



Ice Cream Shop Management System

A SQL PROJECT
FALL 2022
INTRODUCTION TO DATABASE [SECTION- H]
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PROJECT TITLE : AN ICE CREAM SHOP MANAGEMENT SYSTEM

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CASE STUDY

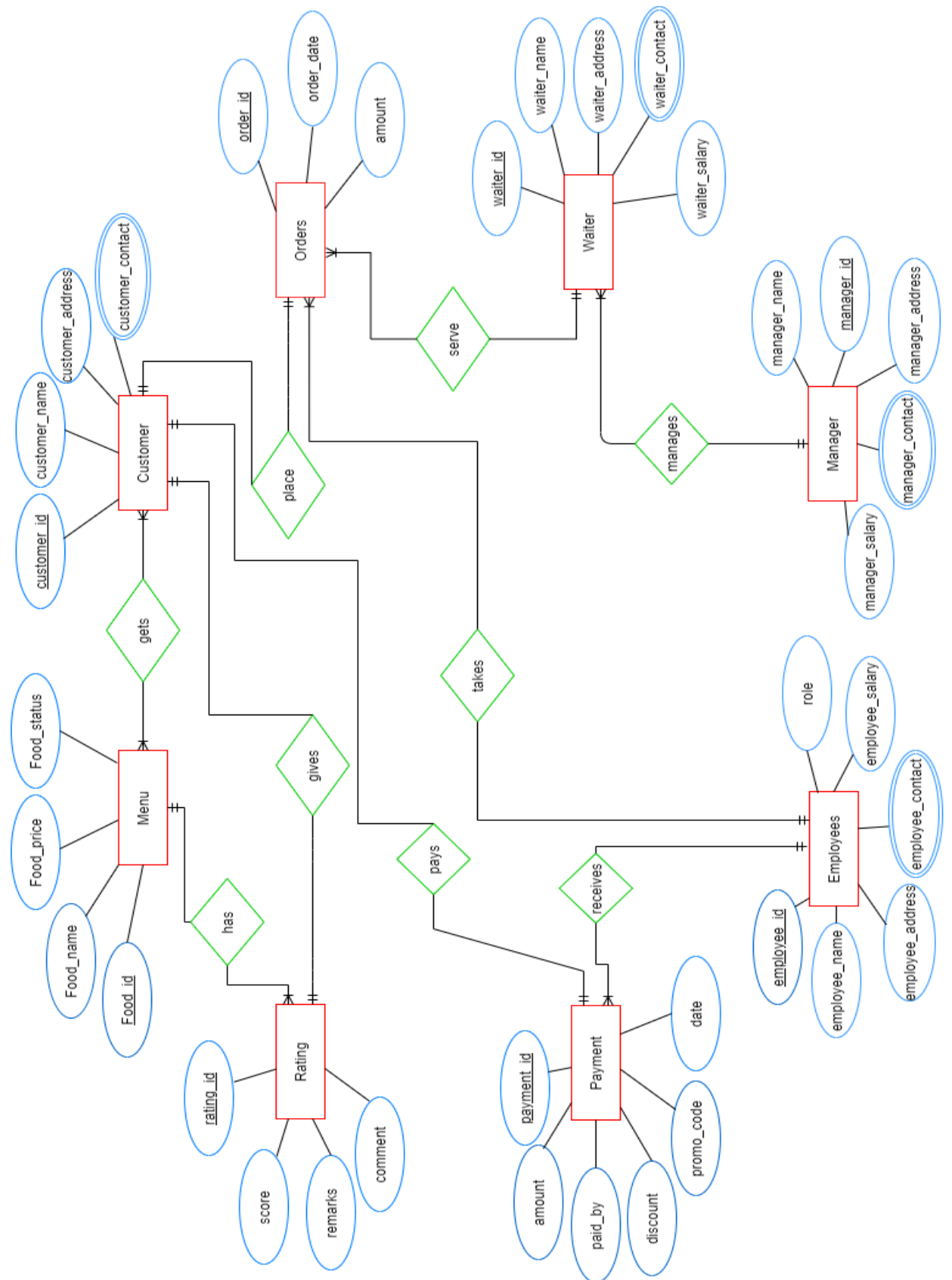
Introduction:

A method for systematically managing an ice-cream shops daily commodities is called an ice-cream shop management system. This system's primary benefit is that it makes managing the business a lot easier. Reduced manual labor and increased workplace productivity can execute through this management system. The everyday flow of services and orders is aided by this method.

Scenario Description:

Ice-cream shop management system offers an efficient working system for the shop. The shop has Menu in their system where food_name, food_id, Price, and the status of a food is stored. A customer can request menu details. One customer can submit a single order. A customer is identified as customer_id, customer_name, customer_address, and contact_number. However, customers can give ratings on the menu. Rating has unique rating_id, score, remarks and comment. Orders details are associated with order_id, order_date, amount, total_amount and order_details. When a customer completes an order, then they process their payments like payment_id, amount, paid_by, discount, and date. An ice_cream shop management system has many waiters to serve food. The attributes for the waiters are waiter_id, waiter_name, waiter_address, phone_number, salary, and role. Each order should produce one serve, and each serve is conducted by one waiter. Also, there are some employees to run the shops other commodities. Their attributes are employee_id, employee_name, employee_address, phone_number, salary and their role. The waiters and employees work under a manager and the managers name, address, phone_number and salary is also stored in the system.

ER DIAGRAM



NORMALIZATION

Gets (Food_id, Food_name, Food_status, Price, Customer_id, Customer_name, Customer_address, Customer_contact)

1NF: Customer_contact Multivalued Attribute

2NF: Food_id, Food_name, Food_status, Price

Customer_id, Customer_name, Customer_address, Customer_contact

CF_id, Customer_id, Food_id

3NF: There is no Transitive Dependency.

