Question 1: Given some sample data, write a program to answer the following: click here to access the required data set

On Shopify, we have exactly 100 sneaker shops, and each of these shops sells only one model of shoe. We want to do some analysis of the average order value (AOV). When we look at orders data over a 30 day window, we naively calculate an AOV of $3145.13. Given that we know these shops are selling sneakers, a relatively affordable item, something seems wrong with our analysis.

a)Think about what could be going wrong with our calculation. Think about a better way to evaluate this data.

Error in the calculation is because we are using count() instead of sum() for getting the total number of items.

sum() function calculates the total of all numerical values in an iterable.

count() will just count number of rows.

Correct way to calculate AOV is: To calculate the sum of the column 'order_amount' divided by the sum of the column 'total_items'

b)What metric would you report for this dataset?

Correct way to calculate AOV is:

To calculate the sum of the column 'order_amount' divided by the sum of the column 'total_items'.

```
totalItems = df['total_items'].sum()

[ ] amount = df['order_amount'].sum()

[ ] avgOrderVal = amount/totalItems
```

c)What is its value?

357.92152221412965

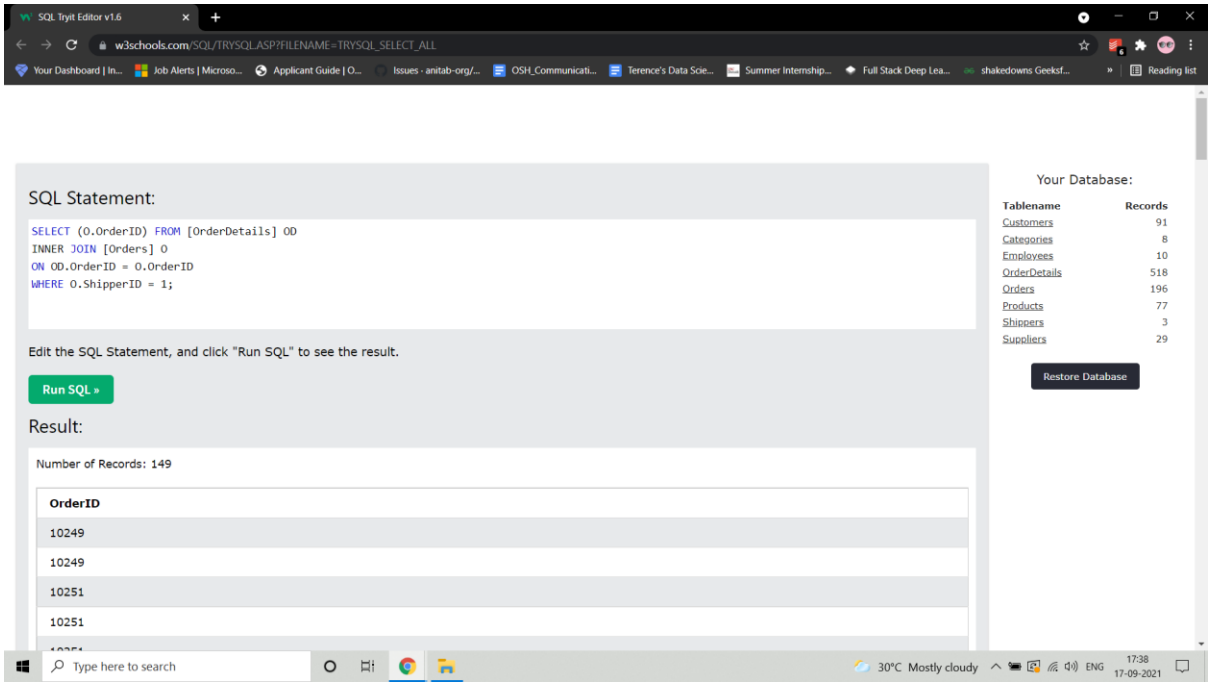
```
Correct value

print(avgOrderVal)
357.92152221412965
```

Question 2: For this question you'll need to use SQL. Follow this link to access the data set required for the challenge. Please use queries to answer the following questions. Paste your queries along with your final numerical answers below.

a)How many orders were shipped by Speedy Express in total?

```
SELECT O.OrderID FROM [OrderDetails] OD
INNER JOIN [Orders] O
ON OD.OrderID = O.OrderID
WHERE O.ShipperID = 1;
```

