Creating Carnival Reports

Carnival would like to harness the full power of reporting. Let's begin to look further at querying the data in our tables. Carnival would like to understand more about their business and needs you to help them build some reports.

Goal

- Below are some desired reports that Carnival would like to see. Use your query knowledge to find the following metrics.

Employee Reports

Best Sellers

1. Who are the top 5 employees for generating sales income?

```
SELECT e.first_name, e.last_name, SUM(s.price) totalSalesIncome
FROM sales s
JOIN employees e ON e.employee_id = s.employee_id
GROUP BY e.first_name, e.last_name
ORDER BY totalSalesIncome DESC
LIMIT 5;
```

2. Who are the top 5 dealership for generating sales income?

```
SELECT d.business_name, SUM(s.price) totalSalesIncome
      FROM sales s
      JOIN dealerships d ON s.dealership_id = d.dealership_id
      GROUP BY d.business_name
      ORDER BY totalSalesIncome DESC
      LIMIT 5;
```

3. Which vehicle model generated the most sales income?

```
SELECT vt.make, vt.model, COUNT(s.sale_id) totalSales,
SUM(s.price) totalSalesIncome
FROM vehicles v
JOIN vehicletypes vt ON vt.vehicle_type_id = v.vehicle_type_id
JOIN sales s ON s.vehicle_id = v.vehicle_id
GROUP BY vt.make, vt.model
ORDER BY totalSalesIncome DESC
LIMIT 1;
```

Top Performance

1. Which employees generate the most income per dealership?

```
WITH employee_salespeople AS
	(
		SELECT
			e.first_name,
			e.last_name,
			de.dealership_id,
			sum(s.price) AS Total_Sales,
		ROW_NUMBER() OVER(PARTITION BY de.dealership_Id ORDER BY
sum(s.price) DESC) as TopEmployee
	FROM dealershipemployees de
		JOIN employees e ON e.employee_id = de.employee_id
		JOIN sales s ON s.employee_id = de.employee_id
		GROUP BY de.dealership_id, e.first_name, e.last_name
		ORDER BY Total_Sales DESC
	)
	SELECT
		td.business_name,
	    SUM(s.price) AS Money_Made,
	    es.first_name,
	    es.last_name,
	    es.Total_Sales
	FROM dealerships td
	JOIN sales s ON s.dealership_id = td.dealership_id
	INNER JOIN employee_salespeople AS es ON td.dealership_id =
es.dealership_id AND TopEmployee = 1
```

```
      GROUP BY td.business_name, es.first_name, es.last_name, es.Total_sales,
td.dealership_id
      ORDER BY   td.dealership_id, es.Total_Sales DESC
```

Vehicle Reports

Inventory

1. In our Vehicle inventory, show the count of each Model that is in stock.

```
SELECT
      vt.make,
      vt.model,
      count(vt.model) models_in_stock
FROM vehicles v
JOIN vehicletypes vt ON vt.vehicle_type_id = v.vehicle_type_id
      WHERE v.is_sold IS FALSE
GROUP BY vt.make , vt.model
ORDER BY models_in_stock DESC
```

2. In our Vehicle inventory, show the count of each Make that is in stock.

```
      SELECT
            vt.make,
            COUNT(vt.make) totalInStock
      FROM vehicles v
      JOIN vehicletypes vt ON vt.vehicle_type_id = v.vehicle_type_id
            WHERE v.is_sold IS FALSE
      GROUP BY vt.make;
      ORDER BY totalInStock DESC;
```

3. In our Vehicle inventory, show the count of each BodyType that is in stock.

```
SELECT vt.body_type, COUNT(vt.body_type) totalOfBodyType
```

```
FROM vehicles v
JOIN vehicletypes vt ON vt.vehicle_type_id = v.vehicle_type_id
WHERE v.is_sold = FALSE
GROUP BY vt.body_type
ORDER BY totalOfBodyType DESC;
```

Purchasing Power

1. Which US state's customers have the highest average purchase price for a vehicle?

```
SELECT

      c.state ,
round( avg(s.price), 2) avg_vehicle_price
FROM sales s
JOIN customers c ON s.customer_id =c.customer_id
GROUP BY c.state
ORDER BY avg_vehicle_price DESC
```

2. Now using the data determined above, which 5 states have the customers with the highest average purchase price for a vehicle?

```
SELECT

      c.state ,
      round( avg(s.price), 2) avg_vehicle_price
FROM sales s
JOIN customers c ON s.customer_id =c.customer_id
GROUP BY c.state
ORDER BY avg_vehicle_price DESC
LIMIT 5
```