Food_id, Food_name, Food_status, Price

Customer_id, Customer_name, Customer_address, Customer_contact

CF_id, Customer_id, Food_id

TABLE:

Food_id, Food_name, Food_status, Price

Customer_id, Customer_name, Customer_address, Customer_contact

CF_id, Customer_id, Food_id

Place (Order_id, Order_date, Amount, Customer_id, Customer_name, Customer_address, Customer_contact)

1NF: Customer_contact Multivalued Attribute

2NF: Order_id, Order_date, Amount

Customer_id, Customer_name, Customer_address, Customer_contact,
Order_id

3NF: There is no Transitive Dependency.

Order_id, Order_date, Amount, Customer_id

Customer_id, Customer_name, Customer_address, Customer_contact,
Order_id

TABLE:

Order_id, Order_date, Amount, Customer_id

Customer_id, Customer_name, Customer_address, Customer_contact,
Order_id

Serve (Order_id, Order_date, Amount, Waiter_id, Waiter_name,
Waiter_address, Waiter_contact, Waiter_salary)

1NF: Waiter_contact Multivalued Attribute

2NF: Order_id, Order_date, Amount, Waiter_id

Waiter_id, Waiter_name, Waiter_address, Waiter_contact,
Waiter_salary

3NF: There is no Transitive Dependency.

Order_id, Order_date, Amount, Waiter_id

Waiter_id, Waiter_name, Waiter_address, Waiter_contact,
Waiter_salary

TABLE:

Order_id, Order_date, Amount, Waiter_id

Waiter_id, Waiter_name, Waiter_address, Waiter_contact,
Waiter_salary

Manages (Manager_id, Manager_name, Manager_address, Manager_salary,
Manager_contact, Waiter_id, Waiter_name, Waiter_address, Waiter_contact,
Waiter_salary)

1NF: Manager_contact, Waiter_contact Multivalued Attribute

2NF: Manager_id, Manager_name, Manager_address, Manager_salary,
Manager_contact Waiter_id, Waiter_name, Waiter_address,
Waiter_contact, Waiter_salary, Manager_id

3NF: There is no Transitive Dependency.

Manager_id, Manager_name, Manager_address, Manager_salary,
Manager_contact

Waiter_id, Waiter_name, Waiter_address, Waiter_contact,
Waiter_salary, Manager_id

TABLE:

Manager_id, Manager_name, Manager_address, Manager_salary,
Manager_contact

Waiter_id, Waiter_name, Waiter_address, Waiter_contact,
Waiter_salary, Manager_id

Takes (Order_id, Order_date, Amount, Employee_id, Employee_name,
Employee _address, Employee_contact, Employee_salary, role)

1NF: Employee_contact Multivalued Attribute

2NF: Order_id, Order_date, Amount, Employee_id

Employee_id, Employee_name, Employee _address, Employee_contact,
Employee_salary, role

3NF: There is no Transitive Dependency.

Order_id, Order_date, Amount, Employee_id

Employee_id, Employee_name, Employee _address, Employee_contact,
Employee_salary, role

TABLE:

Order_id, Order_date, Amount, Employee_id

Employee_id, Employee_name, Employee _address, Employee_contact,
Employee_salary, role

Receives (Payment_id, Amount, Paid_by, Discount, Promo_code, Date,
Employee_id, Employee_name, Employee _address, Employee_contact,
Employee_salary, role)

1NF: Employee_contact Multivalued Attribute

2NF: Payment_id, Amount, Paid_by, Discount, Promo_code, Date,
Employee_id

Employee_id, Employee_name, Employee _address, Employee_contact,
Employee_salary, role

3NF: There is no Transitive Dependency.

Payment_id, Amount, Paid_by, Discount, Promo_code, Date,
Employee_id

Employee_id, Employee_name, Employee _address, Employee_contact,
Employee_salary, role

TABLE:

Payment_id, Amount, Paid_by, Discount, Promo_code, Date

Employee_id, Employee_name, Employee _address, Employee_contact,
Employee_salary, role

Pays (Payment_id, Amount, Paid_by, Discount, Promo_code, Date,
Customer_id, Customer_name, Customer_address, Customer_contact)

1NF: Customer_contact Multivalued Attribute

2NF: Payment_id, Amount, Paid_by, Discount, Promo_code, Date,
Customer_id

Customer_id, Customer_name, Customer_address, Customer_contact

3NF: There is no Transitive Dependency.

Payment_id, Amount, Paid_by, Discount, Promo_code, Date,
Customer_id

Customer_id, Customer_name, Customer_address, Customer_contact

TABLE:

Payment_id, Amount, Paid_by, Discount, Promo_code, Date,
Customer_id

Customer_id, Customer_name, Customer_address, Customer_contact

Gives (Rating_id, Score, Remarks, Comment, Customer_id, Customer_name,
Customer_address, Customer_contact)

1NF: Customer_contact Multivalued Attribute

2NF: Rating_id, Score, Remarks, Comment, Customer_id

Customer_id, Customer_name, Customer_address, Customer_contact

3NF: There is no Transitive Dependency.

Rating_id, Score, Remarks, Comment, Customer_id

Customer_id, Customer_name, Customer_address, Customer_contact

TABLE:

Rating_id, Score, Remarks, Comment, Customer_id

Customer_id, Customer_name, Customer_address, Customer_contact

Has (Food_id, Food_name, Food_status, Price, Rating_id, Score, Remarks, Comment)

1NF: No Multivalued Attribute

2NF: Food_id, Food_name, Food_status, Price

Rating_id, Score, Remarks, Comment, Food_id

3NF: There is no Transitive Dependency.

