# Assignment: Exploring GROUP BY and Aggregation

**Question 1:**

Retrieve the total number of orders placed by each user. Display the user's name and the total number of orders they have placed. Sort the results in descending order based on the number of orders.

**Solution:**

```
SELECT U.NAME, COUNT(O.ORDER_ID) AS 'NUMBER OF ORDERS'
FROM ORDERS O
JOIN USER_INFO U
ON O.USER_ID = U.ID
GROUP BY U.NAME
ORDER BY COUNT(O.ORDER_ID) DESC;
```

**Question 2:**

Find the average price of menu items for each restaurant. Display the restaurant name and the average menu item price. Sort the results in ascending order based on the restaurant name.

**Solution:**

```
SELECT R.NAME, AVG(M.PRICE)
FROM MENUITEMS M
JOIN RESTAURANT_INFO R
ON M.RESTAURANT_ID  = R.RESTAURANT_ID
GROUP BY R.NAME
ORDER BY R.NAME ASC;
```

**Question 3:**

Identify the restaurant with the highest total sales (sum of order amounts). Display the restaurant name and the total sales amount.

**Solution:**

```
SELECT R.NAME, SUM(O.TOTAL_AMOUNT) AS 'TOTAL SALES'

FROM ORDERS O

JOIN RESTAURANT_INFO R

ON O.RESTAURANT_ID = R.RESTAURANT_ID

GROUP BY R.NAME;
```

**Question 4:**

Find the number of orders placed in each city. Display the city name and the number of orders. Sort the results in descending order based on the number of orders.

**Solution:**

```
SELECT C.CITY_NAME AS 'CITY', SUM(O.ORDER_ID) AS 'TOTAL ORDER'

FROM CITY C

JOIN USER_INFO U

ON C.CITY_ID = U.CITY_ID

JOIN ORDERS O

ON U.ID = O.USER_ID

GROUP BY C.CITY_NAME

ORDER BY SUM(O.ORDER_ID) DESC

;
```