RESTAURANT MANAGEMENT SYSTEM

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RESTAURANT MANAGEMENT SYSTEM:-

A Restaurant Management System is a software solution designed to streamline and automate various operations within a restaurant. Here's a brief introduction to what such a project typically entails.

Introduction to Restaurant Management System Project

A Restaurant Management System is a comprehensive tool that helps restaurant managers and staff efficiently handle daily operations. The primary goal of this system is to enhance the overall customer experience while optimizing the restaurant's internal processes. Key features often include:

1. **Order Management**: Facilitates the process of taking, tracking, and fulfilling customer orders. This can include both dine-in and takeout orders.
2. **Menu Management**: Allows for easy updates and modifications to the menu, including pricing, item descriptions, and availability.
3. **Billing and Payment Processing**: Streamlines the billing process and supports various payment methods, ensuring quick and accurate transaction

4. **Inventory Management**: Helps track stock levels, manage suppliers, and reduce waste by providing real-time inventory updates.
5. **Staff Management**: Assists in scheduling, tracking work hours, and managing payroll for restaurant staff.
6. **Customer Relationship Management (CRM)**: Collects and analyses customer data to improve service and marketing efforts.
7. **Reporting and Analytics**: Generates detailed reports on sales, inventory, and staff performance to aid in decision-making.

Benefits:-

- **Efficiency**: Automates routine tasks, reducing manual effort and errors.
- **Customer Satisfaction**: Enhances the dining experience through faster service and personalized interactions.
- **Cost Management**: Helps control costs by optimizing inventory and reducing waste.
- **Data-Driven Decisions**: Provides insights through analytics, helping managers make informed decisions.

ENTITIES :-

1. Management

- id: Unique identifier for each management staff member.
- first_name: First name of the staff member.
- last_name: Last name of the staff member.
- gender: Gender of the staff member (Male or Female).
- email: Email address of the staff member.
- password: Password for the staff member's account.
- mobile: Mobile number of the staff member.
- address: Address of the staff member.
- role: Role of the staff member (admin, waiter, or cashier).

2. Categories

- id: Unique identifier for each category.
- name: Name of the category.
- status: Status of the category (Enable or Disable).

3. Items

- id: Unique identifier for each item.
- name: Name of the item.
- price: Price of the item.

- category_id: Identifier linking the item to a category.
- status: Status of the item (Enable or Disable).

4. Restaurant Tables

- id: Unique identifier for each table.
- table_number: Number assigned to the table.
- seats: Number of seats at the table.
- status: Status of the table (Available or Occupied).

5. Order Items

- id: Unique identifier for each order item.
- order_id: Identifier linking the order item to an order.
- item_id: Identifier linking the order item to an item.
- quantity: Quantity of the item ordered.
- price: Price of the item ordered.

6. Order Status

- id: Unique identifier for each order.
- table_id: Identifier linking the order to a table.
- user_id: Identifier linking the order to a user (staff member).

- order_date: Date and time when the order was placed.
- status: Status of the order (Pending, Completed, or Cancelled).

