

E-Commerce Application Assignment

Objective:

Develop a simple eCommerce application using Object-Oriented Programming (OOP) principles in Java. The application should allow users to manage products, customers, and orders.

Requirements:

1. Classes and Relationships:

- **Product**
 - Attributes: `id`, `name`, `description`, `price`, `stockQuantity`
 - Methods: Constructors, getters, setters, `toString()`
- **Customer**
 - Attributes: `id`, `name`, `email`, `address`
 - Methods: Constructors, getters, setters, `toString()`
- **Order**
 - Attributes: `id`, `customer`, `productList` (List of Product), `totalAmount`
 - Methods: Constructors, getters, setters, `calculateTotalAmount()`, `toString()`
- **OrderManager**
 - Attributes: `orderList` (List of Order)
 - Methods: `addOrder(Order order)`, `removeOrder(int orderId)`, `viewAllOrders()`
- **CustomerManager**
 - Attributes: `customerList` (List of Customer)

- Methods: `addCustomer(Customer customer)`,
`removeCustomer(int customerId)`,
`viewAllCustomers()`
- **ProductManager**
 - Attributes: `productList` (List of Product)
 - Methods: `addProduct(Product product)`,
`removeProduct(int productId)`,
`viewAllProducts()`, `updateStock(int productId, int newStock)`

2. Main Application:

- Create a `Main` class with a `main` method to interact with the user.
- Implement a simple text-based menu to perform the following actions:
 - Add a new product
 - Remove a product
 - View all products
 - Add a new customer
 - Remove a customer
 - View all customers
 - Create a new order
 - View all orders