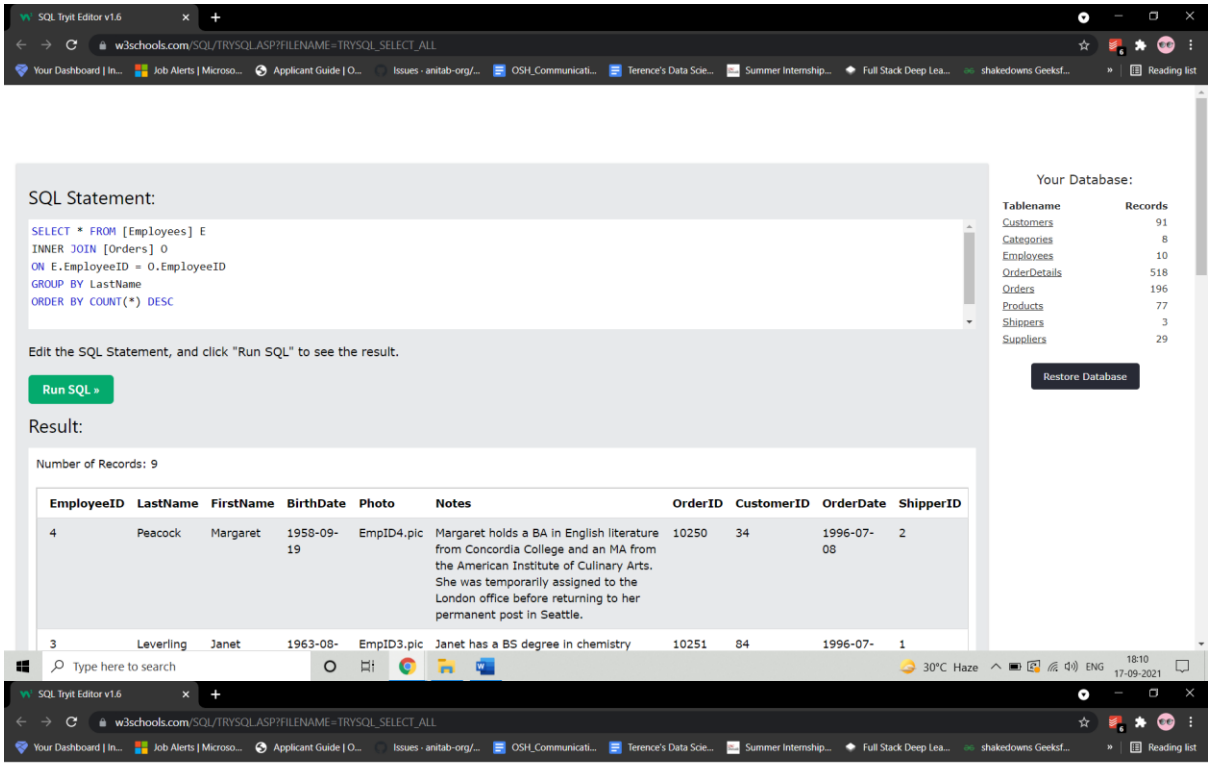
Number of orders shipped by Speedy Express is <u>149</u>

