

CN Kart Application

Problem Statement:

Building an application called **CN Kart** consisting of three microservices: Order Service, Item Service, and Inventory Service. The application aims to manage customer orders, product items, and inventory.

1. **Item:** It manages items for the application and provides APIs for getting and creating items.
2. **Order:** It manages customer orders and provides APIs for placing orders.
3. **Inventory:** It keeps track of items and their quantities, providing API for checking an item's availability.

Steps to build the Application:

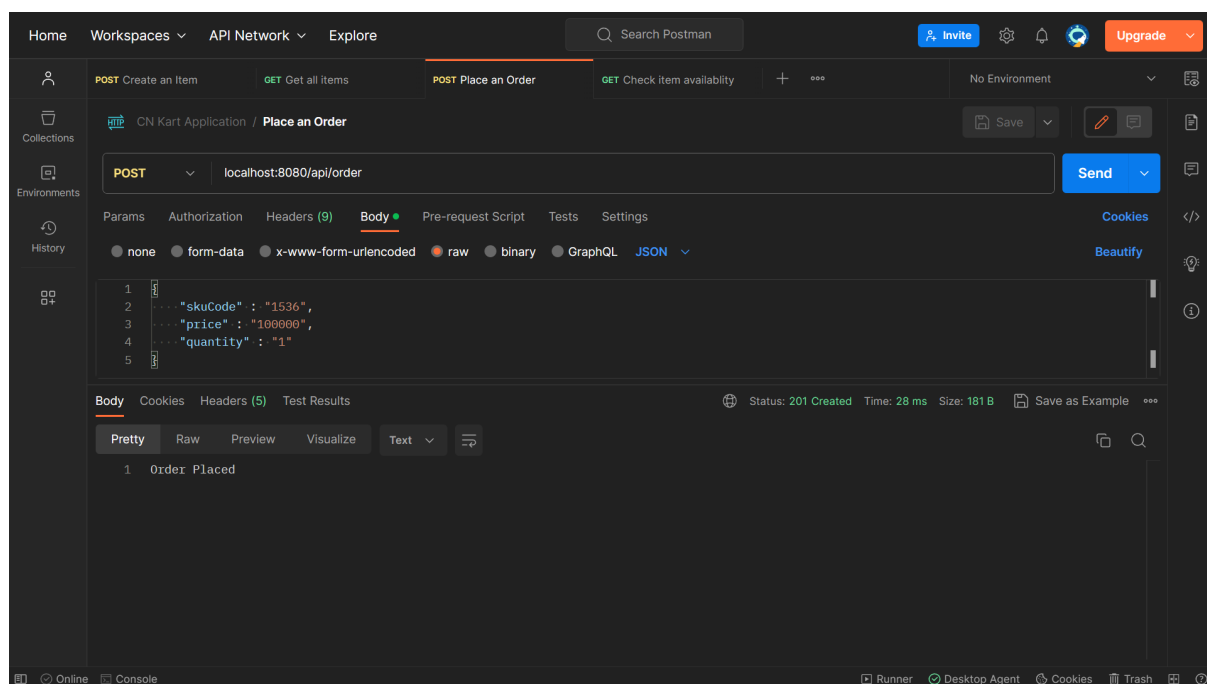
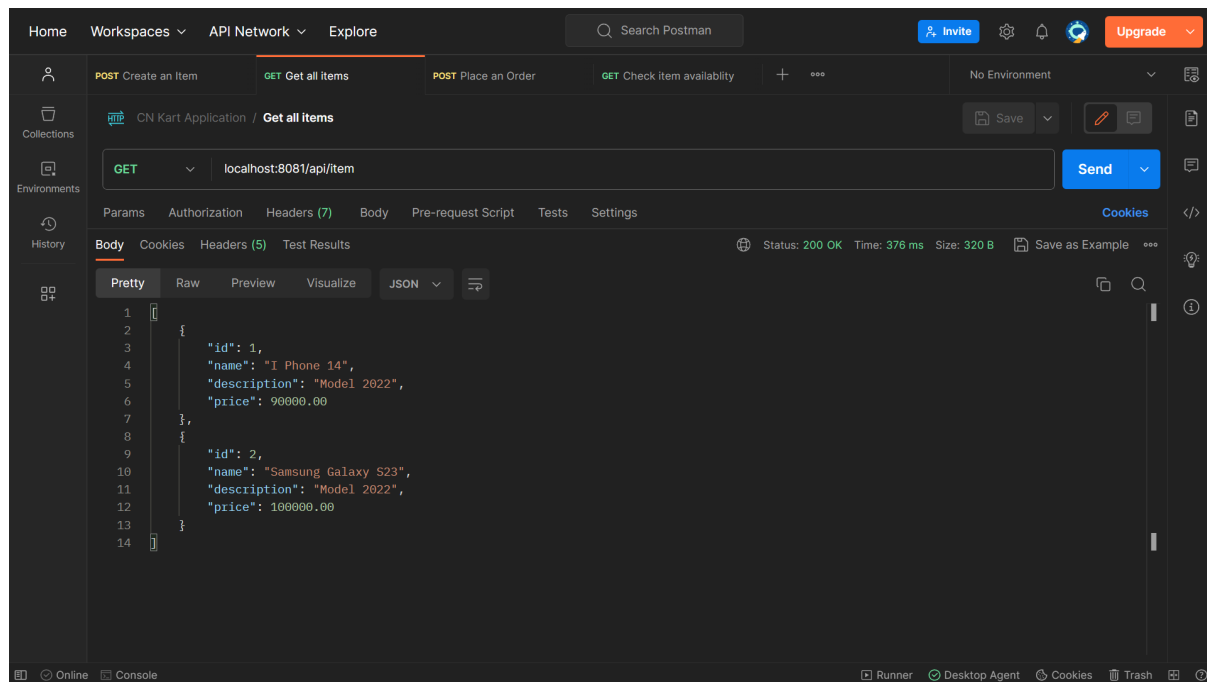
1. Create three separate Spring Boot projects for the Order Service, Item Service, and Inventory Service. Import the required dependencies.
2. Create Entity and repository classes and configure them to connect with the database.
3. You must use these entity classes for each of the microservices respectively with the given properties and their getters and setters:
 - a. **Item Entity:**
 - id (Long)
 - name (String)
 - description (String)
 - price (BigDecimal)
 - b. **Order Entity:**
 - id (Long),
 - skuCode (String)
 - price (BigDecimal)
 - quantity (Integer)
 - c. **Inventory Entity:**
 - id (Long),
 - skuCode (String)
 - quantity (Integer)
4. Create controllers for each of the Microservices with the APIs as described below:
 - a. **Item Controller:**
 - POST /api/item: to create an item
 - Get /api/item: to get all items
 - b. **Order Controller:**
 - POST /api/order: to place an order.
 - c. **Inventory Controller:**

