



DATEBASE PROJECT PHASE 1

Team_Id 105



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FCIS
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Restaurant Database Project

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Project description:

We need to create erd and schema designs based on the following requirements of the restaurant database:

- Restaurant requirements can be handled by the help of the supplier
- We store each supplier's id, name, and phone
- Suppliers supply different ingredients to the restaurant
- Each ingredient has id, name, stored quantity, and derived total quantity which can be calculated from old stored quantity + imported quantity from supplier
- Suppliers supply ingredients at specific time and with specific price
- Every meal has name, price and it consists of different ingredients
- Customer has name, customer_number, address which consists of city and street and phone
- Customer makes order at which order has specific time, order_number and derived total price which is calculated from (quantity * price of each meal). quantity and price of each meal are found in order details. Order details also have id. Each order detail consists of meals.
- we have many employees who works in the restaurant where each employee has ssn, phone, id, first name, last name, B_date, salary, workhour, job name and derived age which can be calculated from B_date.
- Each employee works for specific department at which each department has department_id and department_name

Project design:

Relations:

1. Supplier & ingredients

Each supplier supplies many ingredients to the restaurant while each ingredient is supplied by one supplier, so the relation is:

Supplier	ingredients
1	N
1	1
1	N

2. Ingredients & meals

Each meal consists of many ingredients and each ingredient contributes in many meals so the relation is:

Ingredient	meal
1	M
N	1
M	N

3. Order & order details

Each order has many details and each detail is included in one order, so the relation is:

Order	order details
1	M
1	1
1	M

4. Order & Employee

Each employee takes many orders while each order is taken by one employee, so the relation is:

Employee	order
1	M
1	1
1	M

5. Employee & department

Each Employee works at one department and each department has many employees who worked at it so the relation is:

Employee	department
1	1
M	1
M	1

6. Customer & order

Each customer makes many orders and each order is made by one customer, so the relation is

Customer	order
1	N
1	1
1	N

7. Meals and order details

Order details consist of many meals and every meal has many order details so the relation is:

Meals	order details
1	M
N	1
N	M

- Since the relation between supplier and ingredients is one to many so a foreign key will be added to ingredient table and this will refer to primary key in supplier table

Name	<u>id</u>	stored_quantity	Supplier_id	imported_quantity	price
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Foreign key

- Since the relation between ingredients and meals is many to many so a new table will be created and a foreign key will be taken from each table and both of them will be primary key

<u>ing_id</u>	<u>Meal_Name</u>
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- Since order details is weak entity as it totally depends on orders so there will be a partial key in order details table and foreign key from order table and both of them will be primary key

<u>Order_details_id</u>	<u>order_number</u>	Quantity	price
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- Since the relation between order details and meals is many to many so a new table will be created and a foreign key will be taken from each table and all of them will be primary key

<u>Order_details_id</u>	<u>Order_number</u>	<u>Meal_name</u>
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- Since the relation between employee and order is one to many also the relation between customer and order is one to many so foreign keys will be added to order table and this will refer to primary key in employee table

time	number	original	delivery	Employee_id	Customer_id	Delivery_id
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Foreign keys

- Since the relation between Employee and department is one to many so a foreign key will be added to Employee and this will refer to primary key in department table

Name	job_name	Phone	<u>employee_id</u>	B_Date	department_id	Salary	SSN
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Foreign keys