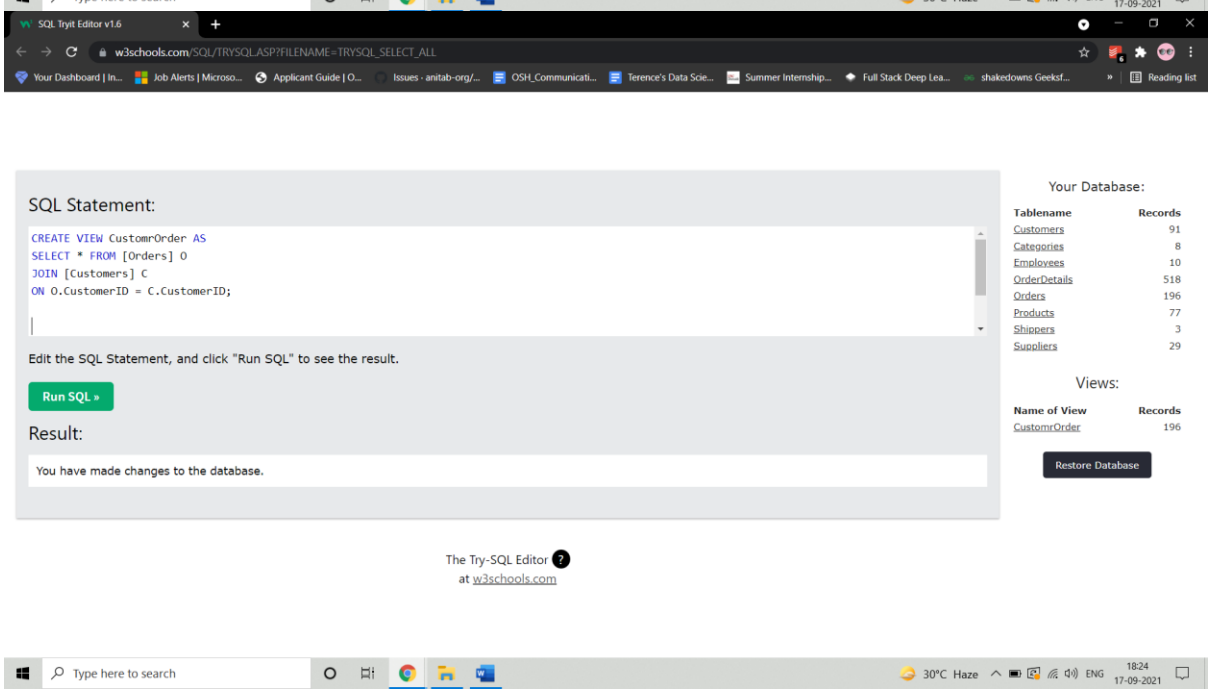


b)What is the last name of the employee with the most orders?

```
SELECT * FROM [Employees] E
INNER JOIN [Orders] O
ON E.EmployeeID = O.EmployeeID
GROUP BY LastName
ORDER BY COUNT(*) DESC
```

