

Jupiter Note:

<https://colab.research.google.com/drive/1pDJG135aPLSyfWiPn4yArWesAJ3RXII-?usp=sharing>

Q1.

a). From boxplots, we realize that shop_id = 42 and shop_id = 78 have unusually high order amounts, which are greatly affecting the AOV by skewing the mean upwards. AOV = 3145.13 USD is the average order value reported which is flawed because of outlier (shop_id = 42, 78). We can see a outlier with unit price of more than 25,000 usd for shop id = 78. It seems, shop_id = 78 is exclusive outlet for expensive sneakers.

b). Better metric to use here is either median(not very sensitive to outliers in the data.) or trimmed mean (removing the outlier).

c). Median sneaker price is: 284.0 USD

Q2.

A). Total Order is 54 and SQL query is as follows

```
Select Count(*) from Orders Inner Join Shippers On Shippers.ShipperID = Orders.ShipperID  
where Shippers.ShipperName = 'Speedy Express';
```

B). Peacock

```
SELECT LastName FROM Employees where EmployeeId in (Select employeeId From (SELECT  
employeeId, count(orderId) as cnt FROM Orders group by EmployeeId ) as temp where  
temp.cnt = (Select max(cnt) From (SELECT employeeId, count(orderId) as cnt FROM Orders  
group by EmployeeId)));
```

There must be an error in the system. Better query is as follows:

```
SELECT Employees.LastName, Count(Orders.OrderID) AS NumOfOrder FROM Orders INNER  
JOIN Employees ON Orders.EmployeeID = Employees.EmployeeID GROUP BY  
Employees.LastName ORDER BY NumOfOrder DESC limit 1;
```

C). Answer is : Boston Crab Meat with 160 orders.

```
SELECT Products.ProductName, Sum(OrderDetails.Quantity) as most_ordered FROM Orders  
JOIN OrderDetails ON Orders.OrderID = OrderDetails.OrderID JOIN Customers ON  
Orders.CustomerID = Customers.CustomerID JOIN Products ON OrderDetails.ProductID =  
Products.ProductID WHERE Country = 'Germany' GROUP BY Products.ProductName ORDER  
BY most_ordered DESC limit 1;
```