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## **Data Structures and Algorithms (DSA)**

### **Exercise 2: E-commerce Platform Search Function**

This program simulates a basic search functionality of an e-commerce platform. It takes a list of product names and allows the user to search using a keyword. Matching products are displayed if the keyword is found in the product name.

#### **Code:**

##### **SearchFunction.java**

```
package com.searchfunc;

import java.util.*;

public class SearchFunction {

    public static void main(String[] args)

    {

        Scanner sc = new Scanner(System.in);

        List<String> products = Arrays.asList("iPhone 16", "Samsung Galaxy", "iPhone 15",
"MacBook Air", "Dell Inspiron", "Apple Watch");

        System.out.print("Enter product search keyword: ");

        String query = sc.nextLine().toLowerCase();

        System.out.println("\nSearch results:");

        boolean found = false;

        for (String product : products) {

            if (product.toLowerCase().contains(query)) {

                System.out.println(product);

                found = true;

            }

        }

    }

}
```

```

    }

    if (!found) {

        System.out.println("No products matched your search.");

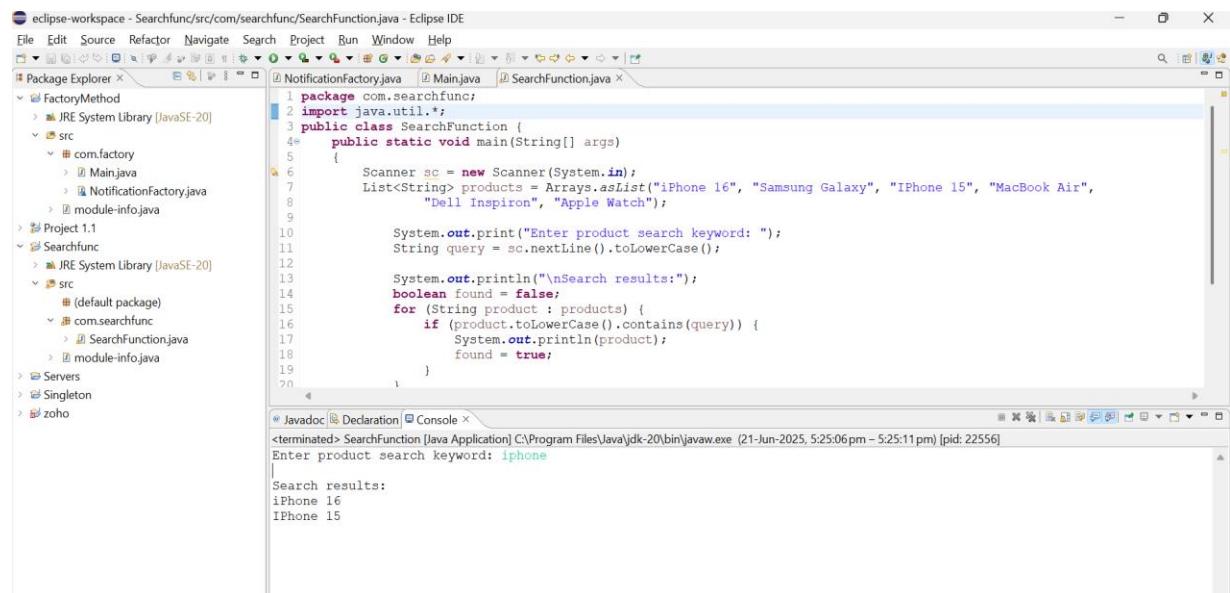
    }

}

}

```

## Output:



The screenshot shows the Eclipse IDE with the following components:

- Package Explorer:** Shows the project structure with packages like `com.factory` and `com.searchfunc`.
- Editor:** Displays the `SearchFunction.java` file with the following code:
 

```

1 package com.searchfunc;
2 import java.util.*;
3 public class SearchFunction {
4     public static void main(String[] args)
5     {
6         Scanner sc = new Scanner(System.in);
7         List<String> products = Arrays.asList("iPhone 16", "Samsung Galaxy", "iPhone 15", "MacBook Air",
8         "Dell Inspiron", "Apple Watch");
9
10        System.out.print("Enter product search keyword: ");
11        String query = sc.nextLine().toLowerCase();
12
13        System.out.println("\nSearch results:");
14        boolean found = false;
15        for (String product : products) {
16            if (product.toLowerCase().contains(query)) {
17                System.out.println(product);
18                found = true;
19            }
20        }
21    }
22 }
      
```
- Console:** Shows the execution output:
 

```

<terminated> SearchFunction [Java Application] C:\Program Files\Java\jdk-20\bin\javaw.exe (21-Jun-2025, 5:25:06 pm - 5:25:11 pm) [pid: 22556]
Enter product search keyword: iphone
Search results:
iPhone 16
iPhone 15
      
```