**Entities**

* Payment method – The restaurants accept 3 payment methods (Cash, Debits card, Online payment)
  + Attributes: payment\_id, payment\_type, Amount, payment date
* Locations – Fufu Republic has multiple outlets nationwide.
  + Attributes: Location id, IP address, city, state,
* Dining options – Dine-in, take-out, online
  + Attributes: Location id, Option type
* Stock levels – Manage stock levels efficiently, reducing waste and ensuring availability.
  + Attributes: Type of stock, Age, size (kg)
* Choice of food – Food items vary based on locations
  + Attributes: Food name, Location id, price, weight
* Orders -
  + Attributes: order id, price, location id, option type, food name, order date

**Relationships**

* **Payment Method**:
  + A restaurant accepts multiple payment methods.
  + **payment-method (1:m)** is accepted by **Orders**.
* **Locations**:
  + Fufu Republic has multiple outlets nationwide.
  + **location (1:m)** has **Dining Options**.
* **Dining Options**:
  + Each location offers several dining options.
  + **dining-options (1:m)** is associated with **Orders**.
* **Stock Levels**:
  + Each location manages stock levels efficiently.
  + **stock-levels (1:1)** is monitored for each **Location**.
* **Choice of Food**:
  + Food items vary based on location.
  + **choice-of-food (m:1)** is linked to **Locations**.
* **Orders**:
  + Each order can include multiple food items and is linked to one payment method.
  + **orders (m:1)** is placed at **Locations**.
  + **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**
  + payment\_id : int NOT NULL PRIMARY KEY,
  + payment\_type varchar(255)  NOT NULL
  + Amount
  + payment date
* **Locations**
  + Location id int NOT NULL PRIMARY KEY,
  + IP address,
  + City varchar(255)  NOT NULL
  + State varchar(255)  NOT NULL
* **Dining Options**
  + Location id int FOREIGN KEY
  + Option type varchar(255)  NOT NULL
* **Stock Levels**
  + Type of stock varchar(255)  NOT NULL
  + Age int NOT NULL
  + size (kg)
* **Orders**
  + order id int NOT NULL PRIMARY KEY,
  + payment id int FOREIGN KEY
  + price,
  + location id int FOREIGN KEY
  + option type,
  + food name varchar(255)  NOT NULL
  + order date
* **Business Process** 
  + Customer makes an order at any location
  + Customers order is acknowledged and processed
  + Customer order ready and packaged
* **Business Questions** 
  + What are the sales trends across different locations?
  + How do sales vary by payment method?
  + What is the popularity of different dining options (dine-in, take-out, online)?
  + Which menu items are the best sellers?
  + How do sales patterns change over time (daily, weekly, monthly, seasonally)?
* **Identify the grain, dimensions and fact.**
  + Fact: Orders
  + Dimensions: Location, payment method, dining options,