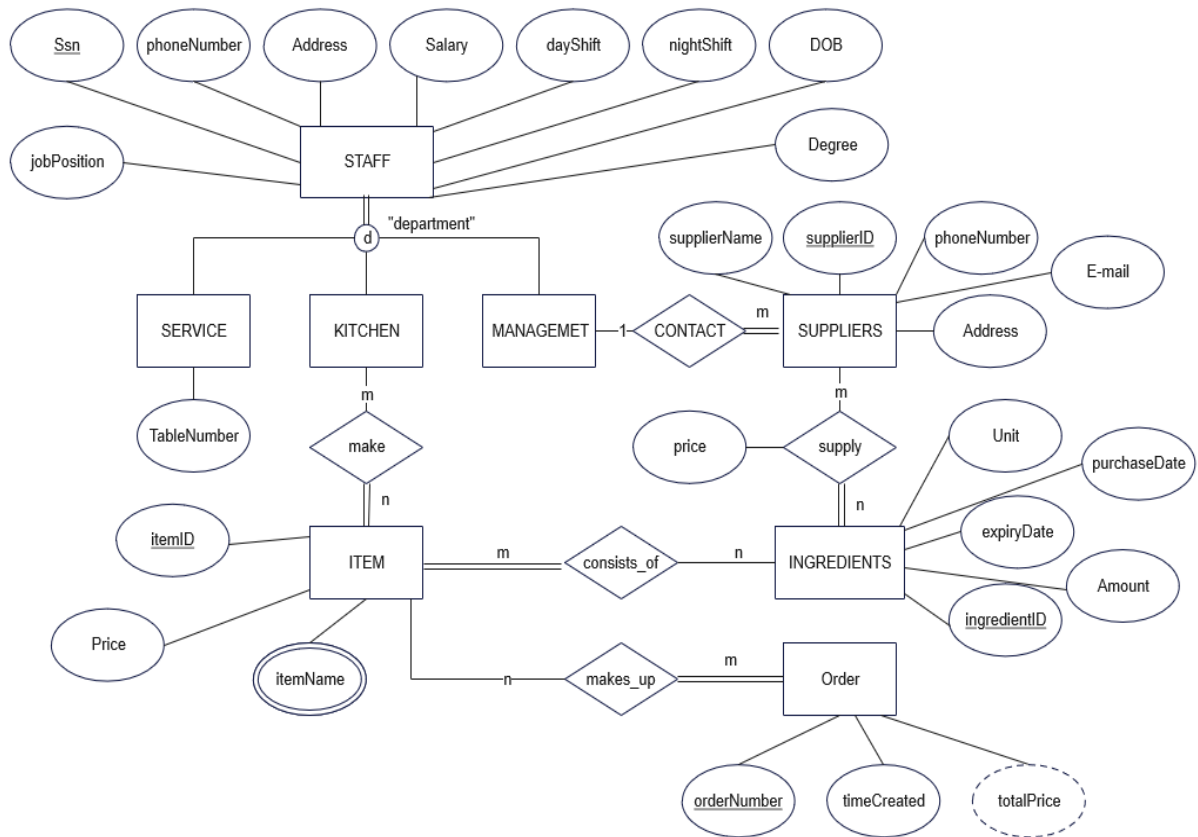# Restaurant Management System Database

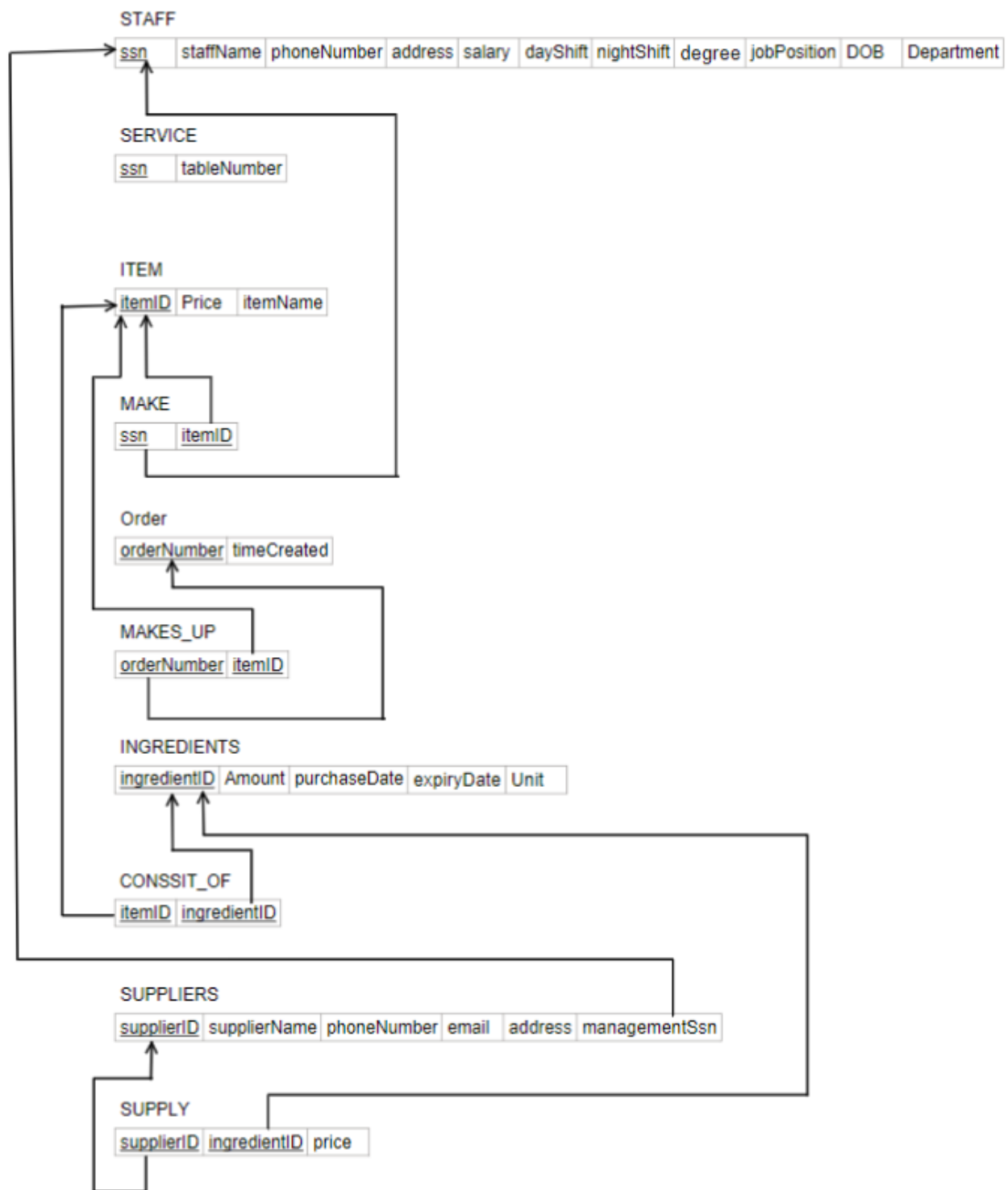| Name	عبد الرحمن يوسف أحمد الشبيني	مريم أحمد عبد العزيز عجور	عمر عبد الله محمد المغاوري يس	مريم هاني فوزي عوض	ميرنا خالد البدوي
Section	3	4	3	4	5
Code	1700776	1701396	1700884	1701410	18x0029
Contribution	● Problem statement. ● DDL ● Some queries	● EER Diagram, ● some queries ● DDL	● Relational diagram ● DDL ● Some queries	● EER Diagram ● Some queries ● DDL	● Relational diagram ● Some queries ● DDL

Problem statement

- A Restaurant Management System requires the use of a properly designed database.
- The Staff is divided into three main categories: kitchen staff, service staff, and management.
- The following data is required for each staff member: SSN, phone number, birthdate, address, salary, and time of shift.
- It is also required to keep a history of all the orders made; This includes the menu items of that order, the total bill, and its data and time.
- Each menu item is either a food or drink, it is known what ingredients are used to make it.
- The ingredients are supplied by various suppliers (companies, butchers, green grocers, fishmongers).
- Multiple suppliers for the same ingredient can exist in case of problems with one of them and price comparisons.
- Suppliers are contacted via phone or email. It should be known how much of an ingredient the restaurant has (in amount and units), and each item's purchase data and expiry date.

