DBMS Project Report

Title: CafeHouse Database Projects

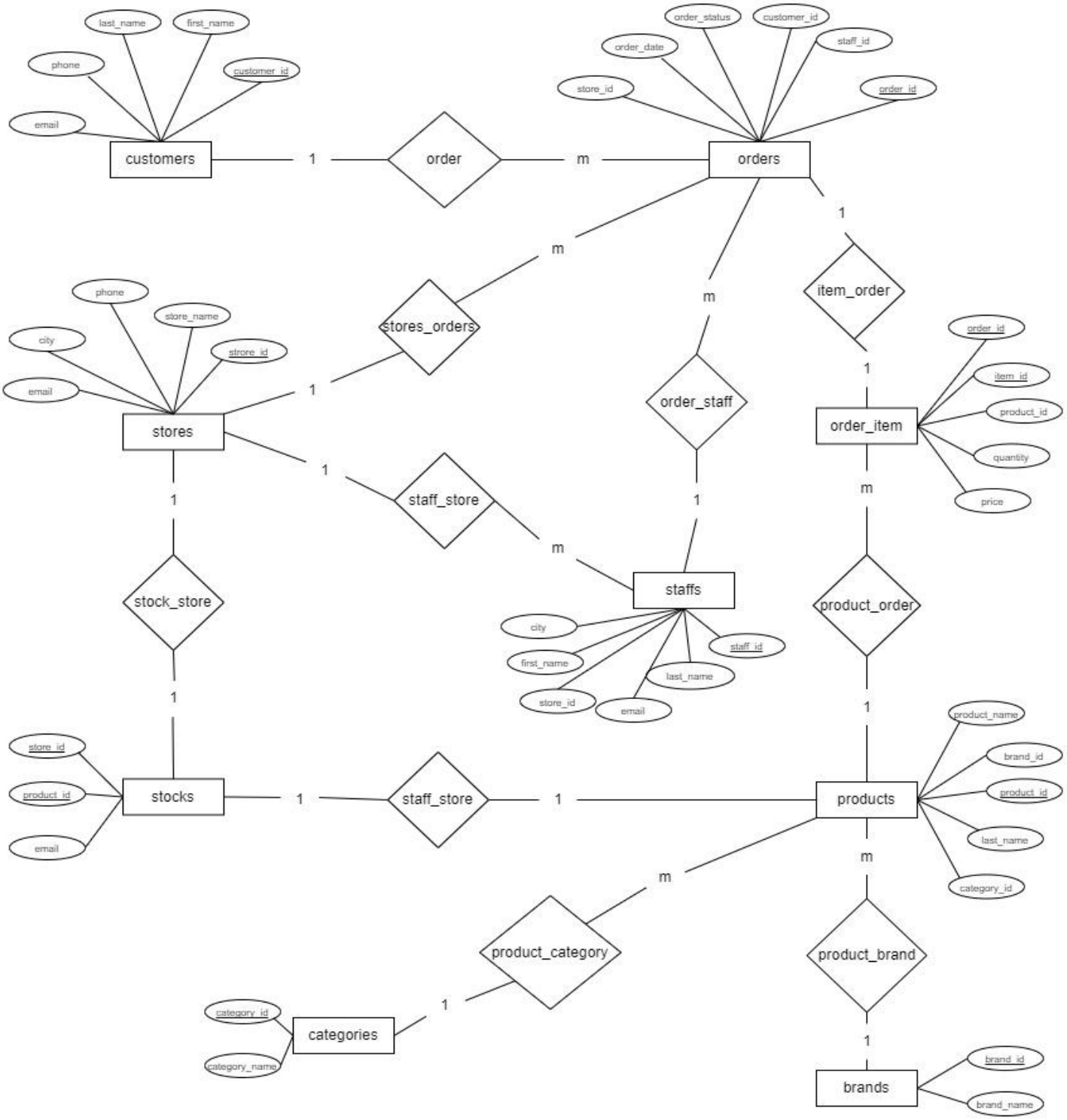
Team :

