REDIS DATA STRUCTURES

Most Viewed Products:

Key: mostViewed:productId

Value: Product ID

Score: Number of views

Description:

Each product has a unique identifier (Product ID).

The key-value storage uses a sorted set to store products based on the number of views.

The score represents the number of views, allowing products to be sorted in descending order of popularity.

Whenever a user views a product, the system increments the score for that product, indicating an increase in popularity.

This allows the system to quickly retrieve and display the most viewed products.

Shopping Cart:

Key: cart:customerId

Value: Product IDs

Description:

Each customer has a unique identifier (Customer ID).

The key-value storage uses a set to store the products in a customer's shopping cart.

When a customer adds a product to the shopping cart, the system adds the product ID to the set associated with that customer.

If needed, the system can also store additional information, such as product quantity or other details, depending on the requirements.

This setup allows for efficient retrieval of a customer's shopping cart.

These functionalities leverage the simplicity and speed of in-memory key-value storage, making it suitable for scenarios where quick access to specific data is crucial. The key-value storage helps optimize operations like incrementing view counts or managing items in a shopping cart by avoiding the need for complex database queries. However, it's important to note that in-memory storage is ephemeral, and data will be lost if the system restarts. If persistence is required, a more durable solution like a database may be necessary.