Last name of the employee with the most orders is <u>Peacock.</u>



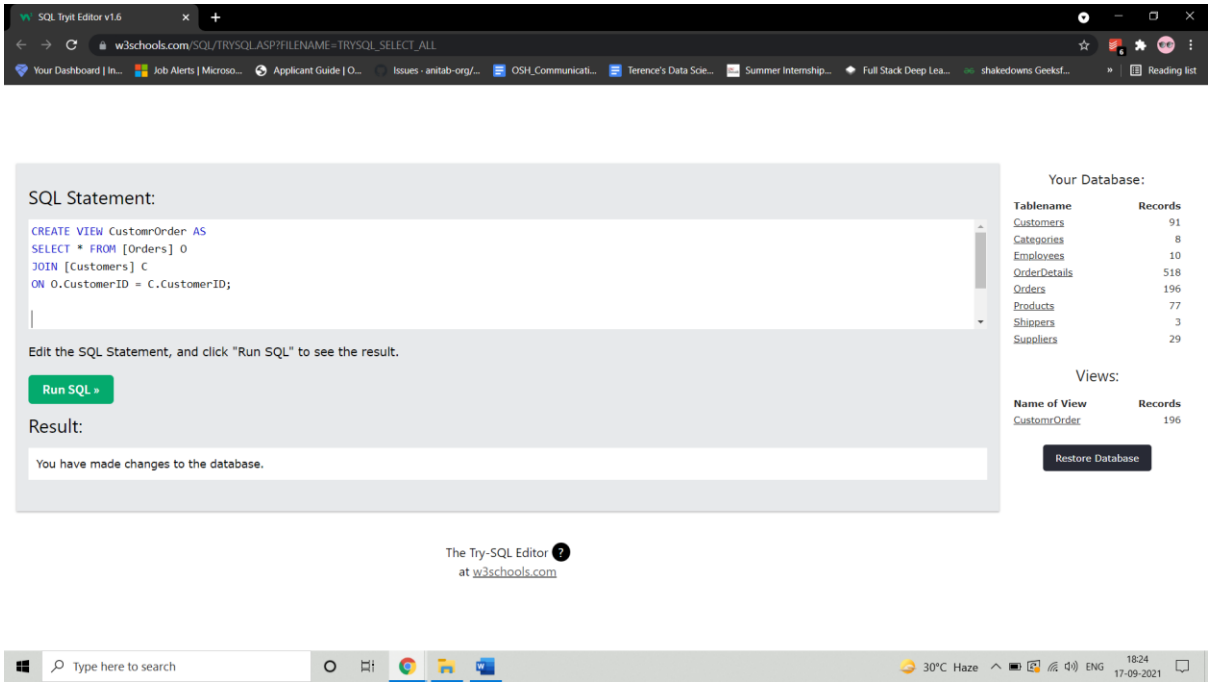


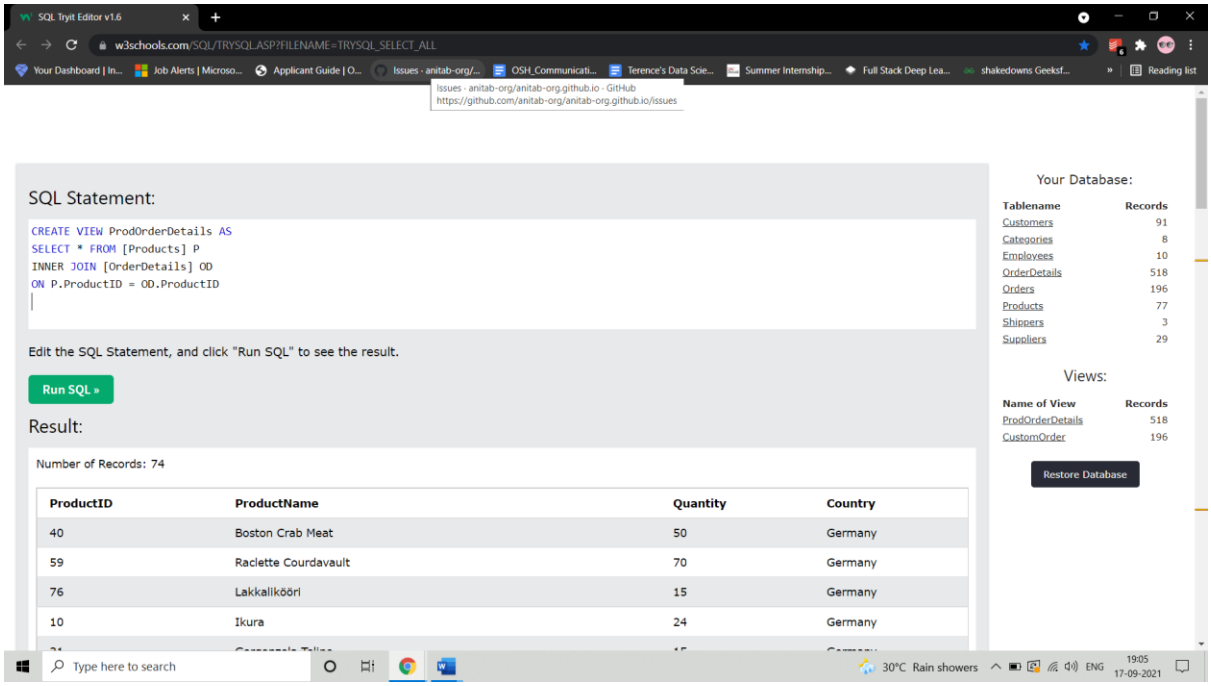
c)What product was ordered the most by customers in Germany?

