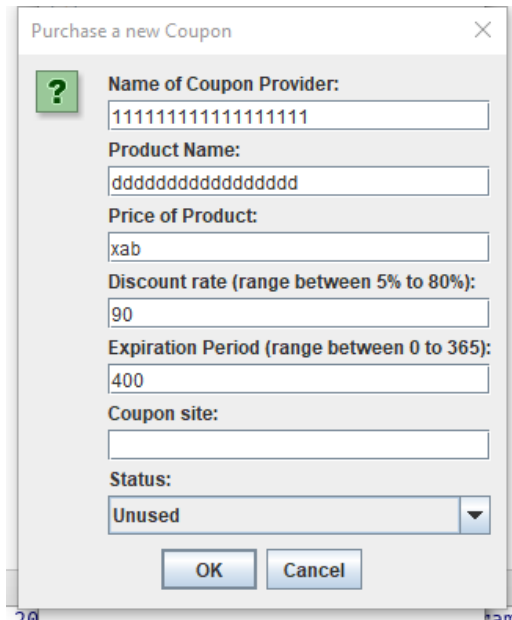
Test Description: This test let the coupon inventory system to deal with fault input. In the event of an invalid input, the system will return a reminder about right data type.

Test Procedure:

1. Open the coupon inventory system and click in input function. Select input manually.



2. Input different error value in the different areas.

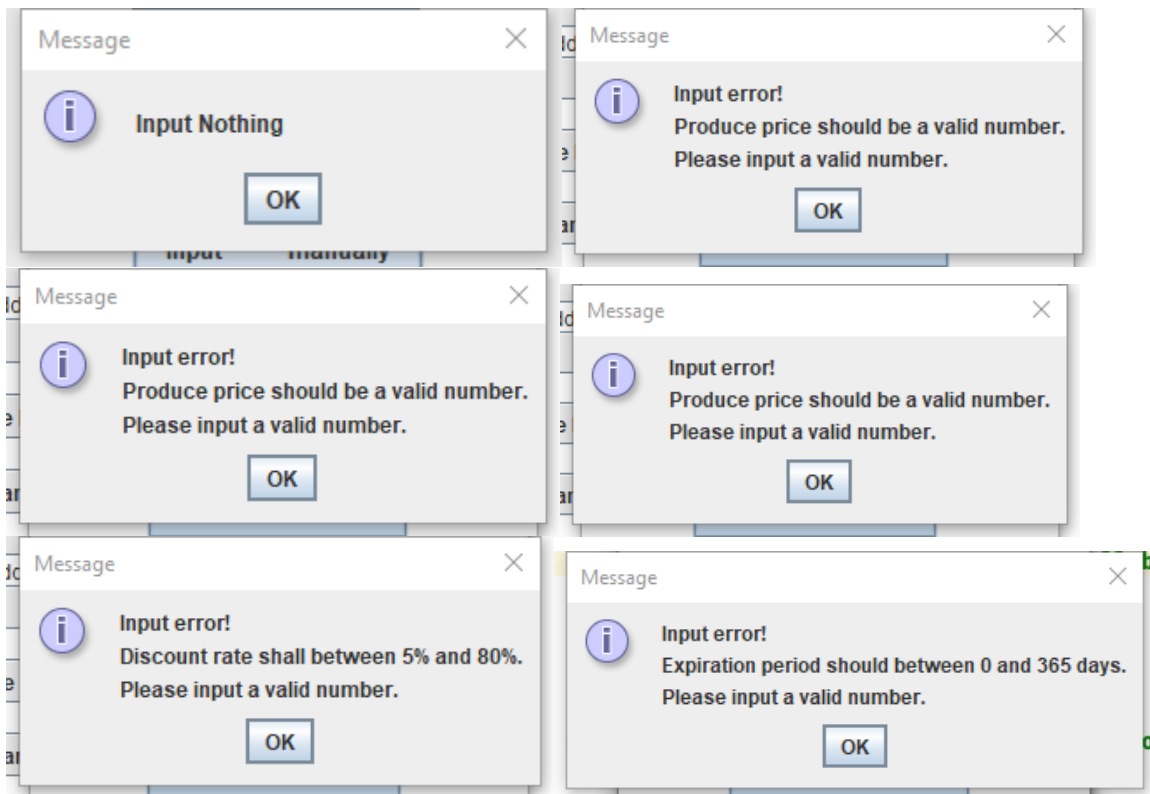


The screenshot shows a dialog box titled "Purchase a new Coupon" with a close button (X) in the top right corner. On the left side, there is a green square icon with a white question mark. The form contains the following fields and values:

- Name of Coupon Provider:** 11111111111111111111
- Product Name:** dddddddddddddddddd
- Price of Product:** xab
- Discount rate (range between 5% to 80%):** 90
- Expiration Period (range between 0 to 365):** 400
- Coupon site:** (empty field)
- Status:** Unused (dropdown menu)

At the bottom of the dialog box are two buttons: "OK" and "Cancel".

3. The system error reminder.



Test 2: Capacity – Large number of data input

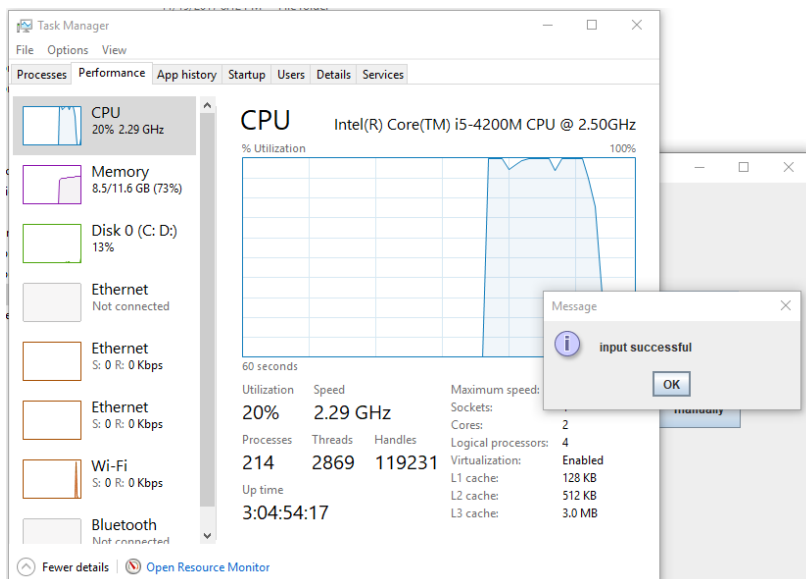
Test Description: The system shall handle the case that the input number is large.

Test Procedure:

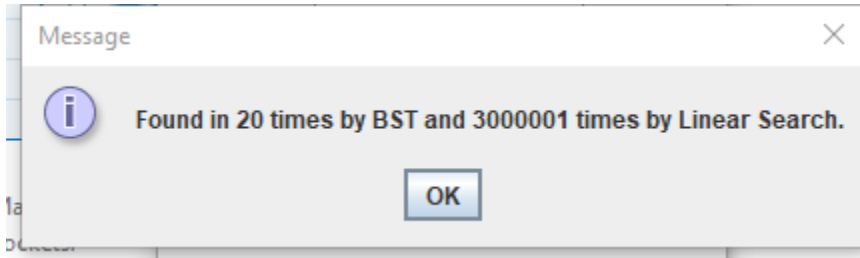
1. Write a script to create large number of coupon data named “CouponCreation.java”.
2. Use “CouponCreation.java” create 3,000,000 coupons data.

```
4 public class CouponCreation {  
5  
6 public static void main(String[] args) {  
7     CouponCreation cc = new CouponCreation();  
8     ArrayList<Coupon> couponList = new ArrayList<>();  
9     for (int i = 0; i < 3000000; i++) {  
10        couponList.add(cc.newCoupon());  
11    }  
12    String fileName = "list.txt";  
13    try {  
14        cc.writeFile(fileName, couponList);  
15    }  
16    catch (IOException e) {  
17        System.out.println("Wrong Insertion!");  
18    }  
19 }
```

