Entities

- Payment method – The restaurants accept 3 payment methods (Cash, Debits card, Online payment)

    o Attributes: payment_id, payment_type, Amount, payment date

- Locations – Fufu Republic has multiple outlets nationwide.

    o Attributes: Location id, IP address, city, state,

- Dining options – Dine-in, take-out, online

    o Attributes: Location id, Option type

- Stock levels – Manage stock levels efficiently, reducing waste and ensuring availability.

    o Attributes: Type of stock, Age, size (kg)

- Choice of food – Food items vary based on locations

    o Attributes: Food name, Location id, price, weight

- Orders -

    o Attributes: order id, price, location id, option type, food name, order date

Relationships

- **Payment Method**:

    o A restaurant accepts multiple payment methods.

    o **payment-method (1:m)** is accepted by **Orders**.

- **Locations**:

    o Fufu Republic has multiple outlets nationwide.

    o **location (1:m)** has **Dining Options**.

- **Dining Options**:

    o Each location offers several dining options.

    o **dining-options (1:m)** is associated with **Orders**.

- **Stock Levels**:

    o Each location manages stock levels efficiently.

    o **stock-levels (1:1)** is monitored for each **Location**.

- **Choice of Food**:

- o   Food items vary based on location.

- o   **choice-of-food (m:1)** is linked to **Locations**.

- **Orders**:

  - o   Each order can include multiple food items and is linked to one payment method.

  - o   **orders (m:1)** is placed at **Locations**.

  - o   **orders (m:1)** is linked to **Payment Method**.

- **Summary of Relationships**

- **Payment Method** (1:m) → **Orders**

- **Locations** (1:m) → **Dining Options**

- **Dining Options** (1:m) → **Orders**

- **Stock Levels** (1:1) → **Locations**

- **Choice of Food** (m:1) → **Locations**

- **Orders** (m:1) → **Locations**

- **Orders** (m:1) → **Payment Method**

Constraints

- **Payment Method**
  - o   payment_id : int NOT NULL PRIMARY KEY,
  - o   payment_type varchar(255) NOT NULL
  - o   Amount
  - o   payment date
- **Locations**
  - o   Location id   int NOT NULL PRIMARY KEY,
  - o   IP address,
  - o   City   varchar(255) NOT NULL
  - o   State   varchar(255)   NOT NULL
- **Dining Options**
  - o   Location id   int FOREIGN KEY
  - o   Option type varchar(255)   NOT NULL
- **Stock Levels**
  - o   Type of stock varchar(255)   NOT NULL
  - o   Age int NOT NULL
  - o   size (kg)
- **Orders**
  - o   order id   int NOT NULL PRIMARY KEY,

- o payment id   int FOREIGN KEY
- o price,
- o location id   int FOREIGN KEY
- o option type,
- o food name varchar(255)   NOT NULL
- o order date

- **Business Process**
  - o Customer makes an order at any location
  - o Customers order is acknowledged and processed
  - o Customer order ready and packaged

- **Business Questions**
  - o What are the sales trends across different locations?
  - o How do sales vary by payment method?
  - o What is the popularity of different dining options (dine-in, take-out, online)?
  - o Which menu items are the best sellers?
  - o How do sales patterns change over time (daily, weekly, monthly, seasonally)?

- **Identify the grain, dimensions and fact.**
  - o Fact: Orders
  - o Dimensions: Location, payment method, dining options,