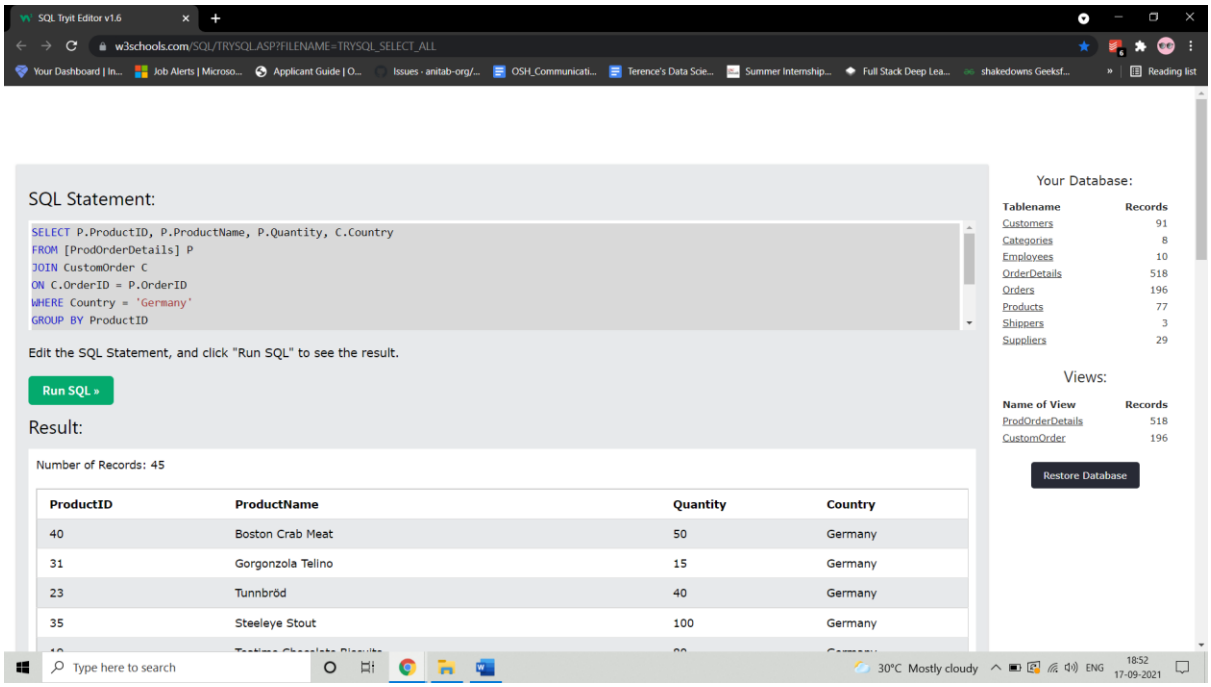
```
CREATE VIEW CustomOrder AS
SELECT * FROM [Customers] C
INNER JOIN [Orders] O
ON C.CustomerID = O.CustomerID

CREATE VIEW ProdOrderDetails AS
SELECT * FROM [Products] P
INNER JOIN [OrderDetails] OD
ON P.ProductID = OD.ProductID
```

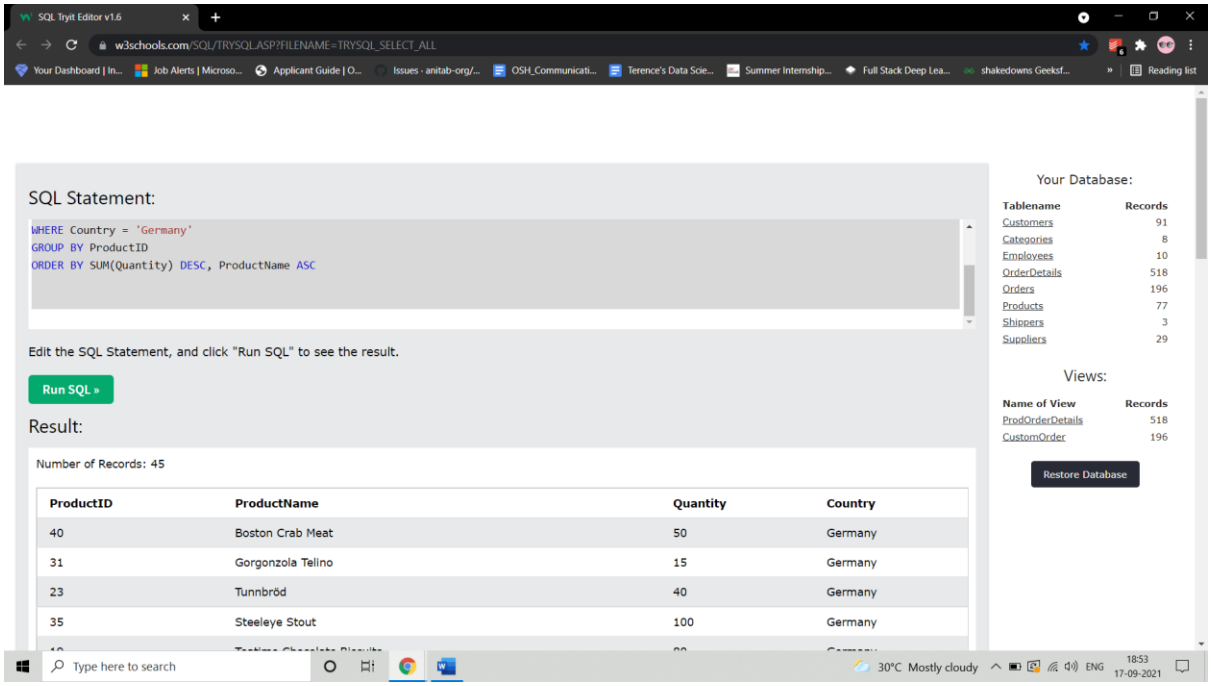
```
SELECT P.ProductID, P.ProductName, P.Quantity, C.Country
FROM [ProdOrderDetails] P
JOIN CustomOrder C
ON C.OrderID = P.OrderID
WHERE Country = 'Germany'
GROUP BY ProductID
ORDER BY SUM(Quantity) DESC, ProductName ASC
```

