

CDA 502: Database Management Systems

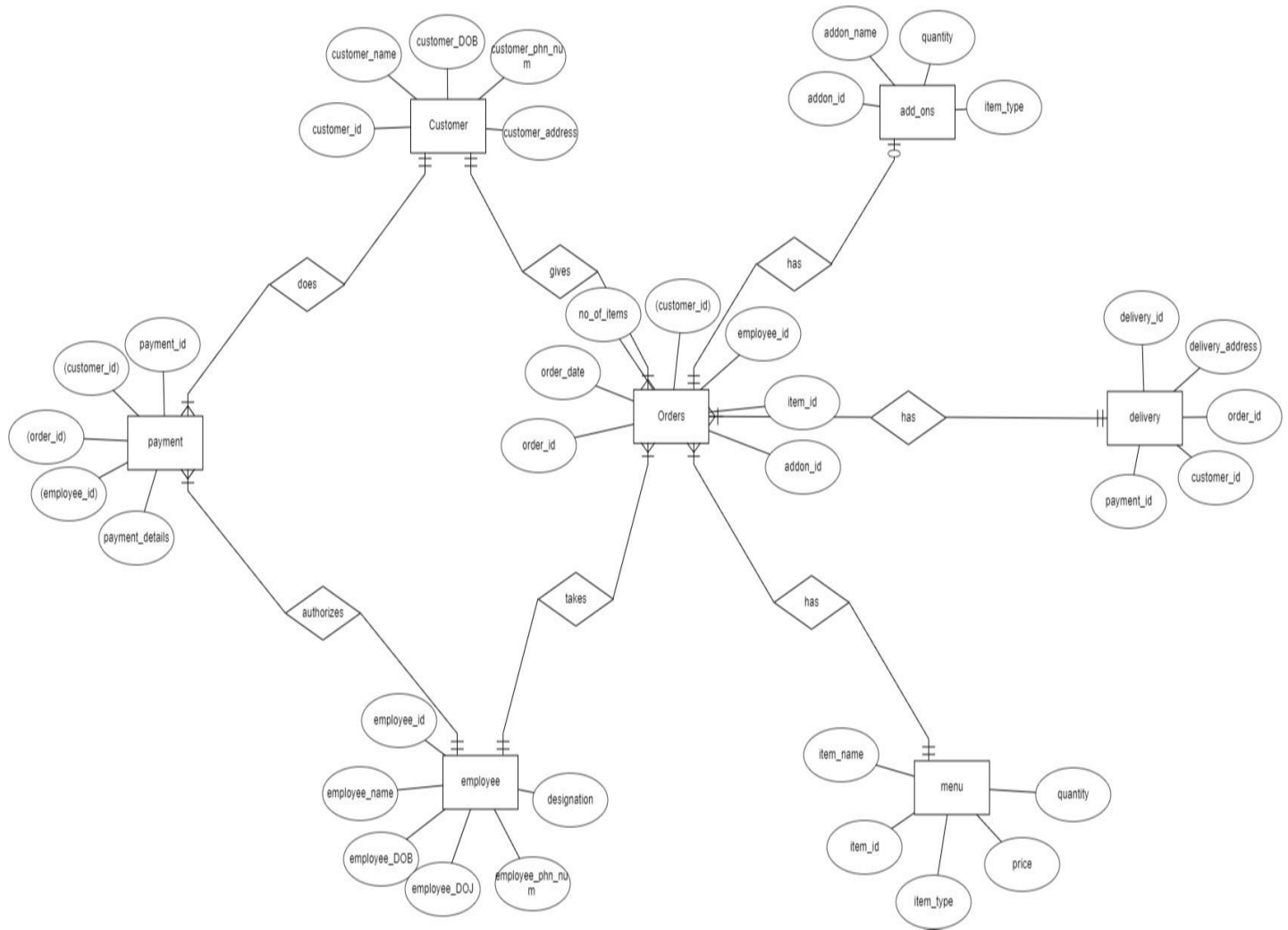
Project By

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Bulls Wings Data Management



Restaurant Management Database - Entity Relationship Diagram



Business Rules

Customer

- A customer can place one or more orders
- A customer can do one or more payments

Payment

- One or more payments can be done by one customer
- One or more payments can be recorded by one employee
- One payment can be done for one or more orders

Employee

- One employee can record one or more payments
- One employee can record one or more orders

Orders

- One or more orders can be placed by a customer
- One or more orders can be paid through one payment
- One or more orders can be recorded by an employee
- One order can have zero or many addons
- One or more orders can be delivered through a delivery
- One or more orders can have an item