Food_id, Food_name, Food_status, Price

Rating_id, Score, Remarks, Comment, Food_id

TABLE:

Food_id, Food_name, Food_status, Price

Rating_id, Score, Remarks, Comment, Food_id

TOTAL TABLE:

1. Food_id, Food_name, Food_status, Price
- ~~2. Customer_id, Customer_name, Customer_address, Customer_contact~~
3. CF_id, Customer_id, Food_id
- ~~4. Order_id, Order_date, Amount~~
5. Customer_id, Customer_name, Customer_address, Customer_contact, Order_id
6. Order_id, Order_date, Amount, Waiter_id
- ~~7. Waiter_id, Waiter_name, Waiter_address, Waiter_contact, Waiter_salary~~
8. Manager_id, Manager_name, Manager_address, Manager_salary, Manager_contact
9. Waiter_id, Waiter_name, Waiter_address, Waiter_contact, Waiter_salary, Manager_id
10. Order_id, Order_date, Amount, Employee_id
11. Employee_id, Employee_name, Employee _address, Employee_contact, Employee_salary, role
- ~~12. Payment_id, Amount, Paid_by, Discount, Promo_code, Date~~
- ~~13. Employee_id, Employee_name, Employee _address, Employee_contact, Employee_salary, role~~
14. Payment_id, Amount, Paid_by, Discount, Promo_code, Date, Customer_id
- ~~15. Customer_id, Customer_name, Customer_address, Customer_contact~~
16. Rating_id, Score, Remarks, Comment, Customer_id
- ~~17. Customer_id, Customer_name, Customer_address, Customer_contact~~
- ~~18. Food_id, Food_name, Food_status, Price~~
19. Rating_id, Score, Remarks, Comment, Food_id

FINAL TABLE:

1. Food_id, Food_name, Food_status, Price
2. CF_id, Customer_id, Food_id
3. Customer_id, Customer_name, Customer_address, Customer_contact, Order_id
4. Order_id, Order_date, Amount, Waiter_id
5. Manager_id, Manager_name, Manager_address, Manager_salary, Manager_contact
6. Waiter_id, Waiter_name, Waiter_address, Waiter_contact, Waiter_salary, Manager_id
7. Order_id, Order_date, Amount, Employee_id
8. Employee_id, Employee_name, Employee _address, Employee_contact, Employee_salary, role
9. Payment_id, Amount, Paid_by, Discount, Promo_code, Date, Customer_id
10. Rating_id, Score, Remarks, Comment, Customer_id
11. Rating_id, Score, Remarks, Comment, Food_id

TABLE CREATION

MENU

create table Menu(Food_id number(10) primary key, Food_name varchar2(40), Food_status varchar2(20), Price number(10))

create sequence menuseq

start with 1

increment by 1

maxvalue 500

NOCACHE

NOCYCLE

Object Type **TABLE** Object **MENU**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>MENU</u>	<u>FOOD_ID</u>	Number	-	10	0	1	-	-	-
	<u>FOOD_NAME</u>	Varchar2	40	-	-	-	✓	-	-
	<u>FOOD_STATUS</u>	Varchar2	20	-	-	-	✓	-	-
	<u>PRICE</u>	Number	-	10	0	-	✓	-	-
1 - 4									

CUSTOMER

create table Customer(Customer_id number(10) primary key, Customer_name varchar2(40), Customer_address varchar2(50), Customer_contact number(20), Order_id number(10))

create sequence customerseq

start with 1

increment by 1

maxvalue 500

NOCACHE

NOCYCLE

Object Type **TABLE** Object **CUSTOMER**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>CUSTOMER</u>	<u>CUSTOMER_ID</u>	Number	-	10	0	1	-	-	-
	<u>CUSTOMER_NAME</u>	Varchar2	40	-	-	-	✓	-	-
	<u>CUSTOMER_ADDRESS</u>	Varchar2	50	-	-	-	✓	-	-
	<u>CUSTOMER_CONTACT</u>	Number	-	20	0	-	✓	-	-
	<u>ORDER_ID</u>	Number	-	10	0	-	✓	-	-
1 - 5									

MANAGER

create table Manager(Manager_id number(10) primary key, Manager_name varchar2(30), Manager_address varchar2(50), Manager_salary number(10), Manager_contact number(20))

create sequence managerseq

start with 1

increment by 1

maxvalue 500

NOCACHE

NOCYCLE

Object Type **TABLE** Object **MANAGER**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>MANAGER</u>	<u>MANAGER_ID</u>	Number	-	10	0	1	-	-	-
	<u>MANAGER_NAME</u>	Varchar2	30	-	-	-	✓	-	-
	<u>MANAGER_ADDRESS</u>	Varchar2	50	-	-	-	✓	-	-
	<u>MANAGER_SALARY</u>	Number	-	10	0	-	✓	-	-
	<u>MANAGER_CONTACT</u>	Number	-	20	0	-	✓	-	-
									1 - 5

EMPLOYEE

create table Employee(Employee_id number(10) primary key, Employee_name varchar2(30), Employee_address varchar2(50), Employee_contact number(20), Employee_salary number(10), role varchar2(20))

create sequence employeeseq

start with 1

increment by 1

maxvalue 500

NOCACHE

NOCYCLE

Object Type **TABLE** Object **EMPLOYEE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMPLOYEE	EMPLOYEE_ID	Number	-	10	0	1	-	-	-
	EMPLOYEE_NAME	Varchar2	30	-	-	-	✓	-	-
	EMPLOYEE_ADDRESS	Varchar2	50	-	-	-	✓	-	-
	EMPLOYEE_CONTACT	Number	-	20	0	-	✓	-	-
	EMPLOYEE_SALARY	Number	-	10	0	-	✓	-	-
	ROLE	Varchar2	20	-	-	-	✓	-	-
									1 - 6

WAITER

```
create table Waiter (waiter_id number(10) primary key, waiter_name  
varchar2(30), waiter_address varchar2(50), waiter_contact number(20),  
waiter_salary number(10), manager_id number(10))
```

```
create sequence waiterseq
```

```
start with 1
```

```
increment by 1
```

```
maxvalue 500
```

```
NOCACHE
```

```
NOCYCLE
```

