Implement a custom exception called ProductNotFoundException that is thrown when a product is not found in the inventory. Use try, catch, finally, throw, and throws to handle exceptions appropriately

```java
J InventoryManagement.java > ...
1    import java.util.HashMap;
2    import java.util.Scanner;
3
4    // Custom exception class
5    class ProductNotFoundException extends Exception {
6        public ProductNotFoundException(String message) {
7            super(message);
8        }
9    }
10
11   class Product {
12       private String name;
13       private String id;
14       private double price;
15
16       public Product(String name, String id, double price) {
17           this.name = name;
18           this.id = id;
19           this.price = price;
20       }
21
22       public String getName() {
23           return name;
24       }
25
26       public String getId() {
27           return id;
28       }
29
30       public double getPrice() {
31           return price;
32       }
33
34       @Override
35       public String toString() {
36           return "Name: " + name + ", ID: " + id + ", Price: $" + price;
37       }
38   }
39
40   public class InventoryManagement {
41       private HashMap<String, Product> inventory;
42
43       public InventoryManagement() {
44           inventory = new HashMap<>();
45       }
46
47       public void addProduct(Product product) {
```

```java
48              inventory.put(product.getId(), product);
49              System.out.println("Product added: " + product);
50          }
51
52      public Product findProduct(String id) throws ProductNotFoundException {
53          Product product = inventory.get(id);
54          if (product == null) {
55              throw new ProductNotFoundException("Product with ID " + id + " not found.");
56          }
57          return product;
58      }
59
        Run | Debug
60      public static void main(String[] args) {
61          InventoryManagement inventory = new InventoryManagement();
62          Scanner scanner = new Scanner(System.in);
63
64          while (true) {
65              System.out.println(x:"Inventory Menu:");
66              System.out.println(x:"1. Add Product");
67              System.out.println(x:"2. Find Product");
68              System.out.println(x:"3. Exit");
69              System.out.print(s:"Choose an option: ");
70              int choice = scanner.nextInt();
71              scanner.nextLine(); // Consume newline
72
73              try {
74                  switch (choice) {
75                      case 1:
76                          System.out.print(s:"Enter product name: ");
77                          String name = scanner.nextLine();
78                          System.out.print(s:"Enter product ID: ");
79                          String id = scanner.nextLine();
80                          System.out.print(s:"Enter product price: ");
81                          double price = scanner.nextDouble();
82                          scanner.nextLine(); // Consume newline
83                          Product product = new Product(name, id, price);
84                          inventory.addProduct(product);
85                          break;
86                      case 2:
87                          System.out.print(s:"Enter product ID to find: ");
88                          String productId = scanner.nextLine();
89                          try {
90                              Product foundProduct = inventory.findProduct(productId);
91                              System.out.println("Product found: " + foundProduct);
92                          } catch (ProductNotFoundException e) {
```

```
93                              System.out.println(e.getMessage());
94                          }
95                          break;
96                      case 3:
97                          System.out.println(x:"Exiting...");
98                          scanner.close();
99                          return;
100                     default:
101                         System.out.println(x:"Invalid choice. Please try again.");
102                 }
103             } catch (Exception e) {
104                 System.out.println("An error occurred: " + e.getMessage());
105             } finally {
106                 System.out.println(x:"Operation complete.");
107             }
108         }
109     }
110 }
```

PROBLEMS (1)   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

```
PS C:\Users\SWETHA BENNY\Documents\javaProject> javac InventoryManagement.java
>> java InventoryManagement
>>
>> java InventoryManagement
>>
Inventory Menu:
>>
Inventory Menu:
1. Add Product
Inventory Menu:
1. Add Product
2. Find Product
1. Add Product
2. Find Product
3. Exit
2. Find Product
3. Exit
Choose an option: 2
3. Exit
Choose an option: 2
Choose an option: 2
Enter product ID to find: 567
Enter product ID to find: 567
Product with ID 567 not found.
Operation complete.
Product with ID 567 not found.
Operation complete.
```