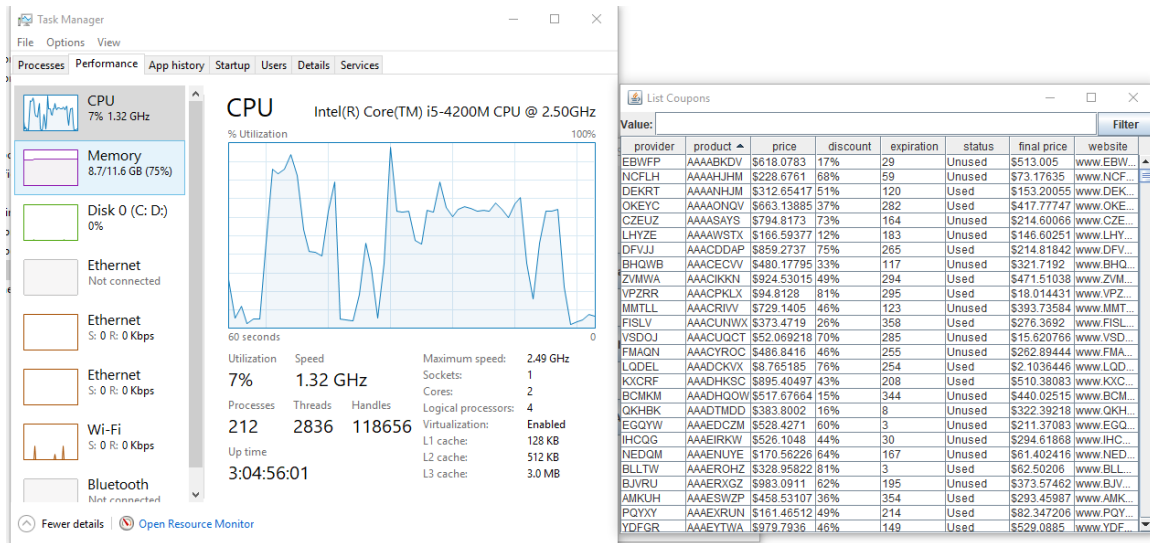
3. Input data in coupon inventory system. There are high level cpu utilization.



4. Search a coupon in the system.



5. List all the coupons and sort by custom label. Still have a high level cpu utilization.

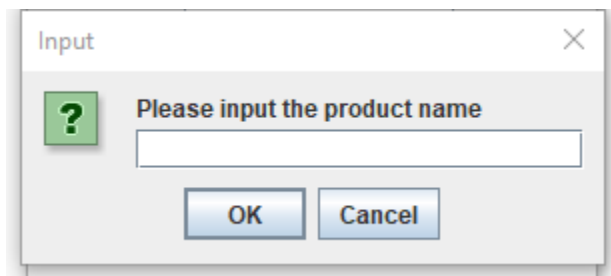


Test 3: Accuracy

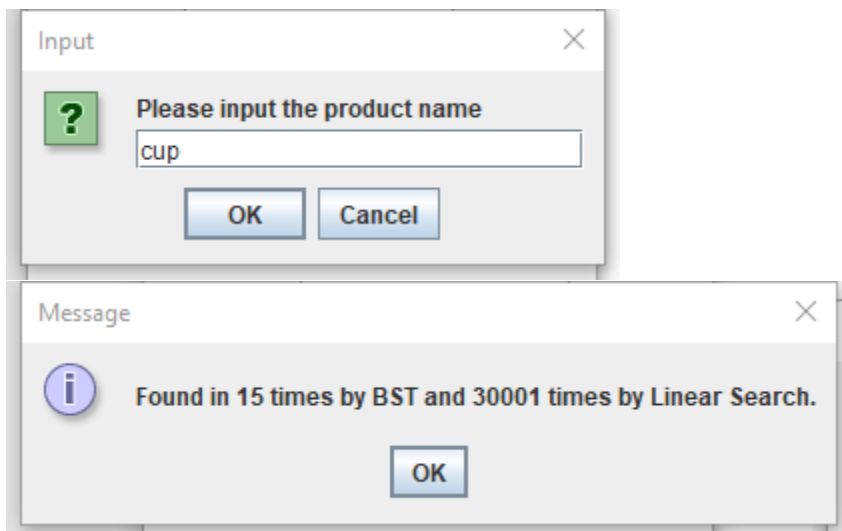
Test Description: Search a specific value in coupon inventory system.