201504008 - OLCAY HAN KORKUT- COMPUTER ENGINEERING
201504038- MELİH EMRE KAYA- COMPUTER ENGINEERING
201504034 - HAKAN YAVAŞ - COMPUTER ENGINEERING

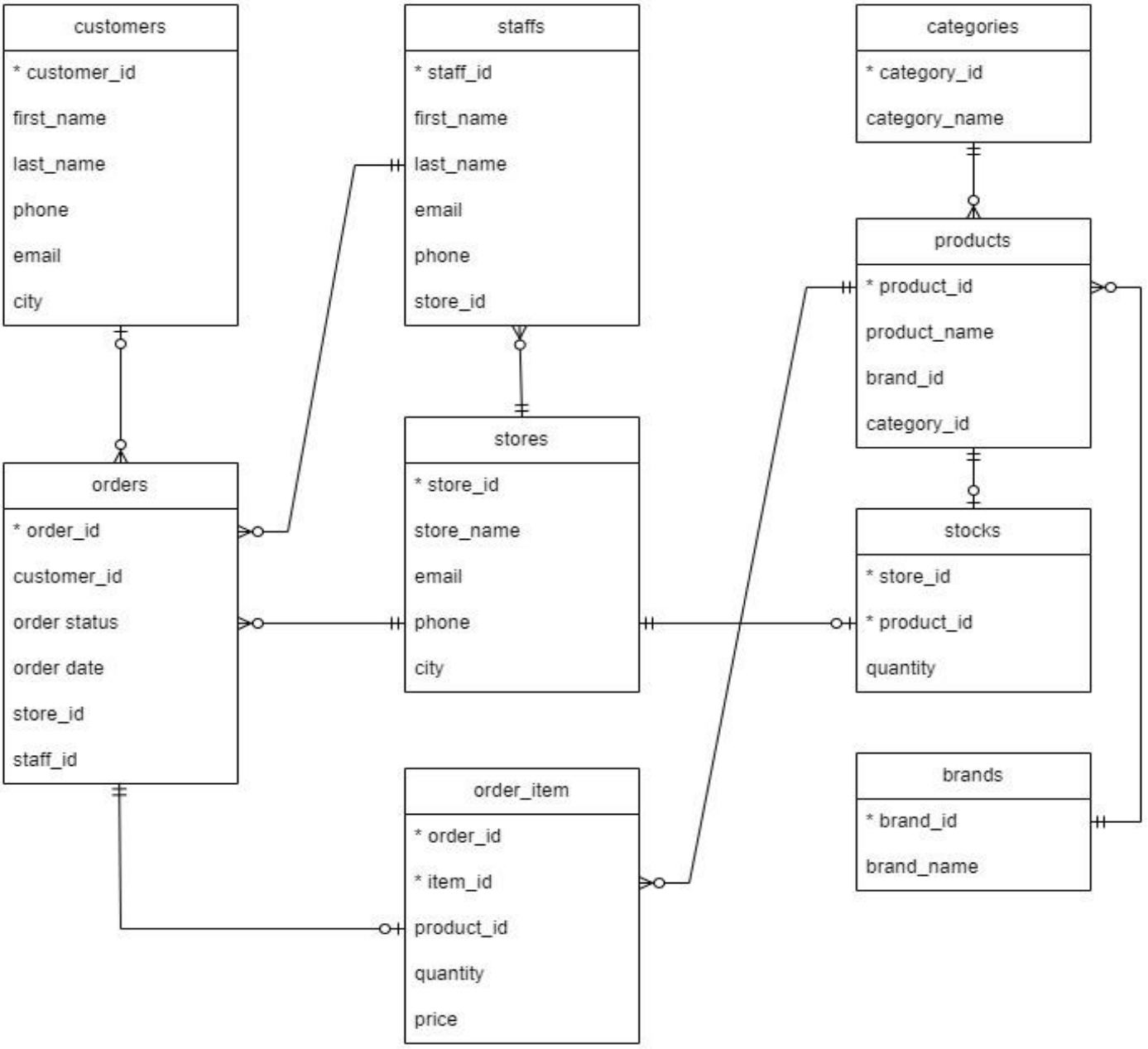
Project Objective and Scope

The CafeHouse project is developed to hold and handle the data of a cafe. If the cafe has order this order is tracked by the database and gives information to the front-end side. We do have not a front-end side but our project has developed properly for the front-end side. Our database has all stores and their stock information in the database in this way you can see all stock and store information.

