

Restaurant System

A restaurant is a catering establishment where food and drinks are prepared and served according to the guests' choice.

Every restaurant has a name, address, contact phone numbers, and is located in a place characterized by its name and postal code. The restaurant contains multiple tables for serving food, and each table needs to store information about a unique table identifier and the number of seats, i.e., table capacity. Since it's possible to reserve tables in a restaurant, it is necessary to keep track of whether a table is reserved or not. Each reservation is characterized by a unique identifier, reservation date and time, as well as the name under which the corresponding table is reserved. Each table can have multiple reservations, and each reservation is associated with a specific table.

As mentioned before, the main purpose of the restaurant is to serve food and drinks. A dish has a unique identifier, name, price, and a description that provides detailed information about the dish's ingredients. Since a dish can be either vegetarian or non-vegetarian, there should be a flag indicating whether the dish is vegetarian or not. In addition to dishes, drinks have a unique identifier, name, price, and a flag indicating whether the drink is alcoholic or non-alcoholic, along with a description that provides more information about the drink.

The employees in the restaurant are responsible for serving guests, preparing food, and managing the restaurant's operations. Each employee is characterized by a unique ID, first name, last name, contact phone number, home address, and salary. A restaurant can have multiple employees, and each employee works in one restaurant. The employees can be waiters, chefs, bartenders, or managers. Waiters are responsible for serving food, and since guests may come from different nationalities, waiters may be able to speak appropriate foreign languages. Chefs are responsible for food preparation, and they can specialize in different types of dishes (meat dishes, vegetarian dishes, etc.). A chef can specialize in multiple types of dishes. Bartenders assist waiters and are responsible for drinks, and they may have experience with cocktails. The manager is responsible for leading and managing all aspects of the restaurant's business operations, and they have corresponding job duties. Each manager can have multiple job duties.

Guests have access to the menu, which consists of food and drink offerings from the restaurant. The menu has a unique identifier. Each restaurant offers one menu, which can be updated, and it has a corresponding publication date. After guests choose their desired food and drinks, a corresponding order is created, associated with a specific table and waiter. The order is characterized by an order number, issuance time, and a flag indicating whether the order is being processed or if food preparation is in progress. Each order consists of multiple items, which are identified by a code, and include the dish or drink and its quantity.

After processing the order, a bill is issued by the waiter who served the guests. The bill has a unique identifier, issuance time and date, and payment method, either by card or cash.

Guests have the option to rate the respective dishes, and this rating is recorded with a unique identifier, rating date, and the actual rating score. In addition to rating dishes, each restaurant can have multiple reviews, which consist of a unique identifier, rating, date, and a comment that can be left by guests. There can be multiple reviews for a restaurant.