Addons

- zero or more addons can be placed in an order

Delivery

- A delivery can have one or more orders

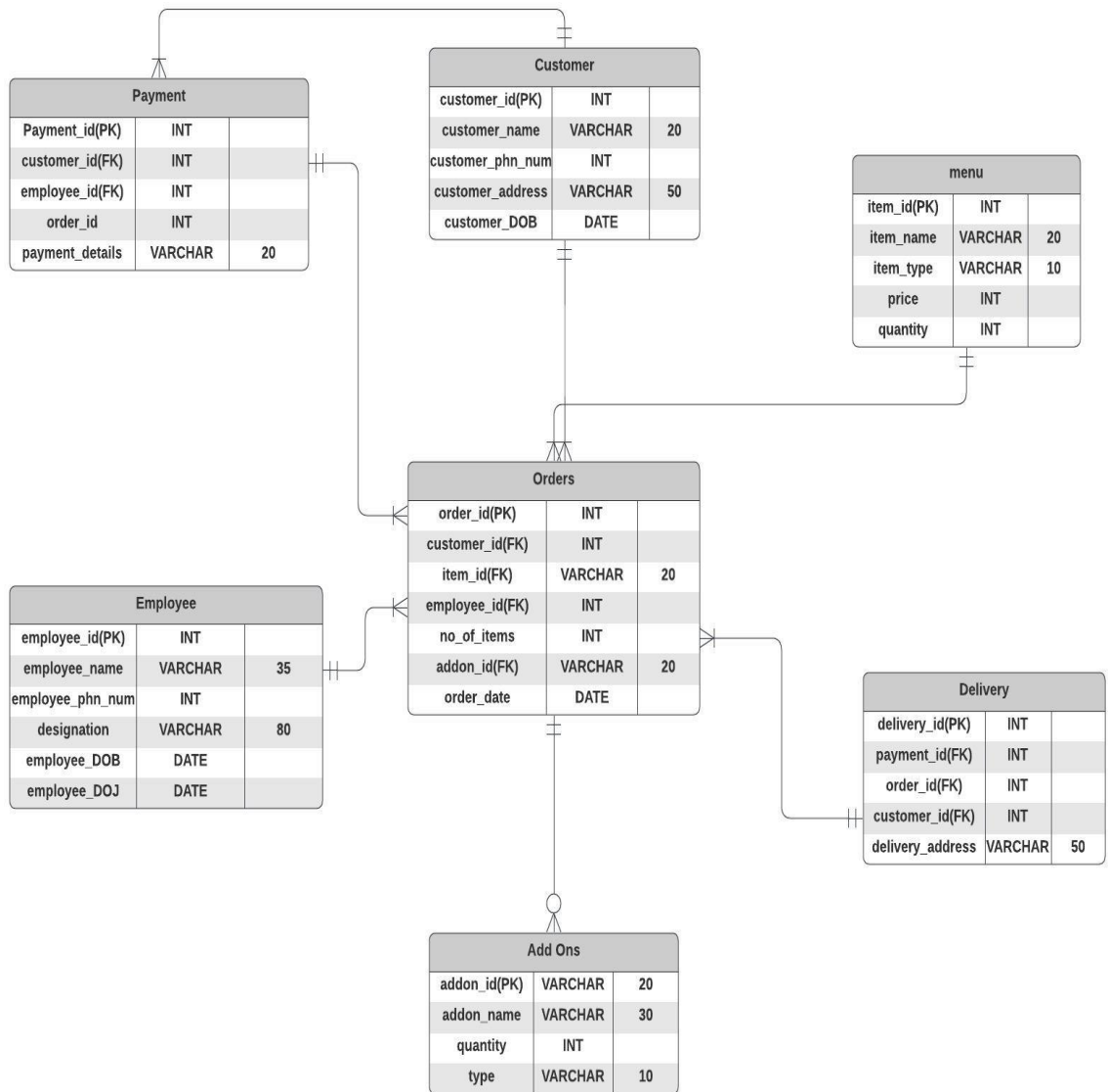
Item

- One item can be placed in one or more orders
- One or more items can be in one Menu

Menu

- One menu can have one or more items

Database Schema



Physical Design

#Creating Employee Table

```
CREATE TABLE Employee
(
    employee_id INT NOT NULL,
    employee_name VARCHAR(95),
    employee_DOB DATE,
    employee_DOJ DATE,
    employee_phn_num INT ,
    designation VARCHAR(80),
    PRIMARY KEY (employee_id)
);
```

#Creating Add ons Table

```
CREATE TABLE Add_ons
(
    addon_id VARCHAR(20),
    addon_name VARCHAR(30),
    quantity INT NOT NULL,
    item_type VARCHAR(10),
    PRIMARY KEY (addon_id)
);
```

#Creating Menu Table

CREATE TABLE Menu

```
(  
    item_id INT NOT NULL,  
    item_name VARCHAR(20),  
    item_type VARCHAR(10),  
    price INT ,  
    quantity INT,  
    PRIMARY KEY (item_id)  
);
```

#creating customer table

CREATE TABLE Customer

```
(  
    customer_id INT NOT NULL,  
    customer_name VARCHAR(20),  
    customer_DOB DATE,  
    customer_phn_num INT ,  
    customer_address VARCHAR(50),  
    PRIMARY KEY (customer_id)  
);
```

#Creating Orders Table

CREATE TABLE Orders

```
(  
    order_id INT NOT NULL,  
    order_date DATE,  
    no_of_items INT,
```

```
customer_id INT NOT NULL,  
employee_id INT NOT NULL,  
item_id INT NOT NULL,  
addon_id VARCHAR(20),  
PRIMARY KEY (order_id),  
FOREIGN KEY (customer_id) REFERENCES Customer(customer_id),  
FOREIGN KEY (employee_id) REFERENCES Employee(employee_id),  
FOREIGN KEY (item_id) REFERENCES Menu(item_id),  
FOREIGN KEY (addon_id) REFERENCES Add_ons(addon_id)  
);
```

#Creating Payment Table

```
CREATE TABLE Payment  
(  
    payment_id INT NOT NULL,  
    payment_details VARCHAR(20),  
    customer_id INT NOT NULL,  
    employee_id INT NOT NULL,  
    order_id INT NOT NULL,  
    PRIMARY KEY (payment_id),  
    FOREIGN KEY(customer_id) REFERENCES Customer(customer_id),  
    FOREIGN KEY (order_id) REFERENCES Orders(order_id),  
    FOREIGN KEY (employee_id) REFERENCES Employee(employee_id)  
);
```


