

June 17, 2025

SQL: Final Project

This project is using the Classic Models database and MySQL. It was completed using MySQL Workbench.

1. Which three product lines were the most profitable in 2004?

```
SELECT productLine, SUM(quantityOrdered * priceEach) AS productLineProfit
FROM products P
      JOIN orderdetails D ON P.productCode = D.productCode
      JOIN orders O ON D.orderNumber = O.orderNumber
WHERE year(orderDate) = 2004
GROUP BY productLine
ORDER BY 2 DESC LIMIT 3;
```

Answer:

productLine	productLineProfit
Classic Cars	\$1,763,136.73
Motorcycles	\$527,243.84
Vintage Cars	\$854,551.85

2. Which office location brought in the most profit per employee?

```
SELECT officeCode, ROUND(SUM(quantityOrdered *
priceEach)/COUNT(employeeNumber), 2) AS averageEmployeeSales
FROM employees E
      JOIN customers C ON E.employeeNumber =
C.salesRepEmployeeNumber
      JOIN orders O ON C.customerNumber = O.customerNumber
      JOIN orderdetails D ON D.orderNumber = O.orderNumber
GROUP BY officeCode
ORDER BY 2 DESC LIMIT 1;
```

Answer:

June 17, 2025

officeCode	averageEmployeeSales
5	\$3,336.57

3. List the employees with customers that have no orders.

```
SELECT CONCAT(firstName, ' ', lastName) AS employee
      FROM customers C
      JOIN employees E ON C.salesRepEmployeeNumber =
E.employeeNumber
      LEFT JOIN orders O ON O.customerNumber = C.customerNumber
      WHERE O.orderNumber IS NULL;
```

Answer:

employee
Foon Yue Tseng
Martin Gerard

Reflection:

I have learned the basics of SQL in this course. I do not know how to do extremely complex SQL statements, but I have all the tools I need to be able to figure those things out. I also know ways I can preserve the integrity, privacy, and security of the data I am working with. This means that, while I am still a novice, I will be able to continue to safely hone my skills and gain more intuition with working with databases. SQL is a powerful tool for data scientists because it allows them to intimately handle large amount of related data more efficiently. Things that would take days to figure out with a folder of spreadsheets can take minutes with SQL.