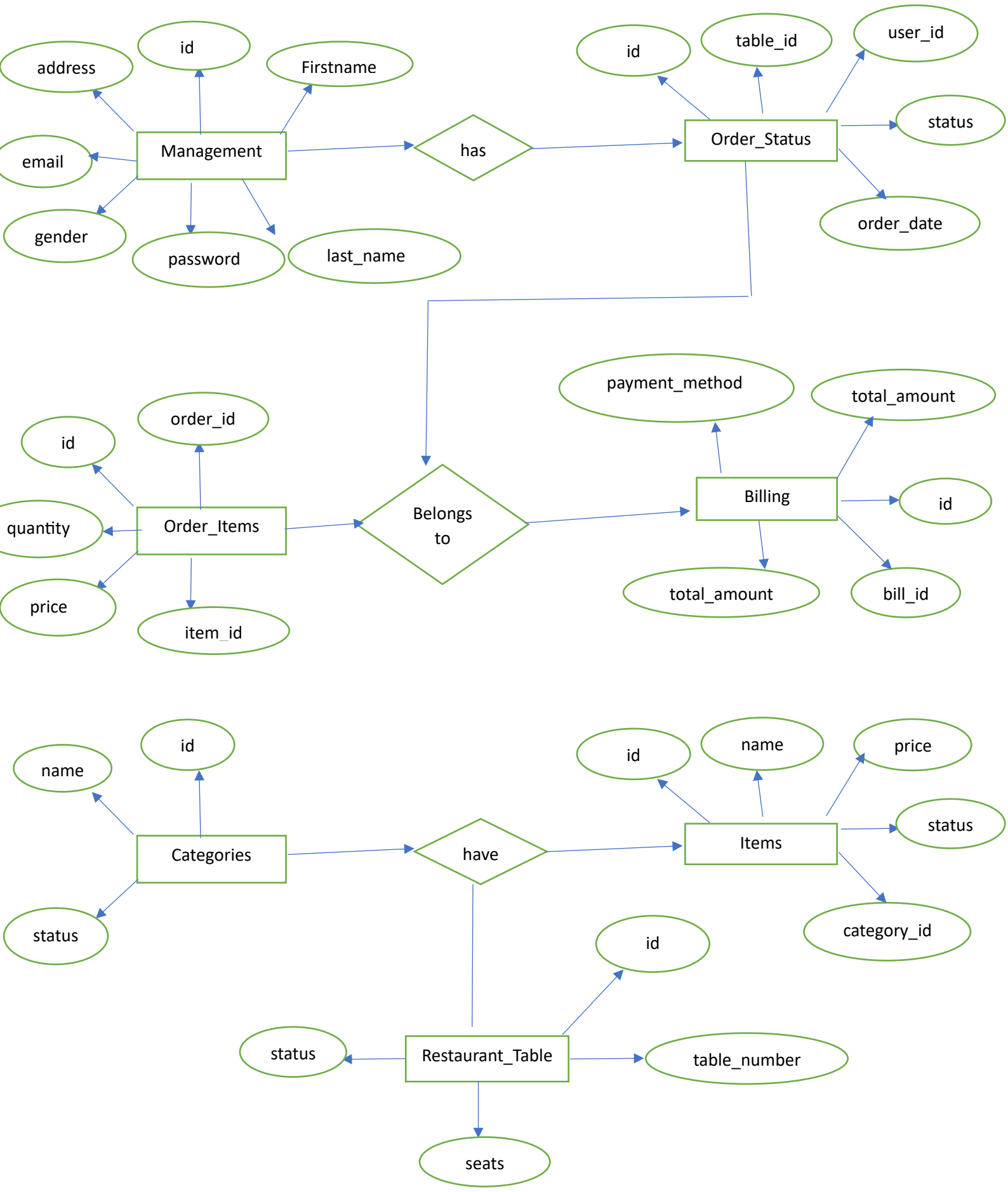
7. Billing

- id: Unique identifier for each billing record.
- bill_id: Identifier linking the billing record to an order.
- payment_method: Method of payment (Cash, Card, or Online).
- total_amount: Total amount of the bill.
- billing_date: Date and time when the billing was done.

RELATIONSHIPS:-

- Categories to Items :One category can have many items.(One-to-Many)
- Restaurant_tables to Order Status: One table can have many orders (One-to-Many)
- Management to Order Status: One user can place many orders (One-to-Many)
- Order Items to Order Status: Many order items belong to one order (Many-to-One)
- Order Items to Items: Many order items can reference one item (Many-to-One)
- Billing to Order Status: One billing record corresponds to one order (One-to-One)