ER Diagram


customers
last_name
first_name
phone
customer_id
email
order
orders
order_status
customer_id
order_date
staff_id
store_id
order_id
1
m
stores_orders
stores
phone
store_name
city
strore_id
email
order_staff
item_order
order_item
order_id
item_id
product_id
quantity
price
staff_store
staffs
city
staff_id
first_name
last_name
store_id
email
stock_store
product_order
stocks
store_id
product_id
email
products
product_name
brand_id
product_id
last_name
category_id
product_category
product_brand
categories
category_id
category_name
brands
brand_id
brand_name

The database schema



Explanation of queries you provide in detail

1-) Finding the number of orders completed on a given date:

```
SELECT count(*) FROM orders WHERE order_date = '04-MAY-23 08.35.30.45 AM' AND order_status = ‘Delivered’;
```

COUNT(*)
1

2-) Fetch an order's date, total price, and customer name:

```
SELECT o.order_date, oi.price, c.first_name, c.last_name

FROM orders o

INNER JOIN customers c ON o.customer_id = c.customer_id

INNER JOIN order_item oi ON o.order_id = oi.order_id

WHERE o.order_id = 100001;
```

ORDER_DATE	PRICE	FIRST_NAME	LAST_NAME
05-MAY-23 09.25.30.450000 AM	40	Nalan	Erdem

3-) Fetch an employee's name, surname, email and phone number:

```
SELECT first_name, last_name, email, phone FROM staffs WHERE staff_id = 1000;
```

FIRST_NAME	LAST_NAME	EMAIL	PHONE
Ahmet	Yılmaz	ahmet@gmail.com	05121251412

4-) Fetch a customer's first name, last name, email address, and phone number:

```
SELECT first_name, last_name, email, phone FROM customers WHERE customer_id = 10008;
```

FIRST_NAME	LAST_NAME	EMAIL	PHONE
Fuat	Öztürk	fuat@gmail.com	05316478568

5-) Finding the total product quantity for a given order:

```
SELECT SUM(quantity) FROM order_item WHERE order_id = 100009;
```

SUM(QUANTITY)
4

6-) Fetch a product's name, brand, category, and price:

```
SELECT p.product_name, p.brand_id, p.category_id, oi.price
FROM products p
INNER JOIN order_item oi ON p.product_id = oi.product_id
WHERE p.product_id = 503;
```

PRODUCT_NAME	BRAND_ID	CATEGORY_ID	PRICE
Gold	2	10	40

7-) Finding the number of products in a given category:

```
SELECT COUNT(*) FROM products WHERE category_id = 11;
```

COUNT(*)
5

8-) Finding the average price of products in a certain price range:

```
SELECT ROUND(AVG(oi.price))
FROM order_item oi
WHERE oi.price BETWEEN 10 AND 50;
```

ROUND(AVG(OI.PRICE))
33

9-) Fetch a store's name, city, and address:

```
SELECT store_name, city FROM stores WHERE store_id = 200;
```

STORE_NAME	CITY
Bursa C-House	Bursa

10-) Find the name and stock quantity of the product with the minimum stock quantity:

```
SELECT p.product_name, s.quantity

FROM stocks s

INNER JOIN products p ON s.product_id = p.product_id

WHERE s.store_id = 300

ORDER BY s.quantity ASC

fetch next 1 rows only;
```

PRODUCT_NAME	QUANTITY
Cold Brew Haselnuss	40

11-) Find the store with the largest number of stocks:

```
SELECT s.store_id, SUM(s.quantity) AS total_stock

FROM stocks s

GROUP BY s.store_id

ORDER BY total_stock DESC

fetch next 1 rows only;
```