#Creating Delivery Table

```
CREATE TABLE Delivery
(
    delivery_id INT NOT NULL,
    delivery_address VARCHAR(50),
    order_id INT NOT NULL,
    customer_id INT NOT NULL,
    payment_id INT NOT NULL,
    PRIMARY KEY (delivery_id),
    FOREIGN KEY (customer_id) REFERENCES Customer(customer_id),
    FOREIGN KEY (payment_id) REFERENCES Payment(payment_id),
    FOREIGN KEY (order_id) REFERENCES Orders(order_id)
);
```

#insert employee

```
INSERT INTO Employee Values (001,"Lalith","1990-08-23","2022-03-01","256718321","Chef");
INSERT INTO Employee Values (002,"Jyoshna","1947-08-13","2022-01-01","486634278","Manager");
INSERT INTO Employee Values (003,"Monisha","1996-02-09","2022-04-23","252144141","Chef");
INSERT INTO Employee Values (004,"Hruthika","1994-04-28","2022-05-11","244416321","Supervisor");
INSERT INTO Employee Values (005,"Sanjay","1997-12-16","2022-05-20","313433546","Manager");
INSERT INTO Employee Values (006,"Sai","1991-06-12","2022-06-19","827362515","Assistant");
INSERT INTO Employee Values (007,"Raju","1987-05-03","2022-07-11","351414441","Delivery Agent");
INSERT INTO Employee Values (008,"Mahendiran","1987-02-09","2022-07-12","826142363","Delivery Agent");
INSERT INTO Employee Values (009,"Kancharla","1994-07-06","2022-07-11","282351534","Server");
INSERT INTO Employee Values (010,"Tarun","1996-12-09","2022-06-14","721735141","Server");
```

#insert Add_ons

```
INSERT INTO Add_ons Values("ADD001","Sambar",1,"Sides");
INSERT INTO Add_ons Values("ADD002","Filter Coffee",1,"Drink");
INSERT INTO Add_ons Values("ADD003","Chutney",1,"Sides");
INSERT INTO Add_ons Values("ADD004","Bonda",3,"Snack");
INSERT INTO Add_ons Values("ADD005","Kesari",1,"Dessert");
INSERT INTO Add_ons Values("ADD006","Payasam",1,"Dessert");
INSERT INTO Add_ons Values("ADD007","Badam Milk",2,"Drink");
INSERT INTO Add_ons Values("ADD008","Bajji",5,"Snack");
INSERT INTO Add_ons Values("ADD009","Tea",1,"Drink");
INSERT INTO Add_ons Values("ADD010","Coke",1,"Drink");
```

#insert Menu

```
INSERT INTO Menu Values(001,"Idly","Tiffin",15,2);
INSERT INTO Menu Values(002,"Dosa","Tiffin",30,1);
INSERT INTO Menu Values(003,"Poori","Tiffin",40,2);
INSERT INTO Menu Values(004,"Chapathi","Tiffin",50,2);
INSERT INTO Menu Values(005,"Upma","Tiffin",60,1);
INSERT INTO Menu Values(006,"Rasam Rice","Lunch",50,1);
INSERT INTO Menu Values(007,"Curd Rice","Lunch",70,1);
INSERT INTO Menu Values(008,"Soup","Snack",150,1);
INSERT INTO Menu Values(009,"Chat","Snack",90,1);
INSERT INTO Menu Values(010,"Parota","Dinner",80,1);
```

#insert Customer

```
INSERT INTO Customer Values(01, "Aravind", "1999-09-09", 23456789, "4121 Bailey Ave");
INSERT INTO Customer Values(02, "Varun", "1997-03-21", 98765432, "4132 Bailey Ave");
INSERT INTO Customer Values(03, "Roshan", "2003-05-30", 567894321, "53 Tyler");
INSERT INTO Customer Values(04, "Neha", "1995-04-17", 234567890, "14 Merimac");
INSERT INTO Customer Values(05, "Bindu", "1992-06-05", 7890643, "63 Tyler");
INSERT INTO Customer Values(06, "Samantha", "2000-03-19", 34567892, "4252 Bailey Ave");
INSERT INTO Customer Values(07, "Smruthi", "1998-04-15", 45678322, "5172 Bailey Ave");
INSERT INTO Customer Values(08, "Rashmika", "1995-09-25", 56789432, "66 Tyler");
INSERT INTO Customer Values(09, "Prabhas", "1999-03-27", 78965432, "78 Tyler");
INSERT INTO Customer Values(10, "Yashwanth", "2001-02-02", 89076543, "15 Merimac");
```

#insert Order

```
INSERT INTO Orders Values(001, '2021-03-11', 2, 01, 002, 001, "ADD001");
INSERT INTO Orders Values(002, "2022-03-25", 1, 03, 002, 002, "ADD002");
INSERT INTO Orders Values(003, "2021-03-18", 3, 03, 004, 003, "ADD003");
INSERT INTO Orders Values(004, "2022-07-11", 1, 04, 004, 004, "ADD004");
INSERT INTO Orders Values(005, "2022-07-08", 2, 05, 005, 005, "ADD005");
INSERT INTO Orders Values(006, "2021-11-20", 2, 02, 006, 006, "ADD006");
INSERT INTO Orders Values(007, "2021-09-08", 1, 07, 006, 007, "ADD007");
INSERT INTO Orders Values(008, "2021-11-14", 1, 08, 006, 009, "ADD008");
INSERT INTO Orders Values(009, "2021-04-27", 3, 09, 006, 008, "ADD010");
INSERT INTO Orders Values(010, "2022-02-25", 3, 10, 006, 010, "ADD009");
INSERT INTO Orders Values(011, "2022-05-24", 2, 01, 002, 001, "ADD001");
INSERT INTO Orders Values(012, "2022-08-11", 1, 03, 002, 002, "ADD002");
INSERT INTO Orders Values(013, "2021-12-12", 3, 03, 004, 003, "ADD003");
INSERT INTO Orders Values(014, "2022-01-09", 1, 04, 004, 004, "ADD004");
```

```
INSERT INTO Orders Values(015,"2022-05-12",2,05,005,005,"ADD005");
INSERT INTO Orders Values(016,"2021-04-28",2,02,006,006,"ADD006");
INSERT INTO Orders Values(017,"2021-04-25",2,05,005,005,"ADD005");
INSERT INTO Orders Values(018,"2021-07-05",2,02,006,006,"ADD006");
INSERT INTO Orders Values(019,"2022-05-22",1,07,006,007,"ADD007");
INSERT INTO Orders Values(020,"2021-08-29",1,08,006,009,"ADD008");
INSERT INTO Orders Values(021,null,2,02,003,006,"ADD003");
INSERT INTO Orders Values(022,null,3,04,002,005,"ADD005");
INSERT INTO Orders Values(023,null,1,05,004,002,"ADD008");
```