ER DIAGRAM:-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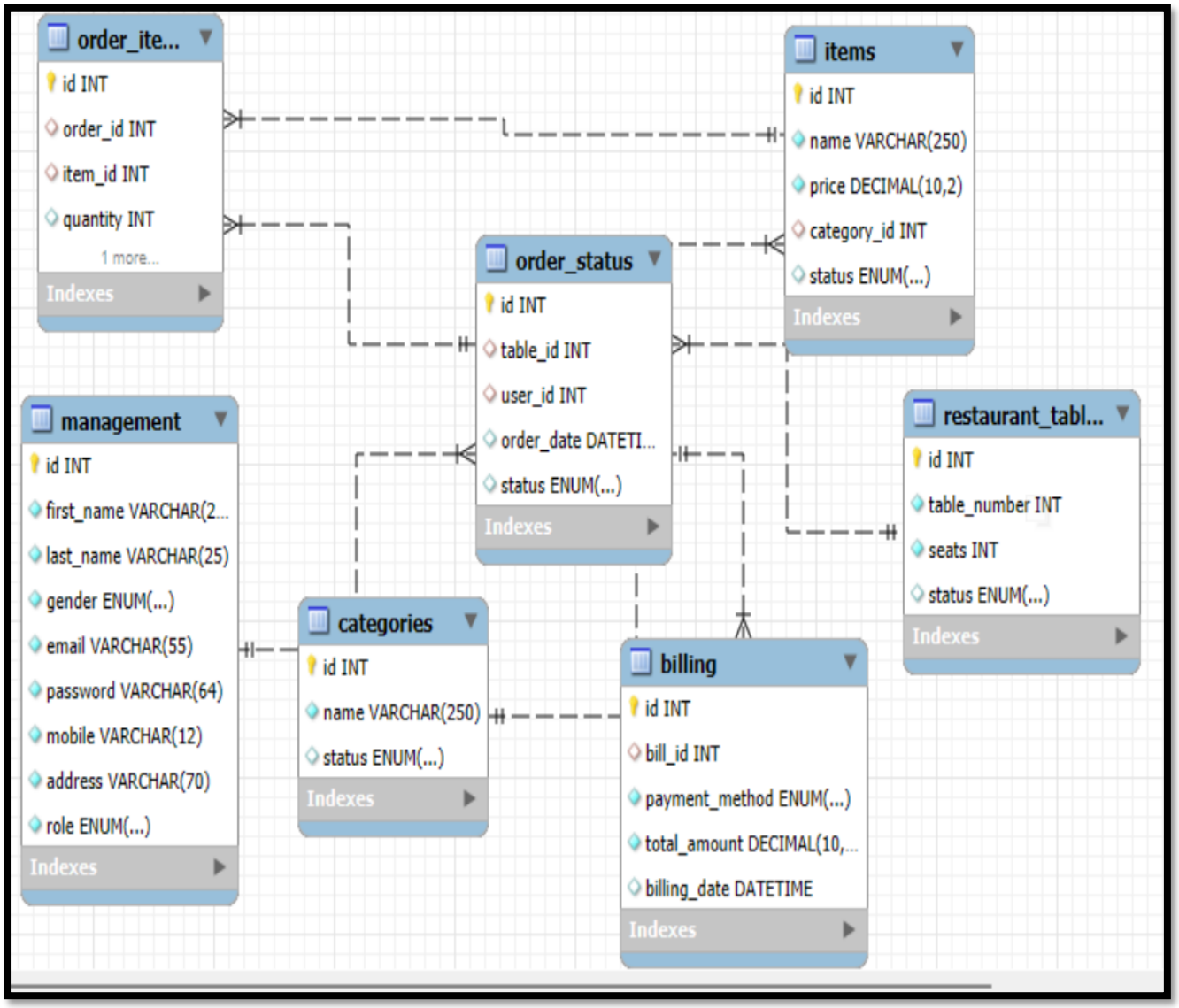
id
Firstname
email
Management
has
gender
password
last_name
id
table_id
user_id
status
Order_Status
order_date
payment_method
total_amount
order_id
id
quantity
Order_Items
Belongs
to
Billing
id
price
item_id
total_amount
bill_id
name
id
Categories
have
status
id
name
price
status
Items
category_id
id
status
Restaurant_Table
table_number
seats

EER DIAGRAM:-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item_id INT
quantity INT
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Indexes
items
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price DECIMAL(10,2)
category_id INT
status ENUM(...)
Indexes
order_status
id INT
table_id INT
user_id INT
order_date DATETI...
status ENUM(...)
Indexes
management
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last_name VARCHAR(25)
gender ENUM(...)
email VARCHAR(55)
password VARCHAR(64)
mobile VARCHAR(12)
address VARCHAR(70)
role ENUM(...)
Indexes
restaurant_tabl...
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table_number INT
seats INT
status ENUM(...)
Indexes
categories
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name VARCHAR(250)
status ENUM(...)
Indexes
billing
id INT
bill_id INT
payment_method ENUM(...)
total_amount DECIMAL(10,...
billing_date DATETIME
Indexes