Object Type **TABLE** Object **WAITER**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>WAITER</u>	<u>WAITER_ID</u>	Number	-	10	0	1	-	-	-
	<u>WAITER_NAME</u>	Varchar2	30	-	-	-	✓	-	-
	<u>WAITER_ADDRESS</u>	Varchar2	50	-	-	-	✓	-	-
	<u>WAITER_CONTACT</u>	Number	-	20	0	-	✓	-	-
	<u>WAITER_SALARY</u>	Number	-	10	0	-	✓	-	-
	<u>MANAGER_ID</u>	Number	-	10	0	-	✓	-	-
									1 - 6

PAYMENT

create table Payment(payment_id number(10) primary key, amount number(10), paid_by varchar2(30), discounts number(10), promo_code number(10), dates varchar2(10), customer_id number(10))

create sequence paymentseq

start with 1

increment by 1

maxvalue 500

NOCACHE

NOCYCLE

Object Type **TABLE** Object **PAYMENT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>PAYMENT</u>	<u>PAYMENT_ID</u>	Number	-	10	0	1	-	-	-
	<u>AMOUNT</u>	Number	-	10	0	-	✓	-	-
	<u>PAID_BY</u>	Varchar2	30	-	-	-	✓	-	-
	<u>DISCOUNTS</u>	Number	-	10	0	-	✓	-	-
	<u>PROMO_CODE</u>	Number	-	10	0	-	✓	-	-
	<u>DATES</u>	Varchar2	10	-	-	-	✓	-	-
	<u>CUSTOMER_ID</u>	Number	-	10	0	-	✓	-	-
									1 - 7

RATING

```
create table Rating(Rating_id number(10) primary key, Scores number(10), Remarks
varchar2(100), Comments varchar2(100), Customer_id number(10), Food_id
number(10))
```

```
create sequence ratingseq
```

```
start with 1
```

```
increment by 1
```

```
maxvalue 500
```

```
NOCACHE
```

```
NOCYCLE
```

Object Type **TABLE** Object **RATING**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>RATING</u>	<u>RATING_ID</u>	Number	-	10	0	1	-	-	-
	<u>SCORES</u>	Number	-	10	0	-	✓	-	-
	<u>REMARKS</u>	Varchar2	100	-	-	-	✓	-	-
	<u>COMMENTS</u>	Varchar2	100	-	-	-	✓	-	-
	<u>CUSTOMER_ID</u>	Number	-	10	0	-	✓	-	-
	<u>FOOD_ID</u>	Number	-	10	0	-	✓	-	-
									1 - 6

ORDERS

create table Orders(Order_id number(10) primary key, Order_date varchar2(20), Amount number(10), Waiter_id number(10), Employee_id number(10))

create sequence orderseq

start with 1

increment by 1

maxvalue 500

NOCACHE

NOCYCLE

Object Type **TABLE** Object **ORDERS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>ORDERS</u>	<u>ORDER_ID</u>	Number	-	10	0	1	-	-	-
	<u>ORDER_DATE</u>	Varchar2	20	-	-	-	✓	-	-
	<u>AMOUNT</u>	Number	-	10	0	-	✓	-	-
	<u>WAITER_ID</u>	Number	-	10	0	-	✓	-	-
	<u>EMPLOYEE_ID</u>	Number	-	10	0	-	✓	-	-
									1 - 5

CMR

create table CMR(CF_id number(10) primary key, customer_id number(10), food_id number(10))

Object Type **TABLE** Object **CMR**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>CMR</u>	<u>CF_ID</u>	Number	-	10	0	1	-	-	-
	<u>CUSTOMER_ID</u>	Number	-	10	0	-	✓	-	-
	<u>FOOD_ID</u>	Number	-	10	0	-	✓	-	-
									1 - 3

DATA INSERTION

MENU

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'CHOCOLATE ICECREAM',  
'AVAILABLE', 160);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'VANILLA ICECREAM', 'AVAILABLE',  
120);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'PEANUT BUTTER ICECREAM',  
'AVAILABLE', 199);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'CINNAMON ICECREAM',  
'AVAILABLE', 220);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'STRAWBERRY ICECREAM',  
'AVAILABLE', 180);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'CARAMEL ICECREAM',  
'AVAILABLE', 220);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'BANANA ICECREAM', 'AVAILABLE',  
120);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'MINT ICECREAM', 'AVAILABLE', 190)
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'BUTTER ICECREAM', 'AVAILABLE',  
220);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'CHERRY ICECREAM', 'AVAILABLE',  
220);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'KIWI ICECREAM', 'AVAILABLE',  
280);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'MELON MIX', 'AVAILABLE', 250);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'YOGURT', 'AVAILABLE', 200);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'CREAMY MILK', 'AVAILABLE', 200);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'MANGO ICECREAM', 'AVAILABLE',  
190);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'CHOCOLATE CONE', 'AVAILABLE',  
199);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'STRAWBERRY CONE', 'AVAILABLE',  
220);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'SUGER CONE', 'AVAILABLE', 180);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'WAFER CONE', 'UNAVAILABLE',  
320);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'RASPBERRY ICECREAM',  
'AVAILABLE', 380);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'HOT CHOCOLATE', 'AVAILABLE',  
190);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'VANILLA MILKSHAKE',  
'AVAILABLE', 120);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'CHOCOLATE MILKSHAKE',  
'AVAILABLE', 149);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'STRAWBERRY MILKSHAKE',  
'AVAILABLE', 149);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'ORANGE SMOOTHIE', 'AVAILABLE',  
99);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'KIWI SMOOTHIE', 'AVAILABLE', 120);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'CHOCOLATE SMOOTHIE',  
'AVAILABLE', 99);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'STRAWBERRY SMOOTHIE',  
'AVAILABLE', 99);
```