EER Diagram:

STAFF attributes: Ssn, phoneNumber, Address, Salary, dayShift, nightShift, DOB, Degree, jobPosition

"department" (d): SERVICE, KITCHEN, MANAGEMET

SERVICE — TableNumber

KITCHEN — m — make — n — ITEM

ITEM attributes: itemID, Price, itemName

ITEM — m — consists_of — n — INGREDIENTS

INGREDIENTS attributes: Unit, purchaseDate, expiryDate, Amount, ingredientID

MANAGEMET — 1 — CONTACT — m — SUPPLIERS

SUPPLIERS attributes: supplierName, supplierID, phoneNumber, E-mail, Address

SUPPLIERS — m — supply — n — INGREDIENTS, price

ITEM — n — makes_up — m — Order

Order attributes: orderNumber, timeCreated, totalPrice

Relational Diagram:

STAFF

ssn	staffName	phoneNumber	address	salary	dayShift	nightShift	degree	jobPosition	DOB	Department

SERVICE

ssn	tableNumber

ITEM

itemID	Price	itemName

MAKE

ssn	itemID

Order

orderNumber	timeCreated

MAKES_UP

orderNumber	itemID

INGREDIENTS

ingredientID	Amount	purchaseDate	expiryDate	Unit

CONSSIT_OF

itemID	ingredientID

SUPPLIERS

supplierID	supplierName	phoneNumber	email	address	managementSsn

SUPPLY

supplierID	ingredientID	price

Screenshots of some useful queries:

1)

```
/*give the price for every orders*/
SELECT M.OrderNumber ,SUM(price) AS TotalPrice
FROM ITEM AS I,FOODORDER AS O,MAKES_UP AS M
WHERE M.OrderNumber = O.orederNumber AND I.item_ID = M.ItemID
GROUP BY M.OrderNumber;
```

100 %

Results | Messages

	OrderNumber	TotalPrice
1	1	250
2	2	150
3	3	150
4	4	100
5	5	100
6	6	130

2)

```
/*give the price of that i paid to every suppliers*/
SELECT SU.supplierName ,SUM(price) as totalPrice
FROM SUPPLY AS S, INGREDIENTS AS I, SUPPLIERS AS SU
WHERE S.ingredientID = I.ingredientID AND S.supplierID = SU.supplierID
GROUP BY SU.supplierID, SU.supplierName;
```

100 %

Results | Messages

	supplierName	totalPrice
1	Wataneya	200
2	Elsallab	158

3)

```sql
/*give the price of the ingredients that comes from el sallab*/
SELECT I.ingredientID ,price,SU.supplierName
FROM SUPPLY AS S, INGREDIENTS AS I, SUPPLIERS AS SU
WHERE S.ingredientID = I.ingredientID AND S.supplierID = SU.supplierID
AND SU.supplierName = 'Elsallab';
```

100 %

Results | Messages

	ingredientID	price	supplierName
1	Chicken spice blend	23	Elsallab
2	Meat	110	Elsallab
3	Pepper	15	Elsallab
4	Salt	10	Elsallab

4)

```sql
/*give the person that has the max salary*/
SELECT staffName, salary as maxSalary/**/
FROM STAFF
WHERE salary in ( SELECT MAX(salary)
                    fROM STAFF)
```

100 %

Results | Messages

	staffName	maxSalary
1	Omar Abdallah	100000

5)

```sql
/*give me the suppliers and the conents who works with the highst salary above than 10k*/
SELECT supplierName , email
From (SUPPLIERS AS I LEFT OUTER JOIN  STAFF AS J
    ON I.managementSSN = J.ssn)
WHERE J.salary>10000;
```

100 %

Results | Messages

	supplierName	email
1	Wataneya	wataneya_sales@gmail.com
2	Elsallab	sales@elsallab.com

5)

```
/*people works in night shift only */
SELECT staffName,salary
FROM STAFF
WHERE nightShift='yes' AND dayShift='no';
```

