

Database Project

Restaurant Management System (RMS)

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description for project

The Restaurant Management System (RMS) , designed to streamline and enhance the operations of a restaurant. This system aims to efficiently manage various aspects of restaurant activities, including customer interactions, order processing, employee management, table reservations, delivery logistics , and overall organizational coordination. The system employs a robust database structure to store and manage data related to customers, deliveries, employees, tables, and orders

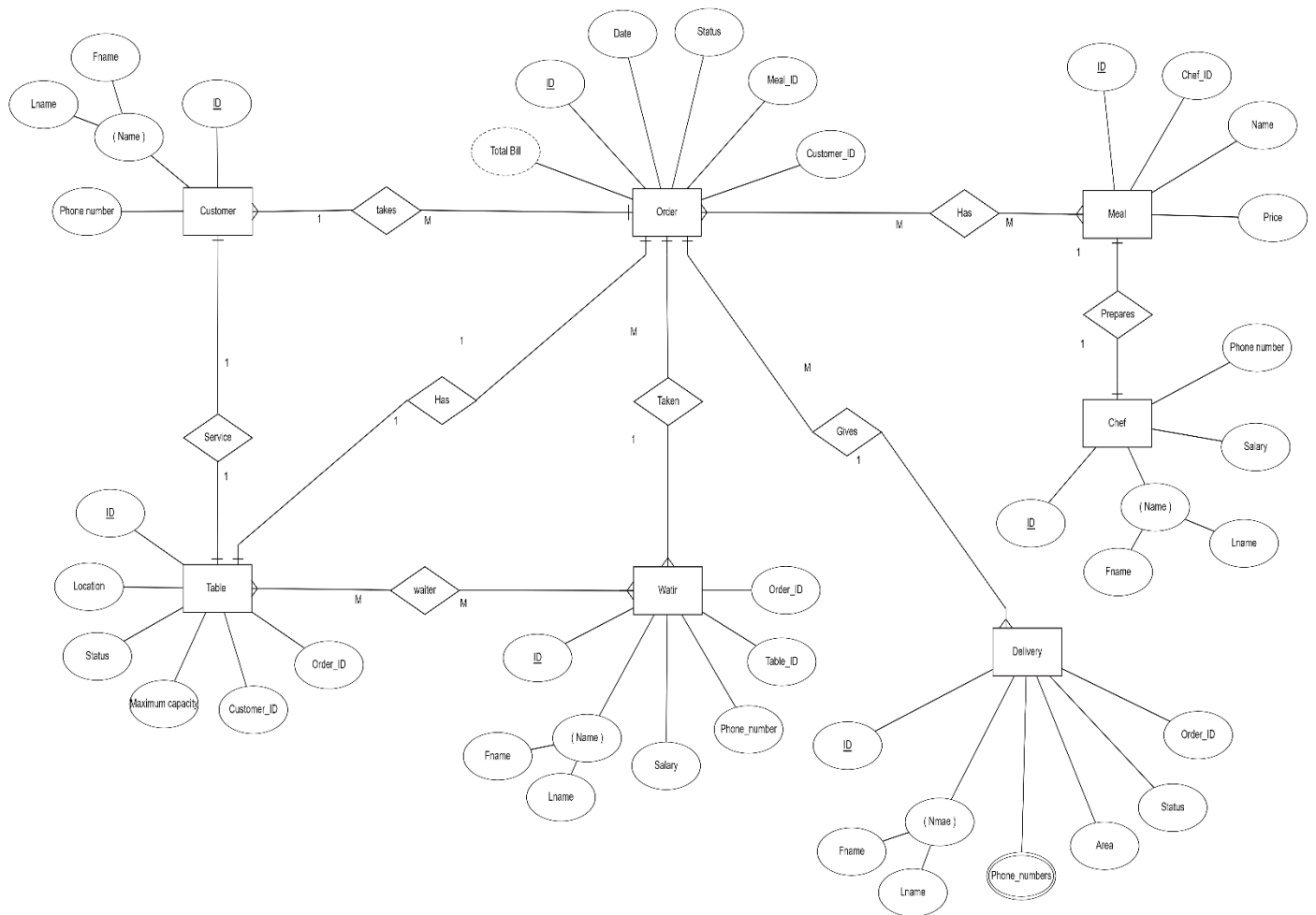
In this project, various relationships exist between entities , Here are some key relationships:

- One customer can place multiple orders, but each order is placed by one customer.
- One delivery can be associated with multiple orders, but each order is associated with one delivery.
- One table can have one order, and each order is associated with one table.
- One chef can handle one meal, and each meal is handled by one chef.
- Each meal can be part of multiple orders, and each order includes multiple meal .