```
INSERT INTO Menu VALUES(menuseq.NEXTVAL, 'BIRTHDAY SURPRISE',  
'AVAILABLE', 899);
```

FOOD_ID	FOOD_NAME	FOOD_STATUS	PRICE
1	CHOCOLATE ICECREAM	AVAILABLE	160
2	VANILLA ICECREAM	AVAILABLE	120
3	PEANUT BUTTER ICECREAM	AVAILABLE	199
4	CINNAMON ICECREAM	AVAILABLE	220
5	STRAWBERRY ICECREAM	AVAILABLE	180
6	CARAMEL ICECREAM	AVAILABLE	220
7	BANANA ICECREAM	AVAILABLE	120
8	MINT ICECREAM	AVAILABLE	190
9	BUTTER ICECREAM	AVAILABLE	220
10	CHERRY ICECREAM	AVAILABLE	220
11	KIWI ICECREAM	AVAILABLE	280
12	MELON MIX	AVAILABLE	250
13	YOUGURT	AVAILABLE	200
14	CREAMY MILK	AVAILABLE	200
15	MANGO ICECREAM	AVAILABLE	190
16	CHOCOLATE CONE	AVAILABLE	199
17	STRAWBERRY CONE	AVAILABLE	220
18	SUGER CONE	AVAILABLE	180
19	WAFER CONE	UNAVAILABLE	320
20	RASPBERRY ICECREAM	AVAILABLE	380
21	HOT CHOCOLATE	AVAILABLE	190
22	VANILLA MILKSHAKE	AVAILABLE	120
23	CHOCOLATE MILKSHAKE	AVAILABLE	149
24	STRAWBERRY MILKSHAKE	AVAILABLE	149
25	ORANGE SMOOTHIE	AVAILABLE	99
26	KIWI SMOOTHIE	AVAILABLE	120
27	CHOCOLATE SMOOTHIE	AVAILABLE	99
28	STRAWBERRY SMOOTHIE	AVAILABLE	99
29	BIRTHDAY SURPRISE	AVAILABLE	899

CUSTOMER

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'RAYHAN', 'UTTARA,  
DHAKA', 8801884801110, 1);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'TAMIM', 'BANANI, DHAKA',  
8801884871110, 2);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'NIHAB', 'BANANI, DHAKA',  
8801884801189, 3);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'LIMA', 'KURIL, DHAKA',  
8801884878110, 4);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'HIMEL', 'UTTARA, DHAKA',  
8801884801120, 5);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'AKASH', 'UTTARA, DHAKA',  
8801884801130, 6);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'RIVA', 'BADDA, DHAKA',  
8801884801140, 7);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'JIBON', 'FARMGATE,  
DHAKA', 8801884801150, 8);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'FAHIM', 'NIKUNJA, DHAKA',  
8801884801160, 9);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'MEHEDI', 'BASHUNDHARA,  
DHAKA', 8801884801170, 10);
```

```
INSERT INTO Customer VALUES(customerseq.NEXTVAL, 'SHAMMO',  
'BASHUNDHARA, DHAKA', 8801884801180, 11);
```

CUSTOMER_ID	CUSTOMER_NAME	CUSTOMER_ADDRESS	CUSTOMER_CONTACT	ORDER_ID
2	TAMIM MRIDHA	BANANI, DHAKA	8801884871110	2
3	NIHAB	BANANI, DHAKA	8801884801189	3
1	RAYHAN TANZIL	UTTARA, DHAKA	8801884801110	1
4	LIMA	KURIL, DHAKA	8801884878110	4
5	HIMEL	UTTARA, DHAKA	8801884801120	5
6	AKASH	UTTARA, DHAKA	8801884801130	6
7	RIVA SULTANA	BADDA, DHAKA	8801884801140	7
8	JIBON	FARMGATE, DHAKA	8801884801150	8
9	FAHIM	NIKUNJA, DHAKA	8801884801160	9
10	MEHEDI	BASHUNDHARA, DHAKA	8801884801170	10
11	SHAMMO	BASHUNDHARA, DHAKA	8801884801180	11

MANAGER

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'MOFAKKAR',  
'CHITTAGONG',25000, 8801478988574);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'RAYHAN', 'DHAKA',25000,  
8801478988577);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'NIYAN', 'DHAKA',25000,  
8801478988584);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'RABBI', 'BARISHAL',25000,  
8801478988585);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'ROFIQ', 'DHAKA',25000,  
8801478988587);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'TANHA', 'DHAKA',25000,  
8801478988589);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'TOUFIQ', 'TANGAIL',25000,  
88014789885890);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'NASIR', 'DHAKA',25000,  
8801478988592);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'JAFAR', 'DHAKA',35000,  
8801478988595);
```

```
INSERT INTO Manager VALUES(managerseq.NEXTVAL, 'SAIF', 'DHAKA',20000,  
8801478988598);
```

MANAGER_ID	MANAGER_NAME	MANAGER_ADDRESS	MANAGER_SALARY	MANAGER_CONTACT
1	MOFAKKAR	CHITTAGONG	25000	8801478988574
2	RAYHAN	DHAKA	25000	8801478988577
3	NIYAN	DHAKA	25000	8801478988584
4	RABBI	BARISHAL	25000	8801478988585
5	ROFIQ	DHAKA	25000	8801478988587
6	TANHA	DHAKA	25000	8801478988589
7	TOUFIQ	TANGAIL	25000	88014789885890
8	NASIR	DHAKA	25000	8801478988592
9	JAFAR	DHAKA	35000	8801478988595
10	SAIF	DHAKA	20000	8801478988598

EMPLOYEE

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'ALEX', 'DHAKA',  
8801758998454, 10000, 'CASHIER');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'HALES', 'DHAKA',  
8801758998455, 8000, 'CLEANER');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'TRUMP', 'CHITTAGONG',  
8801758998456, 15000, 'GUARD');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'PUTIN', 'BARISHAL',  
8801758998457, 15000, 'GUARD');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'MIKEL', 'DHAKA',  
8801758998458, 8000, 'CLEANER');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'JACK', 'GAZIPUR',  
8801758998459, 8000, 'CLEANER');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'JAY', 'BANANI',  
8801758998460, 8000, 'CLEANER');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'ROBIN', 'DHAKA',  
8801758998461, 15000, 'GUARD');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'ARIF', 'DHAKA',  
8801758998462, 10000, 'CASHIER');
```

```
INSERT INTO Employee VALUES(employeeeq.NEXTVAL, 'BOB', 'SYLHET',  
8801758998463, 10000, 'CASHIER');
```