Test Procedure:

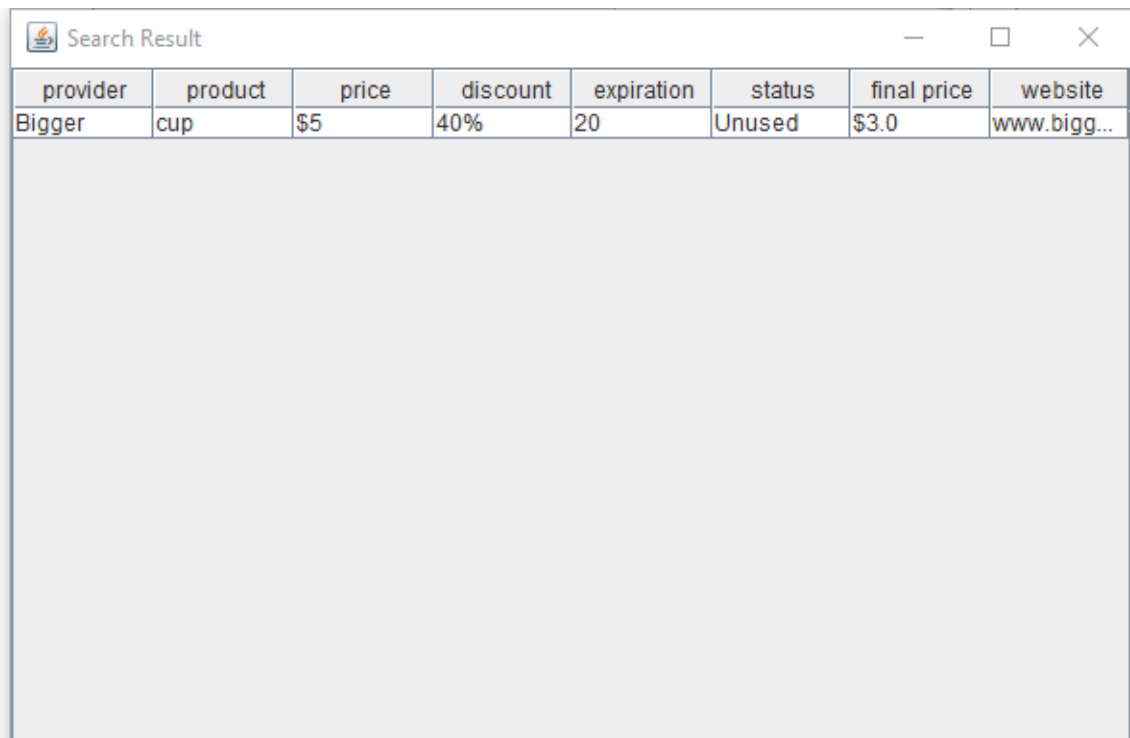
1. Open the coupon inventory system, switch to the search function.



2. Input a valid product name to search



3. Check the search result



The screenshot shows a window titled "Search Result" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window is a table with 8 columns: provider, product, price, discount, expiration, status, final price, and website. The first row of data shows "Bigger" as the provider, "cup" as the product, "\$5" as the price, "40%" as the discount, "20" as the expiration, "Unused" as the status, "\$3.0" as the final price, and "www.bigg..." as the website. The rest of the table area is empty.

provider	product	price	discount	expiration	status	final price	website
Bigger	cup	\$5	40%	20	Unused	\$3.0	www.bigg...