DATABASE FOR RESTAURANT TABLE   BOOKING

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Introduction :

                In this project we create a database for Restaurant Table Booking which will be useful for Restaurants as well as customers so that they can feel comfortable without any difficulty when they arrive Restaurant. This database is done on the basis of restaurant table booking app. In this database Customers can book there Table before they arrive to Restaurant through the app and can also Order the starters at the same time to have there starters Immediately when they arrive. In this database customer can reserve tables as many as they want.

 Tables created for database:

 Restaurant

 Manager

 Customer

 Owner

 Order

 Table

 Table Status

 Menu

 User

 Account Details

 Bill

  Entities and Attributes:

Restaurant(Restaurant\_name,Location,Contact,Opening&Closing\_time,Details)

Manager(Manager\_id,First\_name,Last\_name,Contact,Address)

Customer(Customer\_id,First\_name,Last\_name,Phone\_no,Email\_id)

Owner(Owner\_id,First\_name,Last\_name,Contact,Restaurant\_name)

Order(Order\_id,Order\_date,Price)

Table(Table\_no,Details)

Table\_status(Table\_id,Status)

Menu (Menu\_id, Item\_name,Type,Category,Price)

User(User\_id,First\_name,Last\_name,Password)

Account\_datails(Account\_id,Card\_holder,Expiry\_date,CVV)

Bill(Bill\_id,Order\_id,Bill\_date,Amount,Discount)

 Er DIAGRAM:

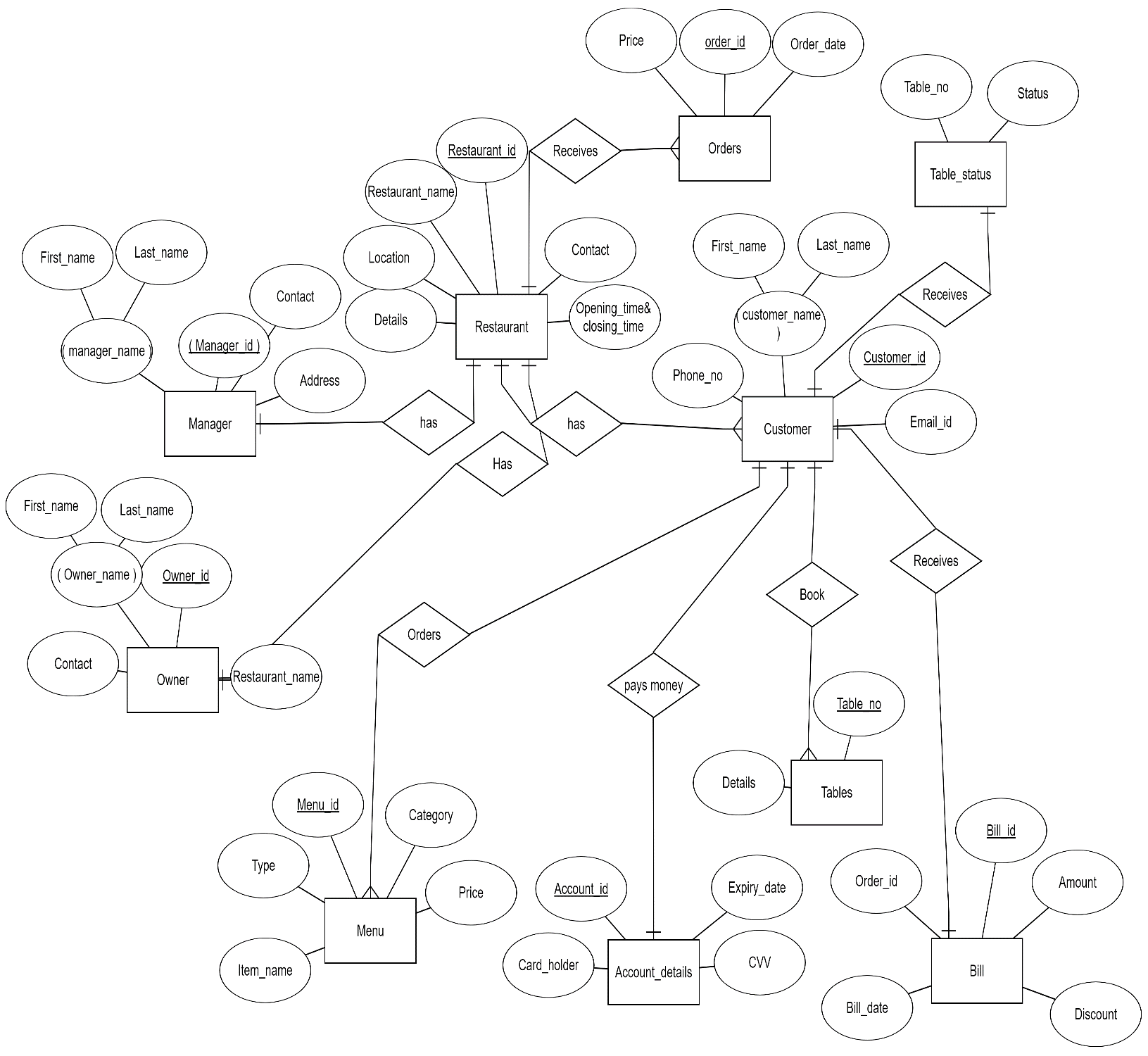


Table schema :

biLL

CREATE TABLE Bill

(

  Bill\_date DATETIME NOT NULL,

  Order\_id INT NOT NULL,

  Bill\_id INT NOT NULL,

  Amount INT NOT NULL,

  Discount INT NOT NULL,

  PRIMARY KEY (Bill\_id)

);

ACCOUNT DETAILS

CREATE TABLE Account\_details

(

  Card\_holder VARCHAR(50) NOT NULL,

  Expiry\_date DATETIME NOT NULL,

  Account\_id INT NOT NULL,

  CVV INT NOT NULL,

  PRIMARY KEY (Account\_id)

);

OWNER

CREATE TABLE Owner

(

  Owner\_id INT NOT NULL,

  Contact INT NOT NULL,

  Restaurant\_name VARCHAR(50) NOT NULL,

  First\_name VARCHAR(50) NOT NULL,

  Last\_name VARCHAR(50) NOT NULL,

  PRIMARY KEY (Owner\_id)

);

TABLE\_STATUS

CREATE TABLE Table\_status

(

  Table\_id INT NOT NULL,

  Status VARCHAR(50) NOT NULL,

  PRIMARY KEY (Table\_id)

);

RESTAURANT

CREATE TABLE Restaurant

(

  Details VARCHAR(50) NOT NULL,

  Location VARCHAR(50) NOT NULL,

  Restaurant\_name VARCHAR(50) NOT NULL,

  Contact INT NOT NULL,

  Opening\_time&\_closing\_time DATETIME NOT NULL,

  Owner\_id INT NOT NULL,

  PRIMARY KEY (Restaurant\_name),

  FOREIGN KEY (Owner\_id) REFERENCES Owner(Owner\_id)

);

MANAGER

CREATE TABLE Manager

(

  Contact INT NOT NULL,

  Address VARCHAR(50) NOT NULL,

  Last\_name VARCHAR(50) NOT NULL,

  First\_name VARCHAR(50) NOT NULL,

  Restaurant\_id INT(50) NOT NULL,

  FOREIGN KEY (Restaurant\_id) REFERENCES Restaurant(Restaurant\_id)

);

USER

CREATE TABLE User

(

  User\_id INT NOT NULL,

  Password INT NOT NULL,

  First\_name VARCHAR(50) NOT NULL,

  Last\_name VARCHAR(50) NOT NULL,

  Restaurant\_id INT NOT NULL,

  Table\_id INT NOT NULL,

  Bill\_id INT NOT NULL,

  Account\_id INT NOT NULL,

  PRIMARY KEY (User\_id),

  FOREIGN KEY (Restaurant\_id) REFERENCES Restaurant(Restaurant\_id),

  FOREIGN KEY (Table\_id) REFERENCES Table\_status(Table\_id),

  FOREIGN KEY (Bill\_id) REFERENCES Bill(Bill\_id),

  FOREIGN KEY (Account\_id) REFERENCES Account\_details(Account\_id)

);

CUSTOMER

CREATE TABLE Customer

(

  Customer\_id INT NOT NULL,

  Phone\_no INT NOT NULL,

  Email\_id VARCHAR(50) NOT NULL,

  First\_name VARCHAR(50) NOT NULL,

  Last\_name VARCHAR(50) NOT NULL,

  Restaurant\_id INT NOT NULL,

  Bill\_id INT NOT NULL,

  PRIMARY KEY (Customer\_id),

  FOREIGN KEY (Restaurant\_id) REFERENCES Restaurant(Restaurant\_id),

  FOREIGN KEY (Bill\_id) REFERENCES Bill(Bill\_id)

);

ORDER

CREATE TABLE Order

(

  Order\_date DATETIME NOT NULL,

  order\_id INT NOT NULL,

  Price INT NOT NULL,

  Restaurant\_id INT NOT NULL,

  PRIMARY KEY (order\_id),

  FOREIGN KEY (Restaurant\_Id) REFERENCES Restaurant(Restaurant\_id)