EMPLOYEE_ID	EMPLOYEE_NAME	EMPLOYEE_ADDRESS	EMPLOYEE_CONTACT	EMPLOYEE_SALARY	ROLE
3	PUTIN	BARISHAL	8801758998457	15000	GUARD
1	ALEX	DHAKA	8801758998454	10000	CASHIER
2	HALES	DHAKA	8801758998455	8000	CLEANER
4	TRUMP	CHITTAGONG	8801758998456	15000	GUARD
5	MIKEL	DHAKA	8801758998458	8000	CLEANER
6	JACK	GAZIPUR	8801758998459	8000	CLEANER
7	JAY	BANANI	8801758998460	8000	CLEANER
8	ROBIN	DHAKA	8801758998461	15000	GUARD
9	ARIF	DHAKA	8801758998462	10000	CASHIER
10	BOB	SYLHET	8801758998463	10000	CASHIER

WAITER

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'NILOY', 'CHITTAGONG',  
8801478987749,10000, 1);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'ALAMGIR', 'DINAJPUR',  
8801478987750,10000, 2);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'SIAM', 'DHAKA',  
8801478987789,10000, 3);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'JUNIOR', 'BARISHAL',  
8801478987790,10000, 3);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'MD ALI', 'CHITTAGONG',  
8801478987791,10000, 2);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'HIRA', 'RANGPUR',  
8801478987747,10000, 2);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'YASHIR', 'COMILLA',  
8801478987719,10000, 3);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'AFIF', 'CHITTAGONG',  
8801478987730,10000, 4);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'SAIF', 'DINAJPUR',  
8801478987750,10000, 5);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'SIFAT', 'DHAKA',  
8801478987789,10000, 6);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'LAZIM', 'BARISHAL',  
8801478987790,10000, 7);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'POROSH', 'CHITTAGONG',  
8801478987791,10000, 8);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'FARUK', 'RANGPUR',  
8801478987747,10000, 9);
```

```
INSERT INTO Waiter VALUES(waiterseq.NEXTVAL, 'HASIB', 'COMILLA',  
8801478987719,10000, 10);
```

WAITER_ID	WAITER_NAME	WAITER_ADDRESS	WAITER_CONTACT	WAITER_SALARY	MANAGER_ID
1	NILOY	CHITTAGONG	8801478987749	10000	1
2	ALAMGIR	DINAJPUR	8801478987750	10000	2
3	SIAM	DHAKA	8801478987789	10000	3
4	JUNIOR	BARISHAL	8801478987790	10000	3
5	MD ALI	CHITTAGONG	8801478987791	10000	1
6	HIRA	RANGPUR	8801478987747	10000	2
7	YASHIR	COMILLA	8801478987719	10000	3
8	AFIF	CHITTAGONG	8801478987730	10000	4
9	SAIF	DINAJPUR	8801478987750	10000	5
10	SIFAT	DHAKA	8801478987789	10000	6
11	LAZIM	BARISHAL	8801478987790	10000	7
12	POROSH	CHITTAGONG	8801478987791	10000	8
13	FARUK	RANGPUR	8801478987747	10000	9
14	HASIB	COMILLA	8801478987719	10000	10

PAYMENT

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 520,'RAYHAN', '08DEC 2022', 1);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 120,'TAMIM', '08DEC 2022', 2);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 450,'NIHAB', '09DEC 2022', 3);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 550,'LIMA', '09DEC 2022', 4);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 600,'HIMEL', '10DEC 2022', 5);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 300,'AKASH', '10DEC 2022', 6);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 200,'RIVA', '10DEC 2022', 7);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 1000,'JIBON', '11DEC 2022', 8);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 900,'FAHIM', '11DEC 2022', 9);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 700,'MEHEDI', '11DEC 2022', 10);
```

```
INSERT INTO Payment (payment_id ,amount,paid_by,dates,customer_id)
VALUES(paymentseq.NEXTVAL, 300,'SHAMMO', '11DEC 2022', 11);
```

PAYMENT_ID	AMOUNT	PAID_BY	DISCOUNTS	PROMO_CODE	DATES	CUSTOMER_ID
1	520	RAYHAN	-	-	08DEC 2022	1
2	120	TAMIM	-	-	08DEC 2022	2
3	450	NIHAB	-	-	09DEC 2022	3
4	550	LIMA	-	-	09DEC 2022	4
5	600	HIMEL	-	-	10DEC 2022	5
6	300	AKASH	-	-	10DEC 2022	6
7	200	RIVA	-	-	10DEC 2022	7
8	1000	JIBON	-	-	11DEC 2022	8
9	900	FAHIM	-	-	11DEC 2022	9
10	700	MEHEDI	-	-	11DEC 2022	10
11	300	SHAMMO	-	-	11DEC 2022	11

RATING

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Delicious food',1,8);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Delicious food',2,9);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Awesome experience',4,17);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Good',9,10);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Best in town',5,11);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Icy',3,20);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'what a surprise!',10,20);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Great food',6,7);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Best flavour',7,16);
```

```
INSERT INTO Rating (Rating_id ,Scores,Remarks,Customer_id,Food_id)
VALUES(ratingseq.NEXTVAL, 9,'Nice behaviour',8,12);
```

RATING_ID	SCORES	REMARKS	COMMENTS	CUSTOMER_ID	FOOD_ID
1	9	Delicious food	-	1	8
2	9	Delicious food	-	2	9
3	9	Awesome experience	-	4	17
4	9	Good	-	9	10
5	9	Best in town	-	5	11
6	9	Icy	-	3	20
7	9	what a surprise!	-	11	29
8	9	Great food	-	6	7
9	9	Best flavour	-	7	16
10	9	Nice behaviour	-	8	12

ORDERS

