Dvdrental Database

1) The management is running a promotion to reward the top 5 customers with coupons. What are the "customer_id" of the top 5 customers by total spend in the ***"payment"*** table?
   SELECT customer_id AS top_5_customers
   FROM payment
   GROUP BY customer_id
   ORDER BY SUM(amount) DESC
   LIMIT 5;

2) Write an SQL query to determine the maximum payment for each customer from the ***"payment"*** table. The "customer_id" should be between 100 and 119. Return "customer_id" and maximum amount.
   SELECT customer_id, MAX(amount) AS max_amount
   FROM payment
   WHERE customer_id BETWEEN 100 AND 119
   GROUP BY customer_id;

3) Write a query to get the average replacement cost for each film rating from the ***"film"*** table, considering only films with a "rental_rate" greater than or equal to $4.99. Display the results with the highest average replacement cost at the top.
   SELECT rating, AVG(replacement_cost) AS avg_replacement_cost
   FROM film
   WHERE rental_rate >= 4.99
   GROUP BY rating
   ORDER BY avg_replacement_cost DESC;

4) Write a query to determine the maximum payment for 5 customers with customer_ids (314, 12, 123, 234, 456) from the ***"payment"*** table. Return "customer_id" and the maximum amount.

```
SELECT customer_id, MAX(amount) AS max_amount
FROM payment
WHERE customer_id IN (314, 12, 123, 234, 456)
GROUP BY customer_id;
```

Northwind Database

5) Write a query to find the distinct city names from the "ship_city" column in the ***"orders"*** table, along with the number of orders placed for each city, and return the top three cities with the highest number of orders.

```
SELECT DISTINCT ship_city, COUNT(*) AS number_of_orders
FROM orders
GROUP BY ship_city
ORDER BY number_of_orders DESC
LIMIT 3;
```

6) The ***"orders"*** table has a column called *"ship_via"*, which stores company IDs (encoded as numerical digits). Write a query that uses the *"ship_via"* column to find which shipping company has the greatest number of orders. Then, manually look up the corresponding company name from the ***"shippers"*** table. Report the number of orders and company name.

Hint: First, find the *"ship_via"* value with the most orders, and then refer to the ***"shippers"*** table to match the *"ship_via"* ID with its company name.

```
SELECT ship_via, COUNT(*) AS number_of_orders

FROM orders

GROUP BY ship_via

ORDER BY number_of_orders DESC

LIMIT 1;
```

The company with the most orders(**326**) is **United Package** with Shipper ID **2**.

7) List the categories (category_id) that have more than 3 products in the "***products"*** table. Only include products with a unit price between $10 and $30. Then, refer to the **"categories"** table to match the category_id with category name and report the names of these categories.

SELECT category_id
FROM products
WHERE unit_price BETWEEN 10 AND 30
GROUP BY category_id
HAVING COUNT(*) > 3;

Categories that have more than 3 products with a unit price between $10 and $30:
1 : Beverages
2 : Condiments
3 : Confections
8 : Seafood