STORE_ID	TOTAL_STOCK
100	350

12-) Find the most expensive product of a particular category:

```
SELECT p.product_name, oi.price
FROM order_item oi
INNER JOIN products p ON oi.product_id = p.product_id
INNER JOIN categories c ON p.category_id = c.category_id
WHERE c.category_name = 'Hot'
ORDER BY oi.price DESC
fetch next 1 rows only;
```

PRODUCT_NAME	PRICE
Monarch	150

13-) Finding the total number of orders in a given date range:

```
SELECT COUNT(*) AS total_orders
FROM orders
WHERE order_date BETWEEN '01-MAY-23 08.35.30.450000 AM' AND '10-JULY-23 08.35.30.450000 AM';
```

TOTAL_ORDERS
6

14-) Find the name, surname and total number of orders of the customer with the most orders:

```
SELECT c.first_name, c.last_name, COUNT(o.order_id) AS total_orders
FROM customers c
INNER JOIN orders o ON c.customer_id = o.customer_id
GROUP BY c.first_name, c.last_name
ORDER BY COUNT(o.order_id) DESC
fetch next 1 rows only;
```

FIRST_NAME	LAST_NAME	TOTAL_ORDERS
Beyza	Genc	1

15-) Find the name, total quantity and revenue of the most products:

```
SELECT p.product_name, SUM(oi.quantity) AS total_quantity, SUM(oi.price) AS total_income
FROM order_item oi
INNER JOIN products p ON oi.product_id = p.product_id
GROUP BY p.product_name, oi.quantity, oi.price
ORDER BY total_quantity DESC
fetch next 1 rows only;
```

PRODUCT_NAME	TOTAL_QUANTITY	TOTAL_INCOME
Monarch	6	150

16-) Find the name and price of the lowest priced product:

```
SELECT p.product_name, oi.price
FROM order_item oi
INNER JOIN products p ON oi.product_id = p.product_id
WHERE oi.price = (SELECT MIN(price) FROM order_item)
fetch next 1 rows only;
```

PRODUCT_NAME	PRICE
Xpress Caramel	25

17-) Find the total number of orders and total sales for a given date range:

```
SELECT COUNT(DISTINCT o.order_id) AS total_orders, SUM(oi.price) AS total_sales
FROM orders o
INNER JOIN order_item oi ON o.order_id = oi.order_id
WHERE o.order_date BETWEEN '01-JUNE-23 08.35.30.450000 AM' AND '10-AUG-23 08.35.30.450000 AM';
```

TOTAL_ORDERS	TOTAL_SALES
7	530

18-) Find stock quantity and total value of all products in a particular store:

```
SELECT SUM(s.quantity) AS total_quantity, SUM(oi.price * s.quantity) AS total_value
FROM stocks s
INNER JOIN order_item oi ON s.product_id = oi.product_id
WHERE s.store_id = 300;
```

TOTAL_QUANTITY	TOTAL_VALUE
280	21200

19-) Find the name and price of the cheapest product in a given category:

```
SELECT p.product_name, oi.price
FROM order_item oi
INNER JOIN products p ON oi.product_id = p.product_id
INNER JOIN categories c ON p.category_id = c.category_id
WHERE c.category_name = 'Milky'
ORDER BY oi.price ASC
fetch next 1 rows only;
```

PRODUCT_NAME	PRICE
Ottoman Coffee	30

20-) Fetch a given customer's last order date, total spend, and products from their most recent order:

```
SELECT o.order_date, oi.price, p.product_name
FROM orders o
INNER JOIN order_item oi ON o.order_id = oi.order_id
INNER JOIN products p ON oi.product_id = p.product_id
WHERE o.customer_id = 10014
GROUP BY o.order_date, oi.price, p.product_name
ORDER BY o.order_date DESC
fetch next 1 rows only;
```

ORDER_DATE	PRICE	PRODUCT_NAME
13-JUL-23 05.27.30.450000 PM	75	Iced Coffee