```
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '08-DEC-2022', 520, 6,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '09-DEC-2022', 120, 5,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '09-DEC-2022', 450, 2,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '09-DEC-2022', 220, 2,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '09-DEC-2022', 320, 6,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '09-DEC-2022', 260, 5,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '09-DEC-2022', 899, 6,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '09-DEC-2022', 720, 2,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '09-DEC-2022', 120, 2,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '10-DEC-2022', 1820, 5,1);
INSERT INTO Orders VALUES(orderseq.NEXTVAL, '11-DEC-2022', 2520, 5,1);
```

ORDER_ID	ORDER_DATE	AMOUNT	WAITER_ID	EMPLOYEE_ID
1	08-DEC-2022	520	6	1
2	08-DEC-2022	120	5	1
3	09-DEC-2022	450	2	1
4	09-DEC-2022	220	2	1
5	09-DEC-2022	320	6	1
6	09-DEC-2022	260	5	1
7	09-DEC-2022	899	6	1
8	09-DEC-2022	720	2	1
9	09-DEC-2022	120	2	1
10	10-DEC-2022	1820	5	1
11	11-DEC-2022	2520	5	1

CMR

INSERT INTO CMR VALUES(1,1,8);

INSERT INTO CMR VALUES(2,2,9);

INSERT INTO CMR VALUES(3,4,17);

INSERT INTO CMR VALUES(4,9,10);

INSERT INTO CMR VALUES(5,5,11);

INSERT INTO CMR VALUES(6,3,20);

INSERT INTO CMR VALUES(7,10,20);

INSERT INTO CMR VALUES(8,6,7);

INSERT INTO CMR VALUES(9,7,16);

INSERT INTO CMR VALUES(10,8,12);

CF_ID	CUSTOMER_ID	FOOD_ID
1	1	8
2	2	9
3	4	17
4	9	10
5	5	11
6	3	20
7	10	20
8	6	7
9	7	16
10	8	12

CONSTRAINTS ADDING

MENU

ALTER TABLE Menu MODIFY Price NOT NULL;

CUSTOMER

ALTER TABLE Customer MODIFY Order_id NOT NULL;

alter table Customer add constraint ofk foreign key (Order_id) references orders(Order_id);

MANAGER

ALTER TABLE Manager MODIFY Manager_salary NOT NULL;

WAITER

alter table Waiter add constraint mfk foreign key (Manager_id) references Manager(Manager_id);

PAYMENT

alter table Payment add constraint cfk foreign key (Customer_id) references Customer(Customer_id);

RATING

alter table Rating add constraint rfk foreign key (Customer_id) references Customer(Customer_id);

alter table Rating add constraint rmfk foreign key (Food_id) references Menu(Food_id);

ORDERS

alter table Orders add constraint wfk foreign key (Waiter_id) references
Waiter(Waiter_id);

alter table Orders add constraint efk foreign key (Employee_id) references
Employee(Employee_id);

CMR

alter table CMR add constraint cufk foreign key (Customer_id) references
Customer(Customer_id);

alter table CMR add constraint fofk foreign key (Food_id) references
Menu(Food_id);

QUERY WRITING

JOINING

EQUIJOIN

1. select m.manager_id, m.manager_name, w.waiter_id, w.waiter_name, w.manager_id from manager m, waiter w where m.manager_id = w.manager_id

MANAGER_ID	MANAGER_NAME	WAITER_ID	WAITER_NAME	MANAGER_ID
1	MOFAKKAR	1	NILOY	1
4	RABBI	8	AFIF	4
5	ROFIQ	9	SAIF	5
6	TANHA	10	SIFAT	6
7	TOUFIQ	11	LAZIM	7
8	NASIR	12	POROSH	8
9	JAFAR	13	FARUK	9
10	SAIF	14	HASIB	10
2	RAYHAN	2	ALAMGIR	2
3	NIYAN	3	SIAM	3
3	NIYAN	4	JUNIOR	3
1	MOFAKKAR	5	MD ALI	1
2	RAYHAN	6	HIRA	2
3	NIYAN	7	YASHIR	3

2. select c.customer_name, c.customer_address, c.order_id, o.order_date, o.amount, o.waiter_id, w.waiter_name from customer c, orders o, waiter w where c.order_id = o.order_id and o.waiter_id = w.waiter_id

CUSTOMER_NAME	CUSTOMER_ADDRESS	ORDER_ID	ORDER_DATE	AMOUNT	WAITER_ID	WAITER_NAME
TAMIM MRIDHA	BANANI, DHAKA	2	08-DEC-2022	120	5	MD ALI
NIHAB	BANANI, DHAKA	3	09-DEC-2022	450	2	ALAMGIR
RAYHAN TANZIL	UTTARA, DHAKA	1	08-DEC-2022	520	6	HIRA
LIMA	KURIL, DHAKA	4	09-DEC-2022	220	2	ALAMGIR
HIMEL	UTTARA, DHAKA	5	09-DEC-2022	320	6	HIRA
AKASH	UTTARA, DHAKA	6	09-DEC-2022	260	5	MD ALI
RIVA SULTANA	BADDA, DHAKA	7	09-DEC-2022	899	6	HIRA
JIBON	FARMGATE, DHAKA	8	09-DEC-2022	720	2	ALAMGIR
FAHIM	NIKUNJA, DHAKA	9	09-DEC-2022	120	2	ALAMGIR
MEHEDI	BASHUNDHARA, DHAKA	10	10-DEC-2022	1820	5	MD ALI
SHAMMO	BASHUNDHARA, DHAKA	11	11-DEC-2022	2520	5	MD ALI

OUTERJOIN

1. select w.waiter_id, w.waiter_name, m.manager_id from waiter w, manager m
where w.manager_id(+) = m.manager_id order by w.manager_id

WAITER_ID	WAITER_NAME	MANAGER_ID
1	NILOY	1
5	MD ALI	1
2	ALAMGIR	2
6	HIRA	2
7	YASHIR	3
3	SIAM	3
4	JUNIOR	3
8	AFIF	4
9	SAIF	5
10	SIFAT	6
11	LAZIM	7
12	POROSH	8
13	FARUK	9