#insert payment

```
INSERT INTO Payment Values (1,'Gpay',1,2,1);
INSERT INTO Payment Values (2,'Cash',3,2,2);
INSERT INTO Payment Values (3,'Phonepe',3,4,3);
INSERT INTO Payment Values (4,'Apple pay',4,4,4);
INSERT INTO Payment Values (5,'Paytm',5,5,5);
INSERT INTO Payment Values (6,'Cash',2,6,6);
INSERT INTO Payment Values (7,'Gpay',7,6,7);
INSERT INTO Payment Values (8,'Applepay',8,6,8);
INSERT INTO Payment Values (9,'Applepay',9,6,9);
INSERT INTO Payment Values (10,'Phonepe',10,6,10);
INSERT INTO Payment Values (11,'Gpay',1,2,11);
INSERT INTO Payment Values (12,'Cash',3,2,12);
INSERT INTO Payment Values (13,'Phonepe',3,4,13);
INSERT INTO Payment Values (14,'Apple pay',4,4,14);
INSERT INTO Payment Values (15,'Paytm',5,5,15);
INSERT INTO Payment Values (16,'Cash',2,6,16);
INSERT INTO Payment Values (17,'Gpay',5,5,17);
```

```
INSERT INTO Payment Values (18,'Applepay',2,6,18);  
INSERT INTO Payment Values (19,'Applepay',7,6,19);  
INSERT INTO Payment Values (20,'Phonepe',8,6,20);
```

#insert Delivery

```
INSERT INTO Delivery Values(1,"4121 Bailey Avenue",001,01,15);  
INSERT INTO Delivery Values(2,"4252 Bailey Avenue",006,06,10);  
INSERT INTO Delivery Values(3,"5172 Bailey Avenue",007,07,11);  
INSERT INTO Delivery Values(4,"4132 Bailey Avenue",002,02,16);  
INSERT INTO Delivery Values(5,"15 Merimac",010,10,19);  
INSERT INTO Delivery Values(6,"14 Merimac",004,04,12);  
INSERT INTO Delivery Values(7,"78 Tyler",009,09,18);  
INSERT INTO Delivery Values(8,"66 Tyler",008,08,14);  
INSERT INTO Delivery Values(9,"53 Tyler",003,03,13);  
INSERT INTO Delivery Values(10,"63 Tyler",005,05,17);
```

Display Table Queries:

Add ons Table

Select * from add_ons;

addon_id	addon_name	quantity	item_type
ADD001	Sambar	1	Sides
ADD002	Filter Coffee	1	Drink
ADD003	Chutney	1	Sides
ADD004	Bonda	3	Snack
ADD005	Kesari	1	Dessert
ADD006	Payasam	1	Dessert
ADD007	Badam Milk	2	Drink
ADD008	Bajji	5	Snack
ADD009	Tea	1	Drink
ADD010	Coke	1	Drink
NULL	NULL	NULL	NULL

add_ons 188 x

Customer Table

Select * from customer;

customer_id	customer_name	customer_DOB	customer_phn_num	customer_address
1	Aravind	1999-09-09	23456789	4121 Bailey Ave
2	Varun	1997-03-21	98765432	4132 Bailey Ave
3	Roshan	2003-05-30	567894321	53 Tyler
4	Neha	1995-04-17	234567890	14 Merimac
5	Bindu	1992-06-05	7890643	63 Tyler
6	Samantha	2000-03-19	34567892	4252 Bailey Ave
7	Smruthi	1998-04-15	45678322	5172 Bailey Ave
8	Rashmika	1995-09-25	56789432	66 Tyler
9	Prabhas	1999-03-27	78965432	78 Tyler
10	Yashwanth	2001-02-02	89076543	15 Merimac
NULL	NULL	NULL	NULL	NULL

customer 189 x









Delivery Table

```
Select * from delivery;
```

Result Grid					
Filter Rows:		Edit:		Export/Import:	Wrap Cell Content:
delivery_id	delivery_address	order_id	customer_id	payment_id	
1	4121 Bailey Avenue	1	1	15	
2	4252 Bailey Avenue	6	6	10	
3	5172 Bailey Avenue	7	7	11	
4	4132 Bailey Avenue	2	2	16	
5	15 Merimac	10	10	19	
6	14 Merimac	4	4	12	
7	78 Tyler	9	9	18	
8	66 Tyler	8	8	14	
9	53 Tyler	3	3	13	
10	63 Tyler	5	5	17	
NULL	NULL	NULL	NULL	NULL	

