ONLINE SHOPPING CART SYSTEM

GLCA – DA Python Revision Session: Week 6

Introduction:

An online shopping cart system is an essential component of an e-commerce platform, allowing customers to select, manage, and purchase products with ease. This case study will explore the requirements of a business person who wants a data analyst to build an online shopping cart system with functionalities such as adding, removing, and viewing the cart using product class and cart item class. We will examine the steps and considerations that go into building such a system and the role of data analytics in ensuring a successful and efficient e-commerce platform.

Step 1: Reflect Upon Your Organization

Before diving into the specifics of the shopping cart system, it's essential to consider the organization's goals, products, and target customers. Understanding the organization's needs will help the data analyst design a shopping cart system that aligns with the business's objectives and ensures a seamless user experience for the customers.

Step 2: Develop a Product Mindset

In a product startup, the data analyst must have the ability to understand the product as well as measure the success of the product. This means working closely with the product team to define the key performance indicators (KPIs) for the shopping cart system, such as conversion rates, average order value, and cart abandonment rates. These KPIs will help the data analyst identify areas for improvement and optimize the shopping cart system.

Step 3: Designing the “Product” and “CartItem“ Classes

The product class should include essential attributes like product ID, na me, description, price, and inventory. The cart item class, on the other hand, should contain the product object, quantity, and any additional attributes that may be relevant to the specific implementation, such as discounts or special offers.

Step 4: Implementing Add, Remove, and View Functionalities

Adding to Cart: When a customer adds a product to their cart, a new cart item object should be created with the selected product and desired quantity. This cart item object should then be added to the customer's shopping cart.

Removing from Cart: When a customer removes a product from their cart, the corresponding cart item object should be removed from the shopping cart. It's important to ensure that the removal process updates the cart's total price and item count accordingly.

Viewing the Cart: Customers should be able to view the contents of their shopping cart, including the products added, their quantities, individual prices, and the total price. This information should be presented in a user-friendly manner, allowing customers to modify their cart contents as needed easily.

Step 5: Data Analytics for Continuous Improvement

Once the shopping cart system is implemented, the data analyst should regularly monitor the system's performance using the defined KPIs. This will involve making assumptions and using data to support hypotheses about the shopping cart system's efficiency and areas for improvement. The data analyst should also be proactive in seeking additional information or clarification when necessary to ensure the system is meeting the organization's goals.

Conclusion

Building an online shopping cart system with add, remove, and view functionalities involves careful planning, collaboration with the product team, and ongoing data analytics to ensure the system is optimized and aligned with the organization's goals. By following these steps and focusing on the customer experience, a data analyst can create a shopping cart system that effectively supports an e-commerce platform's success.