IT1214 - Practical Sheet 29.05.2025

Develop a Java console-based program to manage Items and Customers:

The interface of the program should be:

----- Inventory Management -----

- 1. Add Item
- 2. Remove Item
- 3. Update Item Quantity
- 4. List All Items
- 5. Add Customer
- 6. List All Customers
- 7. Search Item by Name
- 0. Exit

Enter your choice:

• Class Item:

Should have the following fields:

- o description
- o name
- o unitPrice
- o quantityAvailable

Should include the following methods:

- o updateQuantity(int amount): Logic to increase or decrease quantity (you can define your own rules).
- o printDetails(): Display the details of the item.
- Other methods as needed (e.g., getters, setters, or helper methods).
- Class Customer:

Should have the following fields:

- o name
- contactDetails

Should have necessary methods to access the class variables

Class Database:

Should maintain collections of Item and Customer objects (use ArrayList<Item> and ArrayList<Customer>).

Should provide methods to:

- o Items:
 - addItem(Item item)
 - removeItem(String itemName or ID)
 - searchItem(String name)
 - updateItemQuantity(String itemName, int amount)
- Customers:
 - addCustomer(Customer customer)
 - removeCustomer(String name)
 - listCustomers()
 - searchCustomerByName(String name)