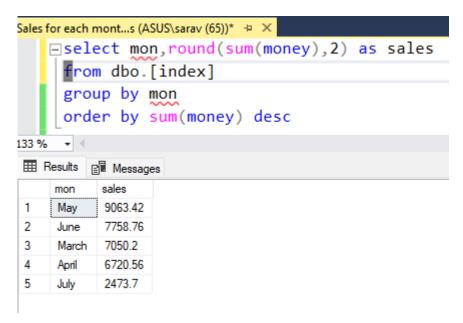
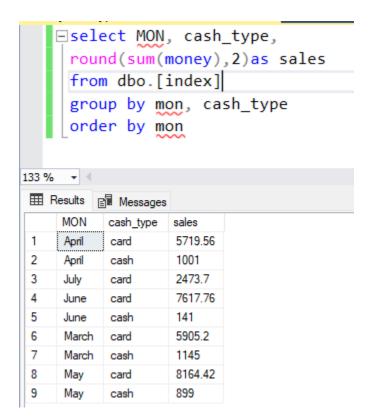
Project 1

1. What is the total sales after each month?

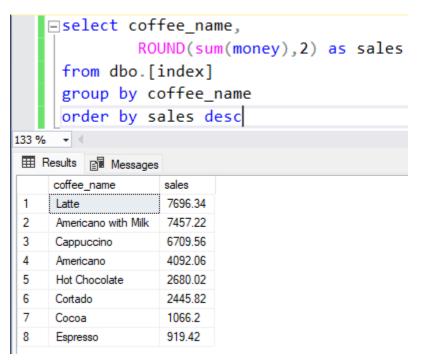


2. What is the sales by cash type for each month?

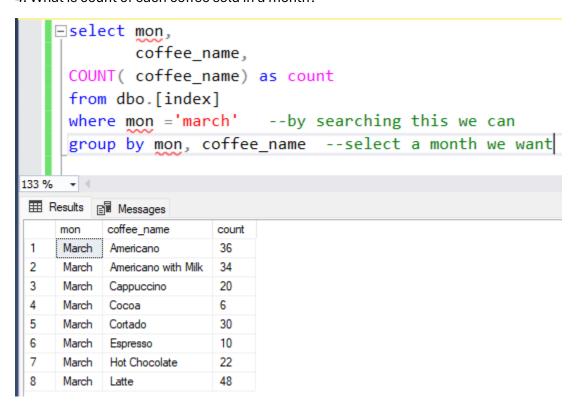


(From the result, we can most of the customers pay by card)

3. What is the sale for each coffee?



4. What is count of each coffee sold in a month?



Python (Using-Pandas, NumPy, DataFrame)

- 1. What is the total sales after each month?
 - 1. what is the total sales for each month

```
total_money_per_month= df.groupby('month')['money'].sum().reset_index()
total_money = total_money_per_month.sort_values(by= 'money', ascending = False)
total_money
```

	month	money
4	May	9063.42
2	June	7758.76
3	March	7050.20
0	April	6720.56
1	July	2473.70

(In May month, the sale is high)

2. Sales for each month by cash type

```
sales_by_month = df.groupby(['month', 'cash_type'])['money'].sum().reset_index()
|sales_by_month = sales_by_month.sort_values(by=['month', 'cash_type'])
sales_by_month
```

	month	cash_type	money
0	April	card	5719.56
1	April	cash	1001.00
2	July	card	2473.70
3	June	card	7617.76
4	June	cash	141.00
5	March	card	5905.20
6	March	cash	1145.00
7	May	card	8164.42
8	May	cash	899.00

3. Each coffee total sales

```
coffee_sales =df.groupby('coffee_name')['money'].sum().reset_index()
coffee_sales = coffee_sales.sort_values(by = 'money', ascending = False)
coffee_sales
```

	coffee_name	money
7	Latte	7696.34
1	Americano with Milk	7457.22
2	Cappuccino	6709.56
0	Americano	4092.06
6	Hot Chocolate	2680.02
4	Cortado	2445.82
3	Cocoa	1066.20
5	Espresso	919.42

4. How many coffee sold in each month

```
coffee_count = df.groupby('month')['coffee_name'].count().reset_index()
coffee_count = coffee_count.sort_values(by = 'coffee_name', ascending = False)
coffee_count
```

	month	coffee_name
4	May	267
2	June	227
3	March	206
0	April	196
1	July	80