);

TABLE

CREATE TABLE Table

(

  Details VARCHAR(50) NOT NULL,

  Table\_no INT NOT NULL,

  Customer\_id INT NOT NULL,

  PRIMARY KEY (Table\_no),

  FOREIGN KEY (Customer\_id) REFERENCES Customer(Customer\_id)

);

MENU

CREATE TABLE Menu

(

  Menu\_id INT NOT NULL,

  Type INT NOT NULL,

  Category VARCHAR(50) NOT NULL,

  Item\_name VARCHAR(50) NOT NULL,

  Price INT NOT NULL,

  Customer\_id INT NOT NULL,

  User\_id INT NOT NULL,

  PRIMARY KEY (Menu\_id),

  FOREIGN KEY (Customer\_id) REFERENCES Customer(Customer\_id),

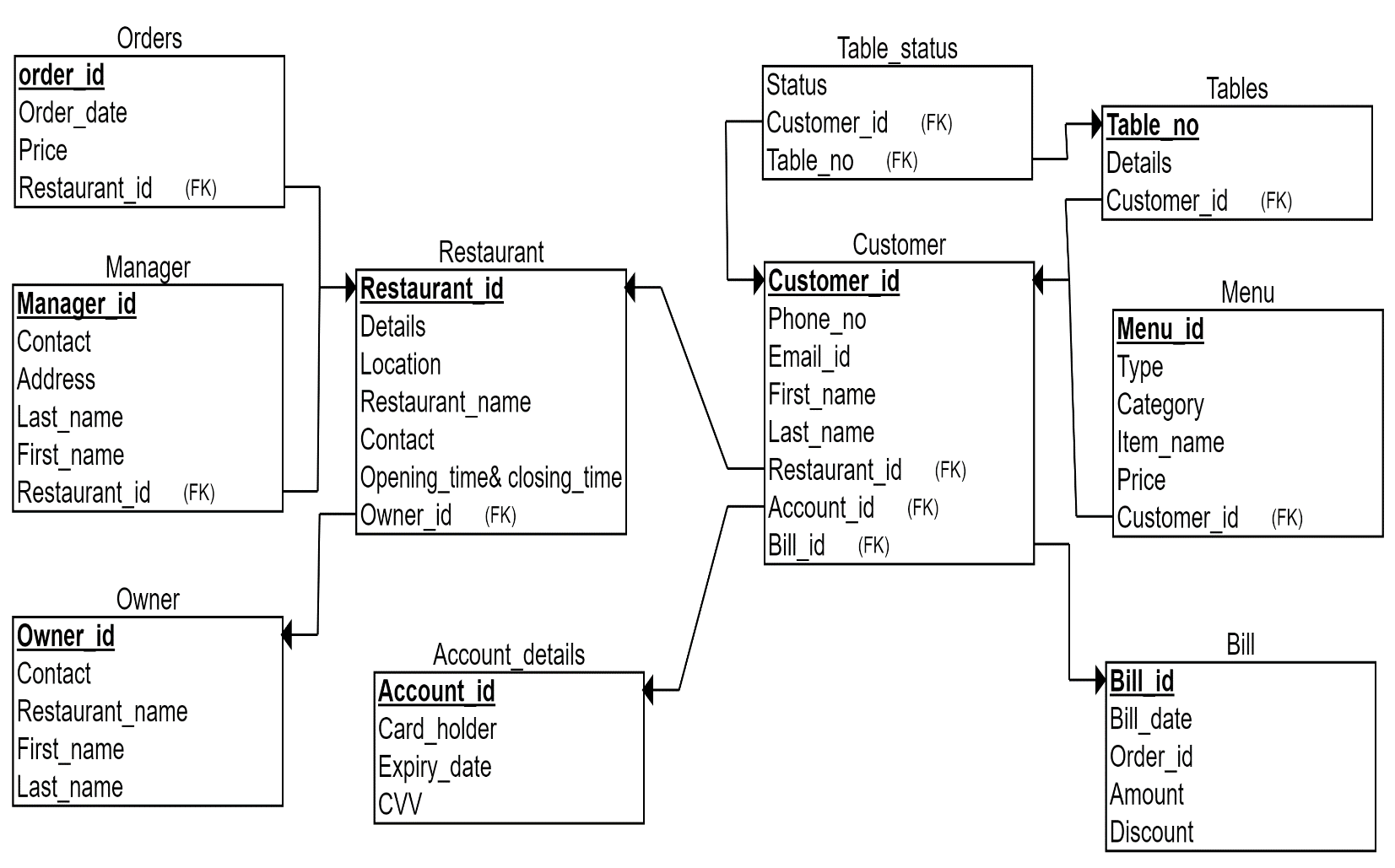
  FOREIGN KEY (User\_id) REFERENCES User(User\_id)

);

 Translation of ER diagram to Relational Database:

* Convert all the Entities in the diagram to tables
* All single valued attributes of an entity are converted to a column of the table
* Key attribute in the ER diagram becomes the Primary key of the table.
* Declare the foreign key column, if applicable
* One can ignore derived attribute, since it can be calculated at any time
* Any multi-valued attributes are converted into new table.
* Any composite attributes are merged into same table as different columns.