Product ordered the most by customers in Germany is Boston Crab Meat.




SQL Tryit Editor v1.6
w3schools.com/SQL/TRYSQL.ASP?FILENAME=TRYSQL_SELECT_ALL
Issues · anitab-org/anitab-org.github.io · GitHub
https://github.com/anitab-org/anitab-org.github.io/issues
SQL Statement:
CREATE VIEW ProdOrderDetails AS
SELECT * FROM [Products] P
INNER JOIN [OrderDetails] OD
ON P.ProductID = OD.ProductID
Edit the SQL Statement, and click "Run SQL" to see the result.
Run SQL »
Result:
Number of Records: 74
ProductID ProductName Quantity Country
40 Boston Crab Meat 50 Germany
59 Raclette Courdavault 70 Germany
76 Lakkalikööri 15 Germany
10 Ikura 24 Germany
Your Database:
Tablename Records
Customers 91
Categories 8
Employees 10
OrderDetails 518
Orders 196
Products 77
Shippers 3
Suppliers 29
Views:
Name of View Records
ProdOrderDetails 518
CustomOrder 196
Restore Database
Type here to search
30°C Rain showers
ENG
19:05
17-09-2021


SQL Tryit Editor v1.6
w3schools.com/SQL/TRYSQL.ASP?FILENAME=TRYSQL_SELECT_ALL
SQL Statement:
SELECT P.ProductID, P.ProductName, P.Quantity, C.Country
FROM [ProdOrderDetails] P
JOIN CustomOrder C
ON C.OrderID = P.OrderID
WHERE Country = 'Germany'
GROUP BY ProductID
Edit the SQL Statement, and click "Run SQL" to see the result.
Run SQL »
Result:
Number of Records: 45
ProductID ProductName Quantity Country
40 Boston Crab Meat 50 Germany
31 Gorgonzola Telino 15 Germany
23 Tunnbröd 40 Germany
35 Steeleye Stout 100 Germany
Your Database:
Tablename Records
Customers 91
Categories 8
Employees 10
OrderDetails 518
Orders 196
Products 77
Shippers 3
Suppliers 29
Views:
Name of View Records
ProdOrderDetails 518
CustomOrder 196
Restore Database
Type here to search
30°C Mostly cloudy
ENG
18:52
17-09-2021


SQL Tryit Editor v1.6
w3schools.com/SQL/TRYSQL.ASP?FILENAME=TRYSQL_SELECT_ALL
SQL Statement:
WHERE Country = 'Germany'
GROUP BY ProductID
ORDER BY SUM(Quantity) DESC, ProductName ASC
Edit the SQL Statement, and click "Run SQL" to see the result.
Run SQL »
Result:
Number of Records: 45
ProductID ProductName Quantity Country
40 Boston Crab Meat 50 Germany
31 Gorgonzola Telino 15 Germany
23 Tunnbröd 40 Germany
35 Steeleye Stout 100 Germany
Your Database:
Tablename Records
Customers 91
Categories 8
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OrderDetails 518
Orders 196
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Shippers 3
Suppliers 29
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Name of View Records
ProdOrderDetails 518
CustomOrder 196
Restore Database
Type here to search
30°C Mostly cloudy
ENG
18:53
17-09-2021