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.

ANS:

```
SELECT
    U.name,
    COUNT(O.order_id) AS TotalOrders
FROM
    User_info U
LEFT JOIN
     Orders O
ON
    U.ID = O.user_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.

ANS:

```
SELECT
    R.name,
    AVG(M.price) AS AVERAGE_PRICE
FROM
    Restaurant_info R
LEFT JOIN
    MenuItems M
ON
    R.restaurant_id = M.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.

ANS:

```
SELECT
    R.name,
    SUM(O.total_amount) AS 'TOTAL SALES'
FROM
     Restaurant_info R
LEFT JOIN
     Orders O
ON
    R.restaurant_id = O.restaurant_id
GROUP BY
    R.name
ORDER BY
    SUM(O.total_amount) DESC
LIMIT 1;
```

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.

ANS:

```
SELECT
    C.city_name,
    COUNT(O.order_id) AS 'Total Orders'
FROM
    city C
JOIN
    Restaurant_info R
ON
    C.city_id = R.city_id
LEFT JOIN
    Orders O
ON
    R.restaurant_id = O.restaurant_id
GROUP BY
    C.city_name
ORDER BY
    COUNT(O.order_id) DESC;
```