- GET /api/inventory: to check if a particular item is in stock with a specific quantity.

5. Create the service layer for each of the Microservices and implement business logic.

6. Create Repository classes using the JPA repository for the entities.

7. Test the application using Postman.



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POST Create an Item GET Get all items POST Place an Order GET Check item availability

CN Kart Application / Check item availability Save

GET localhost:8083/api/inventory?skuCode=1536&qty=1 Send

Params Authorization Headers (7) Body Pre-request Script Tests Settings Cookies

Query Params

Key	Value	Description	Bulk Edit
<input checked="" type="checkbox"/> skuCode	1536		
<input checked="" type="checkbox"/> qty	1		
Key	Value	Description	

Body Cookies Headers (5) Test Results Status: 200 OK Time: 14 ms Size: 168 B Save as Example

Pretty Raw Preview Visualize JSON

```
1 true
```

Online Console Runner Desktop Agent Cookies Trash

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POST Create an Item GET Get all items POST Place an Order GET Check item availability

CN Kart Application / Create an Item Save

POST localhost:8081/api/item Send

Params Authorization Headers (9) Body Pre-request Script Tests Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL JSON Beautify

```
1 {
2   "name": "Samsung Galaxy S23",
3   "description": "Model 2022",
4   "price": "100000"
5 }
```

Body Cookies Headers (4) Test Results Status: 201 Created Time: 23 ms Size: 128 B Save as Example

Pretty Raw Preview Visualize Text

```
1
```

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Solution: [Link](#)