100 %

Results | Messages

	staffName	salary
1	Mariam Hany	1000

6)

```
/*give the orders than contains ingrediants has nearest expiry date*/
SELECT orederNumber , I.ingredientID,I.expiryDate
FROM INGREDIENTS AS I , ITEM AS T, FOODORDER AS F, CONSISTS_OF AS C, MAKES_UP AS M
WHERE C.ingredientID=I.ingredientID AND C.itemID=T.item_ID
AND F.orederNumber=M.OrderNumber AND M.ItemID=T.item_ID
AND I.expiryDate < ALL(SELECT expiryDate
                        FROM INGREDIENTS AS ING
                        WHERE I.expiryDate != expiryDate)
ORDER  BY I.expiryDate;
```

100 %

Results | Messages

	orederNumber	ingredientID	expiryDate
1	1	Chicken	2022-01-30 00:00:00.000
2	4	Chicken	2022-01-30 00:00:00.000
3	5	Chicken	2022-01-30 00:00:00.000
4	1	Meat	2022-01-30 00:00:00.000
5	6	Meat	2022-01-30 00:00:00.000
6	2	Meat	2022-01-30 00:00:00.000
7	3	Meat	2022-01-30 00:00:00.000

7)

```
/*give all dishes and drinks than contains k*/
SELECT * FROM ITEM WHERE itemName LIKE '%K%'
```

100 %

▦ Results 📄 Messages

	item_ID	price	itemName
1	1	150	Kabab 1kg
2	2	130	Kofta 1kg
3	3	150	Mix 1kg
4	4	100	Grilled Chicken

8)

```
/*give all dishes and drinks and the people who make them and contents*/
SELECT staffName,itemName , phoneNumber
FROM STAFF AS S,ITEM AS I, MAKE AS M
WHERE M.ssn=S.ssn AND M.itemID =I.item_ID AND  I.itemName='Grilled Chicken';
```

100 %

▦ Results 📄 Messages

	staffName	itemName	phoneNumber
1	Abdurrahman Eshibiny	Grilled Chicken	77777777

9)

```
/*give staffName, degree, salary and order them by salary*/
SELECT staffName, degree, salary FROM STAFF
ORDER BY salary;
```

	staffName	degree	salary
1	Abdurrahman Eshibiny	Primary education	500
2	Mariam Hany	Bsc of Engineering	1000
3	Mema Khaled	Bsc of Engineering, Ain Shams	2000
4	Mariam Aggour	Bachelor of Engineering, AinshamsU	2677
5	Omar Abdullah	CHIF	3000
6	HOSSAM	COOKING PHD, Ain shames	10200
7	Omar Abdallah	Bachelor of engineering	100000

10)

```
/*give all dishes and drinks and the people who make them and the price*/
SELECT staffName, itemName as Dish,price FROM STAFF AS S,ITEM AS I, MAKE AS M
WHERE M.ssn=S.ssn AND M.itemID =I.item_ID;
```

	staffName	Dish	price
1	Mema Khaled	Mix 1kg	150
2	Mariam Aggour	ice coffes	120
3	HOSSAM	green tea	120
4	Abdurrahman Eshibiny	Kabab 1kg	150
5	Abdurrahman Eshibiny	Kofta 1kg	130
6	Abdurrahman Eshibiny	Grilled Chicken	100

11)

```
/*give me every thing about staff*/
SELECT * FROM STAFF;
```

	ssn	staffName	phoneNumber	address	salary	dayShift	nightShift	degree	jopPosition	DOB	department
1	1234	Mema Khaled	07775000	4 Siwa st, Cairo	2000	yes	no	Bsc of Engineering, Ain Shams	Dish washer	1999-05-05	Kitchen
2	3333	Mariam Hany	87654321	NULL	1000	no	yes	Bsc of Engineering	Waiter	1999-08-08	Service
3	4444	Mariam Aggour	12345678	NULL	2677	yes	no	Bachelor of Engineering, AinshamsU	Accountant	1998-02-02	Management
4	5555	Omar Abdallah	66666666	68 Elsalam city	100000	yes	no	Bachelor of engineering	Restaurant Manager	1999-10-10	Management
5	6666	HOSSAM	011234564	PARIS	10200	yes	yes	COOKING PHD, Ain shames	Cleaner	1960-03-05	service
6	8888	Abdurrahman Eshibiny	77777777	42 wallabi st, Sydney	500	yes	yes	Primary education	Sous chef	1999-08-05	Kitchen
7	132456	Omar Abdullah	01011179003	paris	3000	YES	NO	CHIF	NULL	1999-10-01	KITCHEN