14	HASIB	10

2. select w.waiter_name, w.waiter_id, o.order_id, o.amount from orders o, waiter w
where w.waiter_id = o.waiter_id (+)

WAITER_NAME	WAITER_ID	ORDER_ID	AMOUNT
HIRA	6	1	520
MD ALI	5	2	120
ALAMGIR	2	3	450
ALAMGIR	2	4	220
HIRA	6	5	320
MD ALI	5	6	260
HIRA	6	7	899
ALAMGIR	2	8	720
ALAMGIR	2	9	120
MD ALI	5	10	1820
MD ALI	5	11	2520
SIAM	3	-	-
POROSH	12	-	-
AFIF	8	-	-
SIFAT	10	-	-
YASHIR	7	-	-
JUNIOR	4	-	-
HASIB	14	-	-
SAIF	9	-	-
FARUK	13	-	-
NILOY	1	-	-
LAZIM	11	-	-

SELFJOIN

1. `select distinct w.waiter_id || ' Works for ' || m.manager_id from waiter w, waiter m where w.manager_id = m.manager_id`

W.WAITER_ID 'WORKSFOR' M.MANAGER_ID
13 Works for 9
8 Works for 4
12 Works for 8
4 Works for 3
3 Works for 3
11 Works for 7
14 Works for 10
9 Works for 5
6 Works for 2
1 Works for 1
10 Works for 6
7 Works for 3
5 Works for 1
2 Works for 2

2. `select e.employee_name || ' WORKS AS ' || r.role as info from employee e, employee r where e.employee_id = r.employee_id`

INFO
PUTIN WORKS AS GUARD
ALEX WORKS AS CASHIER
HALES WORKS AS CLEANER
TRUMP WORKS AS GUARD
MIKEL WORKS AS CLEANER
JACK WORKS AS CLEANER
JAY WORKS AS CLEANER
ROBIN WORKS AS GUARD
ARIF WORKS AS CASHIER
BOB WORKS AS CASHIER

NON_EQUIJOIN

1. `select distinct e.employee_name from waiter w, employee e where w.waiter_salary>=10000`

EMPLOYEE_NAME
HALES
MIKEL
ROBIN
BOB
PUTIN
ALEX
ARIF
JACK
JAY
TRUMP

2. `select distinct o.order_date, o.amount from orders o, waiter w where w.waiter_id between 5 and 7`

ORDER_DATE	AMOUNT
08-DEC-2022	120
09-DEC-2022	260
09-DEC-2022	899
10-DEC-2022	1820
11-DEC-2022	2520
09-DEC-2022	120
08-DEC-2022	520
09-DEC-2022	450
09-DEC-2022	320
09-DEC-2022	720
09-DEC-2022	220

SUBQUERY

1. `select * from menu where food_id in (select food_id from menu where price>200)`
2. `select * from customer where customer_id = any (select customer_id from customer where customer_address = 'UTTARA, DHAKA')`
3. `select * from employee where employee_salary > all (select employee_salary from employee where role='CLEANER')`
4. `select * from waiter where waiter_address <> all (select waiter_address from waiter where manager_id = 2)`
5. `select * from orders where order_id = any (select order_id from orders where amount>300)`

SINGLE ROW FUNCTION

1. `select * from employee where LOWER(role) = 'guard'`
2. `select * from rating where UPPER(remarks) = 'GOOD'`
3. `select * from menu where INITCAP(food_name) = 'Mint Icecream'`
4. `select employee_name, CONCAT(employee_name,role), LENGTH(role) from employee where employee_address = 'DHAKA'`
5. `select TO_CHAR(employee_salary, '$99,999') salary from employee where employee_name='ALEX'`

GROUP FUNCTION

1. `select MIN(employee_salary) from employee where employee_address = 'DHAKA'`
2. `select MAX(employee_salary) from employee where employee_address = 'DHAKA'`
3. `select COUNT(*) from waiter where manager_id = 2`
4. `select AVG(employee_salary) from employee group by role`
5. `select role, SUM(employee_salary) from employee where employee_name<>'JACK' group by role having SUM(employee_salary) >5000 order by SUM(employee_salary) desc`

VIEW

create or replace view menuview

as

select m.food_name, m.food_status, m.price, r.remarks, r.food_id from menu
m, rating r

where m.food_id = r.food_id

select * from menuview

FOOD_NAME	FOOD_STATUS	PRICE	REMARKS	FOOD_ID
BANANA ICECREAM	AVAILABLE	120	Great food	7
CHOCOLATE CONE	AVAILABLE	199	Best flavour	16
MELON MIX	AVAILABLE	250	Nice behaviour	12
MINT ICECREAM	AVAILABLE	190	Delicious food	8
BUTTER ICECREAM	AVAILABLE	220	Delicious food	9
STRAWBERRY CONE	AVAILABLE	220	Awesome experience	17
CHERRY ICECREAM	AVAILABLE	220	Good	10
KIWI ICECREAM	AVAILABLE	280	Best in town	11
RASPBERRY ICECREAM	AVAILABLE	380	Icy	20
BIRTHDAY SURPRISE	AVAILABLE	899	what a surprise!	29

SEQUENCE

create sequence menuseq

start with 1

increment by

maxvalue 500

NOCACHE

NOCYCLE

GENERAL QUERY

1. `select employee_name from employee where employee_name like '%L%';`
2. `select customer_name, order_id from customer where customer_id in (5,9,10);`
3. `select food_name, food_id, price from menu where food_status = 'UNAVAILABLE';`
4. `select employee_id, employee_name, employee_salary from employee where employee_id <> 90;`
5. `select manager_id, manager_name || ' FROM ' || manager_address as info from manager;`

THE END