

IT 3232: Practical for E-Commerce

ICAE 02

Department of Physical Science

Faculty of Applied Science, University of Vavuniya

Answer All Questions

Duration: 1 hour

26th of July 2024

Instruction:

- A Springboot project was already created, use it to answer the given questions.
- Once you complete the exam copy only the 'src' folder and the generated database to the Z drive (server).
- Don't copy your files while it is opened in the editor.
- Capture screenshots of the outputs for each question.

You and your friends have a startup idea to empower women by marketing Palmyra products from northern Sri Lanka. You have connections with women producers and suppliers from northern districts, whose hard work supports their families. You aim to create an online platform connecting these producers with potential customers.

The project aims to create a web and mobile app for selling Palmyra products, using Spring Boot and MySQL. Initially, a REST web service was built as a backend, followed by the development of UIs for the web and mobile apps. The core models involved in the project are detailed in the paragraph below.

- "Seller" has the attributes seller id, name, email, address, company name, and contact info.
- "Customer" has the attributes id, name, email, address, credit card info, and shipping address.
- "Product" represents the products available for sale on the E-commerce site, with attributes like product id, name, price, quantity, and description.
- "Category" groups similar products such as Edibles Items, Handicraft Items, and Kitchen Tools.
- "Order" has attributes of id, order date and, the total value of the order. Customers can place multiple orders, but each order is associated with only one customer.
- "Order Item" has attributes of id, quantity and the sub-total value of the item (multiplication of quantity and product price). Each order can have multiple items, and each item is associated with only one order.

The models and a sample data file are provided to enhance understanding of the attributes and data types.

The following tasks are given to you. Complete the task with efficient coding practices, and return proper JSON responses.

1. Allow the customers to filter the products by their category. [15 mark]

2. Search the products by their manufacturing district. [20 mark]
3. Customers can place the order only by specifying their customer ID, order date, list of product IDs, and quantities of products. Refer to Figure 1 for JSON input format. [40 mark]

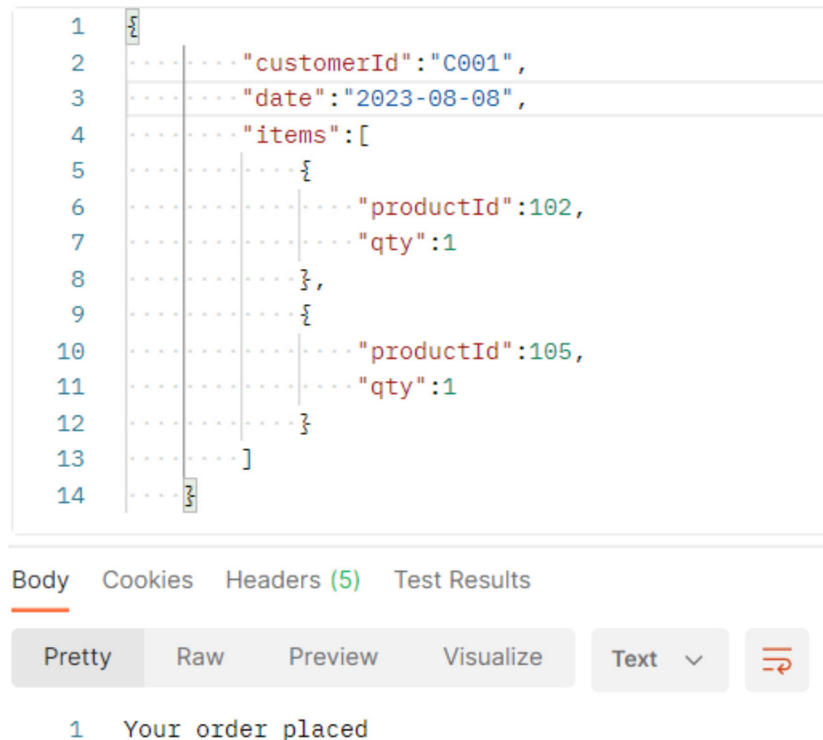


Figure 1 Screen capture of order placement

4. Validate the customer's quantity against the product stock. It should be less than the stock. If the quantity exceeds the stock handle the error with the "IllegalArgumentException" class. The error message should be in proper JSON format. Refer to Figure 2. [25 mark]

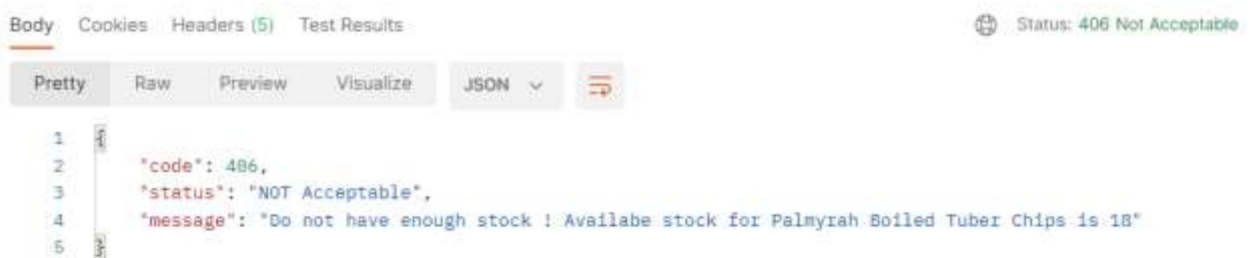


Figure 2 Screen capture of the error message