Employee Table

```
Select * from employee;
```

<div> <div>Result Grid</div> <div>   Filter Rows: </div> <div> Edit:    </div> <div> Export/Import:   </div> <div> Wrap Cell Content:  </div> </div>						
	employee_id	employee_name	employee_DOB	employee_DOJ	employee_phn_num	designation
▶	1	Lalith	1990-08-23	2022-03-01	256718321	Chef
	2	Jyoshna	1947-08-13	2022-01-01	486634278	Manager
	3	Monisha	1996-02-09	2022-04-23	252144141	Chef
	4	Hruthika	1994-04-28	2022-05-11	244416321	Supervisor
	5	Sanjay	1997-12-16	2022-05-20	313433546	Manager
	6	Sai	1991-06-12	2022-06-19	827362515	Assistant
	7	Raju	1987-05-03	2022-07-11	351414441	Delivery Agent
	8	Mahendiran	1987-02-09	2022-07-12	826142363	Delivery Agent
	9	Kancharla	1994-07-06	2022-07-11	282351534	Server
	10	Tarun	1996-12-09	2022-06-14	721735141	Server
*	NULL	NULL	NULL	NULL	NULL	NULL

Menu Table

```
Select * from menu;
```

Result Grid					
Filter Rows:		Edit:		Export/Import:	
	item_id	item_name	item_type	price	quantity
1	Idly	Tiffin	15	2	
2	Dosa	Tiffin	30	1	
3	Poori	Tiffin	40	2	
4	Chapathi	Tiffin	50	2	
5	Upma	Tiffin	60	1	
6	Rasam Rice	Lunch	50	1	
7	Curd Rice	Lunch	70	1	
8	Soup	Snack	150	1	
9	Chat	Snack	90	1	
10	Parota	Dinner	80	1	
	NULL	NULL	NULL	NULL	NULL

#Order Table

```
Select * from orders;
```

[illegible]

Payment Table

Select * from payment;

Result Grid					
Filter Rows:		Edit:		Export/Import:	
Wrap Cell Content:					
	payment_id	payment_details	customer_id	employee_id	order_id
▶	1	Gpay	1	2	1
	2	Cash	3	2	2
	3	Phonepe	3	4	3
	4	Apple pay	4	4	4
	5	Paytm	5	5	5
	6	Cash	2	6	6
	7	Gpay	7	6	7
	8	Applepay	8	6	8
	9	Applepay	9	6	9
	10	Phonepe	10	6	10
	11	Gpay	1	2	11
	12	Cash	3	2	12
	13	Phonepe	3	4	13
	14	Apple pay	4	4	14
	15	Paytm	5	5	15
	16	Cash	2	6	16
	17	Gpay	5	5	17
	18	Applepay	2	6	18
	19	Applepay	7	6	19
	20	Phonepe	8	6	20
•	NULL	NULL	NULL	NULL	NULL

payment 194 x

Populated data and query output

Query 1: Employees whose name starts with S who billed more than two orders

```
Select E.employee_id as Employee_ID,  
       E.employee_name as Employee_Name,  
       count(P.payment_id) as No_of_transactions_handled  
From Employee as E  
JOIN Orders as O on E.employee_id = O.employee_id  
JOIN Payment as P on O.order_id = P.payment_id  
Where E.employee_name Like "S%"  
GROUP BY E.employee_id  
Having Count(P.payment_id)>2;
```

OUTPUT:

Result Grid Filter Rows: Export: Wrap Cell Content:			
	Employee_ID	Employee_Name	No_of_transactions_handled
▶	5	Sanjay	3
	6	Sai	9

Result 197 x

Query 2: Display summary of customers who paid using cash or apple pay and the type of item is Tiffin using string functions.

Select concat(upper(c.customer_name)," customer ID is ",c.customer_id," and order ID is ",o.order_id," bought ",m.item_name," , item code being ",LPAD(RPAD(substr(m.item_name,1,3),6,'#'),9,'#'), " was priced at \$",m.price) **as** String_Function_Statement

From customer c

JOIN orders o **on** c.customer_id=o.customer_id

JOIN menu m **on** o.item_id=m.item_id

JOIN payment p **on** o.order_id=p.order_id

where p.payment_details="Cash" or p.payment_details="Applepay" and m.item_type in ("Tiffin")

order by c.customer_name;

OUTPUT:

String_Function_Statement	
▶	ROSHAN customer ID is 3 and order ID is 2 bought Dosa , item code being ###Dos### was priced at \$30
	ROSHAN customer ID is 3 and order ID is 12 bought Dosa , item code being ###Dos### was priced at \$30
	VARUN customer ID is 2 and order ID is 6 bought Rasam Rice , item code being ###Ras### was priced at \$50
	VARUN customer ID is 2 and order ID is 16 bought Rasam Rice , item code being ###Ras### was priced at \$50

Result 200 x

Query 3: Display top 3 customer details who placed highest number of orders

```
Select c.customer_name as Customer_Name,  
       c.customer_id as Customer_ID,  
       o.order_id as Order_ID,  
       a.quantity as Quantity,  
       a.addon_id as Addon_ID,  
       Rank() Over(Order by a.quantity desc) as Rank_based_on_quantity  
From customer c  
JOIN orders o on c.customer_id=o.customer_id  
JOIN add_ons a on a.addon_id=o.addon_id  
GROUP BY c.customer_name  
Limit 3;  
OUTPUT:
```



Result Grid						
		Filter Rows:		Export:	Wrap Cell Content:	
	Customer_Name	Customer_ID	Order_ID	Quantity	Addon_ID	Rank_based_on_quantity
▶	Rashmika	8	8	5	ADD008	1
	Neha	4	4	3	ADD004	2
	Smruthi	7	7	2	ADD007	3