Entities and Attributes:

- Customer (customer_id, name, phone_number)
- Delivery (delivery_id, name, delivery_area, status, phone_number)
- chef (chef_id, name, salary, phone_number)
- Waiter (Waiter_id, name, salary, phone_number)
- Table (table_id, location, capacity, status)
- Meal (meal_id, name, price)
- Order (order_id, order_date, total_Bill)

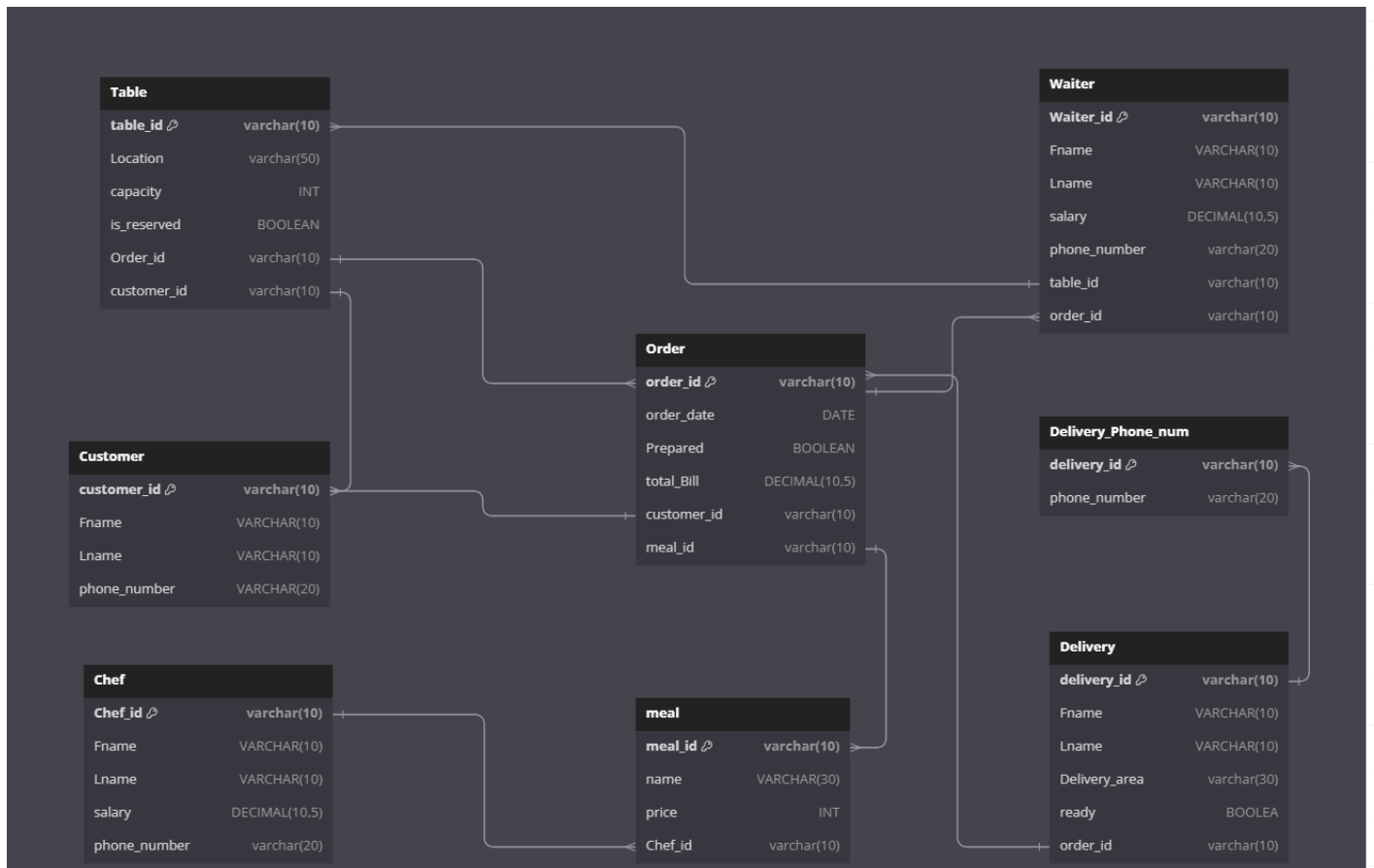
ERD Digram



- Here is the drive link to download project files:

<https://drive.google.com/drive/folders/1oFgnFMD2L-B7Xs88x-KkMAIO4Vj8hXqJ>

relation schema



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DDL (Data Defintion Language)

