

Case Study: Fufu Republic

Overview:

Fufu Republic is a popular restaurant chain in Nigeria with multiple outlets nationwide. While the core menu is standardized, some items vary by location (e.g., the Agege branch may sell Chinese Rice, while the Lekki branch might not). Customers can order online through the website or visit outlets for dine-in or take-out.

Payment Methods:

The restaurant accepts:

- Cash
- Debit card payments via Nomba POS terminals at outlets
- Online payments processed through gateways like Nomba Web Checkout, Paystack, Interswitch etc.

Challenges:

1. **Inventory Management:**

Variations in customer demand and menu items across branches make it challenging to maintain optimal stock levels.

2. **Customer Experience:**

The restaurant aims to improve the customer experience by offering personalized promotions based on purchasing behavior.

Objective:

Fufu Republic wants to leverage data to:

- Understand sales trends across locations, payment methods, and dining options (dine-in, take-out, online).
- Manage stock levels efficiently, reducing waste and ensuring availability.
- Enhance customer experience by analyzing purchasing habits and tailoring promotions accordingly.

As a recently hired data engineer at Fufu Republic, you have been tasked with developing a dimensional model to address the business's needs for data-driven decision-making.

1. **Map out the necessary entities ,relationships and constraints:** This should be a model (Any degree of abstraction is okay)
2. **Create a dimensional model:**
 - Identify a business process of your choice
 - List the business question under the business process you selected
 - Identify the grain, dimensions and fact.