Result 201 x

Query 4: Display the customer details who have paid highest amount for the orders on an average.

```
Select c.customer_id as Customer_ID,  
       c.customer_name as Customer_Name,  
       TRUNCATE(AVG(m.price),2) as Average_Amount,  
       COUNT(o.order_id) as No_of_orders,  
       o.no_of_items as No_of_items  
from customer c  
JOIN orders o on c.customer_id = o.customer_id  
JOIN menu m on o.item_id=m.item_id  
where c.customer_id = (Select c.customer_id from customer c  
                       JOIN orders o on c.customer_id = o.customer_id  
                       JOIN menu m on o.item_id=m.item_id  
                       GROUP BY c.customer_id  
                       order by AVG(m.price) desc  
                       limit 1);
```

OUTPUT:




Result Grid					
Filter Rows:		Export:  Wrap Cell Content: 			
	Customer_ID	Customer_Name	Average_Amount	No_of_orders	No_of_items
▶	9	Prabhas	150.00	1	3

Result 202 x

Query 5: Display purchase history and the number of employees they have interacted with.

```
Select c.customer_id as Customer_ID,  
       c.customer_name as Customer_Name,  
       SUM(m.price) as Total_Amount,  
       COUNT (DISTINCT o.order_id) as No_of_orders,  
       COUNT (DISTINCT p.employee_id) as No_of_employees_interacted_with  
from customer c  
JOIN orders o on c.customer_id = o.customer_id  
JOIN menu m on o.item_id=m.item_id  
JOIN payment p on o.order_id = p.order_id  
GROUP BY c.customer_id  
order by sum(m.price) desc;
```

OUTPUT:

Result Grid  Filter Rows: <input type="text"/> Export:  Wrap Cell Content: 					
	Customer_ID	Customer_Name	Total_Amount	No_of_orders	No_of_employees_interacted_with
▶	5	Bindu	180	3	1
	8	Rashmika	180	2	1
	2	Varun	150	3	1
	9	Prabhas	150	1	1
	3	Roshan	140	4	2
	7	Smruthi	140	2	1
	4	Neha	100	2	1
	10	Yashwanth	80	1	1
	1	Aravind	30	2	1

Result 205 x

Query 6: Display employee's employment details i.e, no of months of employment, no of transactions handled and rank them based on the no of transactions. Displaying the total amount handled along with the rank.

```

Select e.employee_name as Employee_Name,
       e.employee_id as Employee_ID,
       e.designation as Designation,
       employee_DOJ as Date_of_JOINing,
       (TIMESTAMPDIFF( month,employee_DOJ,sysdate())) as No_of_months_of_employment,
       COUNT(p.payment_id) as No_of_transactions_handled ,
       dense_rank() over (partition by e.designation order by count(p.payment_id) desc ) as
       Rank_based_on_no_of_payments_handled,
       SUM(m.price) as Bill_Amount

FROM employee e

JOIN orders o on e.employee_id = o.employee_id

JOIN payment p on o.order_id = p.order_id

JOIN menu m on m.item_id = o.item_id

GROUP BY e.employee_name

order by Rank_based_on_no_of_payments_handled;

```

OUTPUT:

Result Grid								
		Filter Rows:		Export:		Wrap Cell Content:		
	Employee_Name	Employee_ID	Designation	Date_of_Joining	No_of_months_of_employment	No_of_transactions_handled	Rank_based_on_no_of_payments_handled	Bill_Amount
▶	Sai	6	Assistant	2022-06-19	5	9	1	700
	Jyoshna	2	Manager	2022-01-01	10	4	1	90
	Hruthika	4	Supervisor	2022-05-11	6	4	1	180
	Sanjay	5	Manager	2022-05-20	6	3	2	180

Query 7: Displaying all the orders which don't have an order date and by using Coalesce function replacing null values with 'Not Recorded' text. Displaying the maximum and minimum price of each order whose order date is not recorded.

```
SELECT c.customer_name as Customer_Name,  
       m.price as Price,  
       o.order_date as Order_Date,  
       COALESCE(o.order_date,"Not Recorded") as Order_date_Rewritten
```