- Command create for (database and tables)

```
create database restaurant
use restaurant
CREATE TABLE Customer (
    customer_id varchar(10) PRIMARY KEY ,
    Fname VARCHAR(10) not null,
    Lname VARCHAR(10) not null,
    phone_number VARCHAR(20) not null
)
-----
CREATE TABLE Tablee (
    table_id varchar(10) PRIMARY KEY ,
    Locationn varchar(50),
    capacity INT,
    is_reserved BIT not null,
    Order_id int,
    customer_id varchar(10)
)
-----
CREATE TABLE Orderr (
    order_id int IDENTITY(1,1) PRIMARY KEY ,
    order_date DATE not null,
    Prepared TINYINT not null,
    total_Bill DECIMAL(10,3) not null,
    customer_id varchar(10),
    meal_id varchar(10)
)
-----
CREATE TABLE Delivery (
    delivery_id varchar(10) PRIMARY KEY ,
    Fname VARCHAR(10) not null,
    Lname VARCHAR(10),
    Delivery_area varchar(30) not null,
    ready BIT not null,
    order_id int
)
-----
```

```
= CREATE TABLE Delivery_Phone_num (  
    phone_number varchar(20) not null,  
    delivery_id varchar(10) foreign key references Delivery(delivery_id) not null  
)
```

```
= CREATE TABLE Chef (  
    Chef_id varchar(10) PRIMARY KEY ,  
    Fname VARCHAR(10) not null,  
    Lname VARCHAR(10),  
    salary DECIMAL(10,3) not null,  
    phone_number varchar(20)  
)
```

```
= CREATE TABLE meal (  
    meal_id varchar(10) PRIMARY KEY ,  
    meal_name varchar(30) unique not null,  
    price INT not null,  
    Chef_id varchar(10)  
)
```

```
= CREATE TABLE Waiter (  
    Waiter_id varchar(10) PRIMARY KEY ,  
    Fname VARCHAR(10) not null,  
    Lname VARCHAR(10),  
    salary DECIMAL(10,3) not null,  
    phone_number varchar(20) ,  
    table_id varchar(10),  
    order_id int  
)
```

- Command alter for (table , column , constaint)
- Command drop

```
--created this table just to remove it
```

```
CREATE TABLE employee (
  emp_id varchar(10) PRIMARY KEY not null,
  Nameee VARCHAR(10) not null,
  salary DECIMAL(10,3) not null,
)
drop table employee
```

```
alter table orderr alter column Prepared BIT;--modify data type for this column (nested alter)
```

```
alter table Tablee add constraint is_reserved DEFAULT '0' FOR is_reserved;--ADD CONSTRAINT (DEFAULT) for this column
```

```
alter table orderr add constraint Prepared DEFAULT '0' FOR Prepared;--ADD CONSTRAINT (DEFAULT) for this column
```

```
alter table Delivery add constraint ready DEFAULT '0' FOR ready;--ADD CONSTRAINT (DEFAULT) for this column
```

```
alter table tablee add foreign key (customer_id) references customer(customer_id);
alter table tablee add foreign key (order_id) references orderr(order_id);
alter table Orderr add foreign key (customer_id) references customer(customer_id)
alter table Orderr add foreign key (meal_id) references meal(meal_id)
alter table Delivery add foreign key (order_id) references orderr(order_id)
alter table meal add foreign key (chef_id) references chef(chef_id)
alter table waiter add foreign key (table_id) references tablee(table_id)
alter table waiter add foreign key (order_id) references orderr(order_id)
```

DML (Data Manipulation Language)

- Command insert

```
insert into Customer
values('1','ahmed','hamouda','01158202830'),('2','hosam','hamouda','01058509830'),('3','habiba','mostafa','01525688792')
=====

insert into Chef
values('101','mohamed','kareem','4500.50','01258973050'),('102','mahmoud','hazem','4000','01587935015'),('103','ali','atef','6000.100','01123698750')
=====

insert into meal
values('1','pizza',150,'101'),('2','Hamburger',100,'102'),('3','ric',220,'103')
=====

insert into Orderr
values('1-12-2023','1',250,'1','1'),('2-12-2023','1',550,'2','2')
=====

insert into Delivery
values('1','yousef','tarek','maadi_st9','1','4'),('2','Khiry','eslam','Giza','1','9')
=====

insert into Delivery_Phone_num
values('01254879012','1'),('01556982250','2')
=====

insert into Tablee
values('2','floor_2',4,1,'4','1'),('1','floor_1',5,0,null,null)
=====

insert into Waiter
values('1','khalid','said',3000,'01254845701','1','13'),('2','hassan','gamal',2900,'01112589632','2',4)
=====
```


- Command (delete and update)

```
update Delivery  
set Delivery_area='madenty'  
where Delivery_area='Giza';
```

```
UPDATE Chef  
SET salary = 5600  
WHERE Chef_id = 102;
```

```
delete from meal  
where meal_name='Sushi'
```

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