 RELATIONAL SCHEMA:



Conversion Process:

|  |  |  |
| --- | --- | --- |
| **Entity/Relationship** | **Table** | **Remarks** |
| Restaurant | Restaurant | It is an entity and has the same name in relational database |
| Owner | Owner | It is an entity and has the same name in relational database |
| Manager | Manager | It is an entity and has the same name in relational database |
| Customer | Customer | It is an entity and has the same name in relational database |
| Order | Order | It is an entity and has the same name in relational database |
| Table | Table | It is an entity and has the same name in relational database |
| Table\_status | Table\_status | It is an entity and has the same name in relational database |
| User | User | It is an entity and has the same name in relational database |
| Menu | Menu | It is an entity and has the same name in relational database |
| Bill | Bill | It is an entity and has the same name in relational database |
| Account\_Details | Account\_Details | It is an entity and has the same name in relational database |
| Receives |  | It is a 1-N relationship between Restaurant and Orders |
| Has |  | It is a 1-N relationship between Restaurant and Customers and also between Restaurant and Users |
| Orders |  | It is a 1-N relationship between Customer and Menu and also between User and Menu |
| Can Book |  | It is a 1-N relationship between Customer and Tables |
| Has |  | It is a 1-1 relationship between Restaurant and Manager and also  Between Restaurant and Owner |
| Receives |  | It is a 1-1 relationship between User and Table status and also  Customer and Bill |
| Pay Money |  | It is a 1-1 relationship between User and Account Details |

Functional DEPENDENCIES:

Restaurant

PRIMARY KEY Restaurant\_Id

Restaurant\_id->Restaurant\_name

Restaurant\_id->Owner\_id

Restaurant\_id->location

Restaurant\_id->contact

Restaurant\_id->Manager\_id

Restaurant\_id-> ( Restaurant\_name, Location, Contact,Details, Opening\_time & closing\_time, Owner\_id)

Order

Order\_id Primary key

Order\_id->Bill\_id

Order\_id->order\_date

Order\_id->Price

Oder\_id-> (Order\_date, Price, Bill\_id)

Bill

bill\_id Primary key

Order foreign key references order(order\_id)

Bill\_id->Amount

Bill\_id->bill\_date

Bill\_id->Order\_id

Bill\_id->Discount

Bill\_id-> ( Amount, bill\_date, Order\_id, Discount)

Owner

Owner\_id primary\_key

Owner\_id->Restaurant\_name

Owner\_id->Contact

Owner\_id->Owner\_name

Owner\_id->First\_name

Owner\_id->Last\_name

Owner\_id-> (Restaurant\_name, Contact, Owner\_name, First\_name, Last\_name)

Account details

Account\_id primary key

Account\_id->Card\_holder

Account\_id->CVV

Account\_id->Expiry\_date

Account\_id->Customer\_name

Account\_id-> (Card\_holder, CVV, Expiry\_date, Customer\_name)

Menu

Menu\_id primary key

Menu\_id->item\_name

Menu\_id->Table\_id

Menu\_id->Type

Menu\_id->Category

Menu\_id->Price

Menu\_id-> (Item\_name, Table\_id, Type, Category, Price)

Table status

Table\_no primary key

Table\_no->Table\_no

Table\_no->Status

Table\_no-> (Table\_no, Status)

Manager

Manager\_id primary key

Manager\_id->Manager\_name

Manager\_id->First\_name

Manager\_id->Last\_name

Manager\_id->Contact

Manager\_id->Address

Manager\_id->Restaurant\_name

Manager\_id-> (Manager\_name, First\_name, Last\_name, Contact, Address, Restaurant\_name)

TABLES

Table\_no Primary key

Table\_no->Table\_no

Table\_no->Details

Table\_no-> (Table\_no, Details)

Customer

Customer\_id primary key

customer\_id->Menu\_id

Customer\_id->Customer\_name

Customer\_id->First\_name

Customer\_id->Last\_name

Customer\_id->contact

Customer\_id->Email

Customer\_id->Table\_id

Customer\_id-> (Menu\_id, Customer\_name, First\_name, Last\_name, contact, Email, Table\_id)