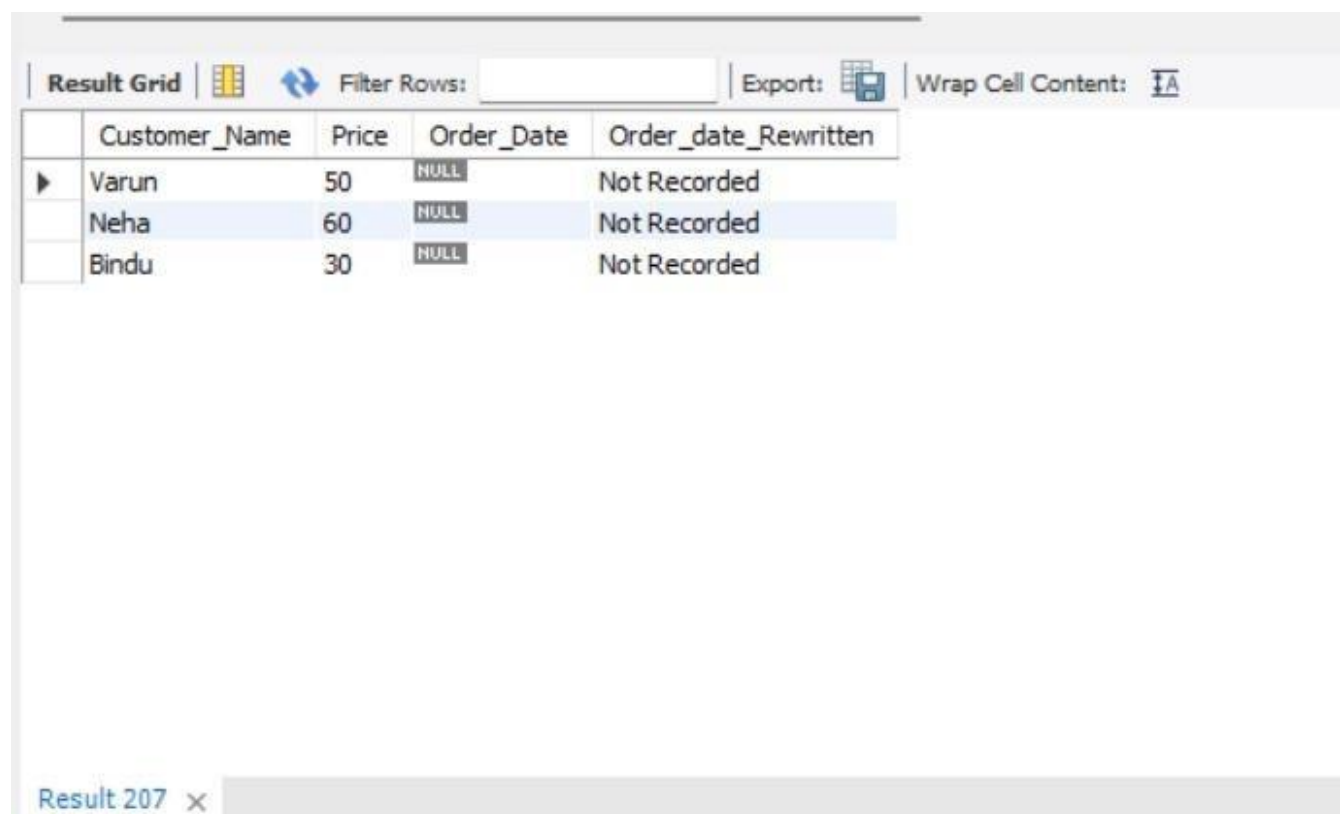
```
FROM customer c
```

```
Right OUTER JOIN orders o on c.customer_id=o.customer_id
```

```
JOIN menu m on m.item_id=o.item_id
```

```
where o.order_date is NULL;
```

OUTPUT:

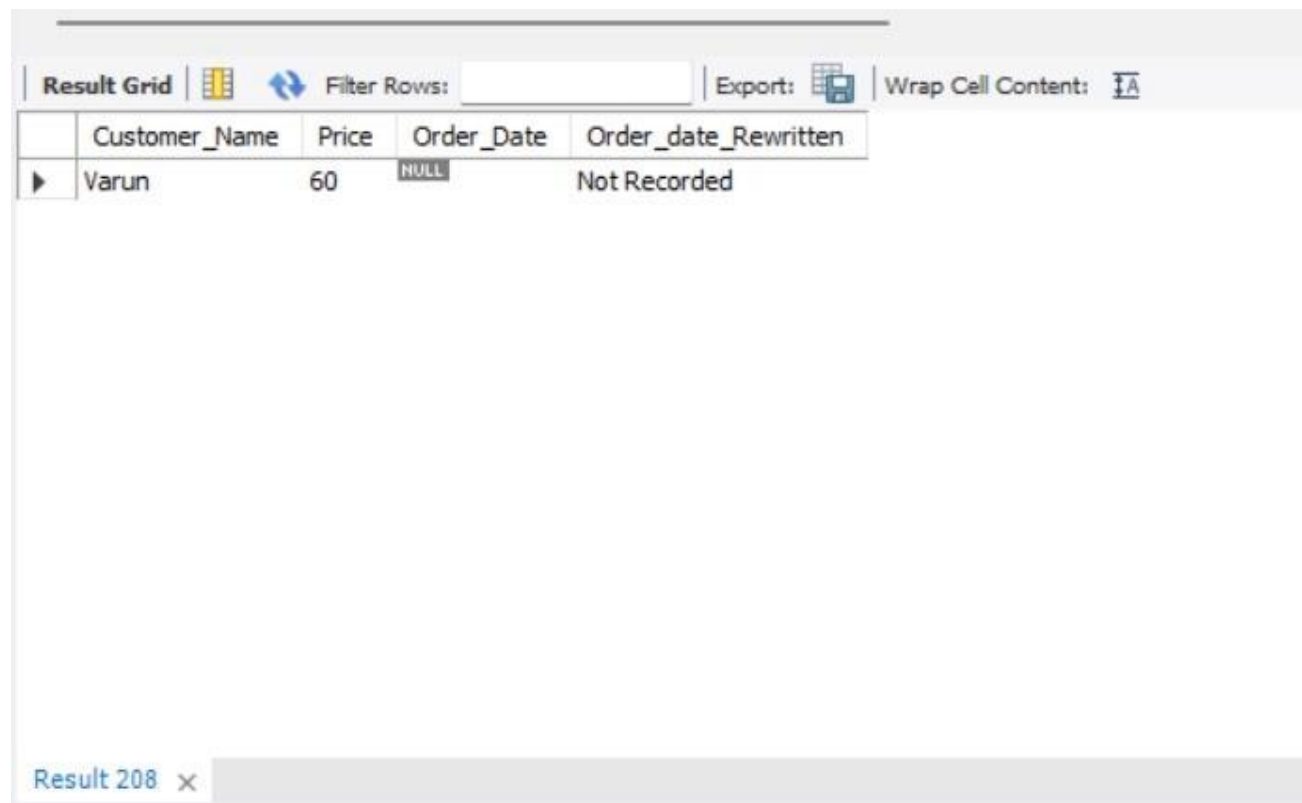


The screenshot shows a database query result grid with the following columns: Customer_Name, Price, Order_Date, and Order_date_Rewritten. The grid contains three rows of data, all of which have NULL values for Order_Date and 'Not Recorded' for Order_date_Rewritten. The interface includes a 'Result Grid' tab, a 'Filter Rows' input field, an 'Export' button, and a 'Wrap Cell Content' toggle. The result is labeled 'Result 207'.

	Customer_Name	Price	Order_Date	Order_date_Rewritten
▶	Varun	50	NULL	Not Recorded
	Neha	60	NULL	Not Recorded
	Bindu	30	NULL	Not Recorded


```
SELECT c.customer_name as Customer_Name,  
       max(m.price) as Price,  
       o.order_date as Order_Date,  
       COALESCE (o.order_date,"Not Recorded") as Order_date_Rewritten  
FROM customer c  
Right OUTER JOIN orders o on c.customer_id=o.customer_id  
JOIN menu m on m.item_id=o.item_id  
where o.order_date is NULL;
```

OUTPUT:

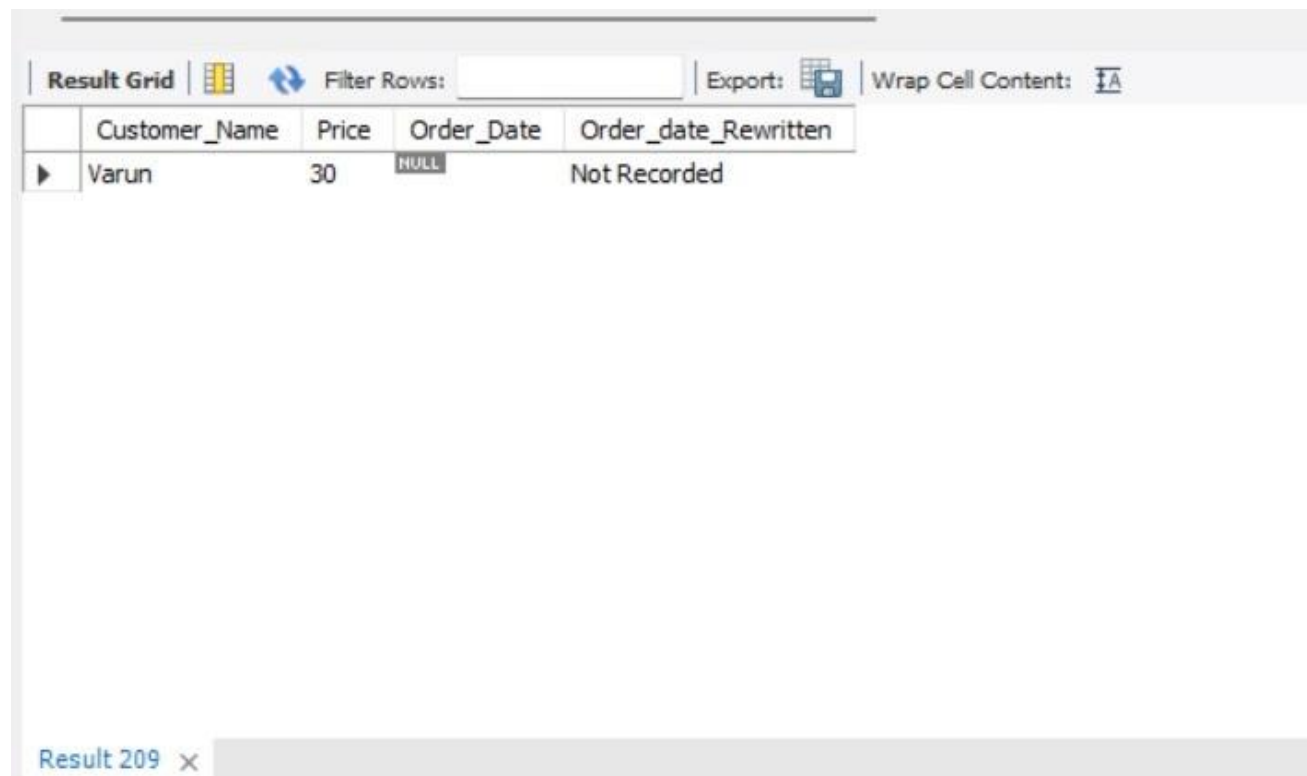


The screenshot shows a database query result grid. The grid has a toolbar at the top with options like 'Result Grid', 'Filter Rows', 'Export', and 'Wrap Cell Content'. The grid itself has four columns: 'Customer_Name', 'Price', 'Order_Date', and 'Order_date_Rewritten'. There is one row of data with the following values: 'Varun', '60', 'NULL', and 'Not Recorded'. The 'Order_Date' cell is highlighted with a red border and the word 'NULL' is written inside it. At the bottom left, there is a tab labeled 'Result 208'.

	Customer_Name	Price	Order_Date	Order_date_Rewritten
▶	Varun	60	NULL	Not Recorded

```
SELECT c.customer_name as Customer_Name,  
       MIN(m.price) as Price,  
       o.order_date as Order_Date,  
       COALESCE (o.order_date,"Not Recorded") as Order_date_Rewritten  
FROM customer c  
Right OUTER JOIN orders o on c.customer_id=o.customer_id  
JOIN menu m on m.item_id=o.item_id  
where o.order_date is NULL;
```

OUTPUT:



The screenshot shows a database query result grid. The grid has a header row with columns: Customer_Name, Price, Order_Date, and Order_date_Rewritten. The first data row shows the customer 'Varun' with a price of 30, an order date of NULL, and a rewritten order date of 'Not Recorded'. The interface includes a 'Result Grid' tab, a 'Filter Rows' search bar, an 'Export' button, and a 'Wrap Cell Content' checkbox. The bottom of the window shows a tab labeled 'Result 209'.

	Customer_Name	Price	Order_Date	Order_date_Rewritten
▶	Varun	30	NULL	Not Recorded