

**NAME – AMRITA VARIER**

**REG NO – 20BCE2354**

**DATA ANALYTICS**

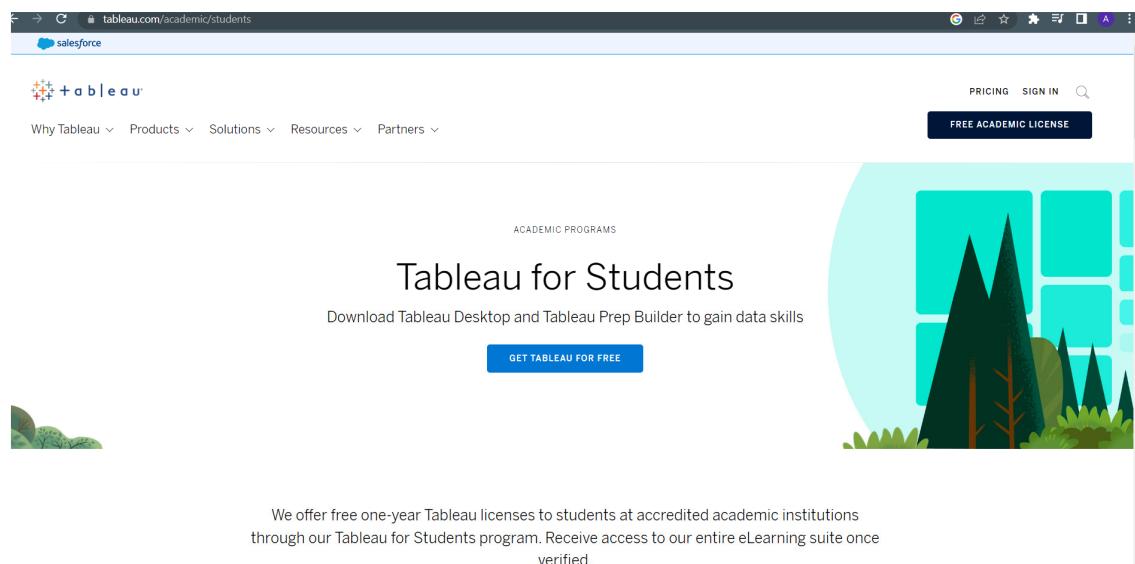
**SMARTBRIDGE EXTERNSHIP PROGRAMME**

**ASSIGNMENT - 1**

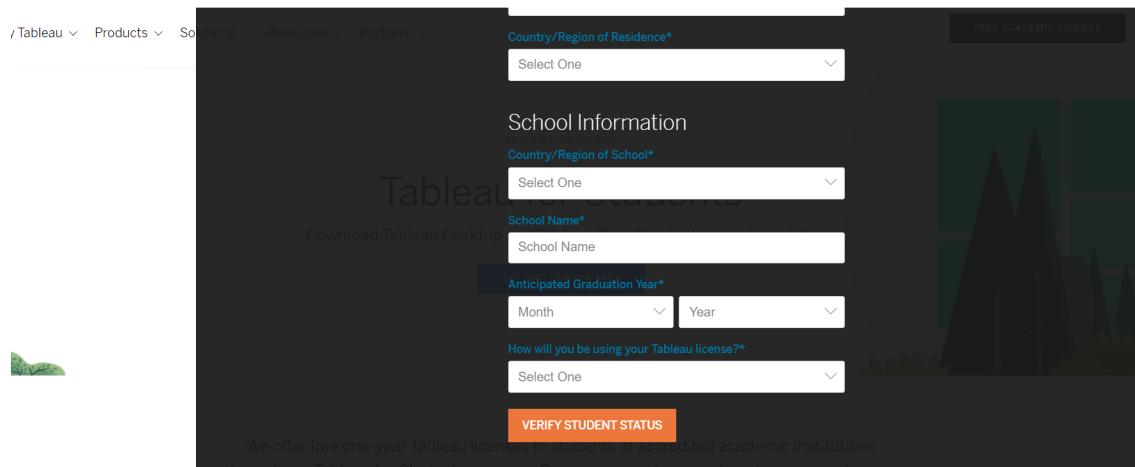
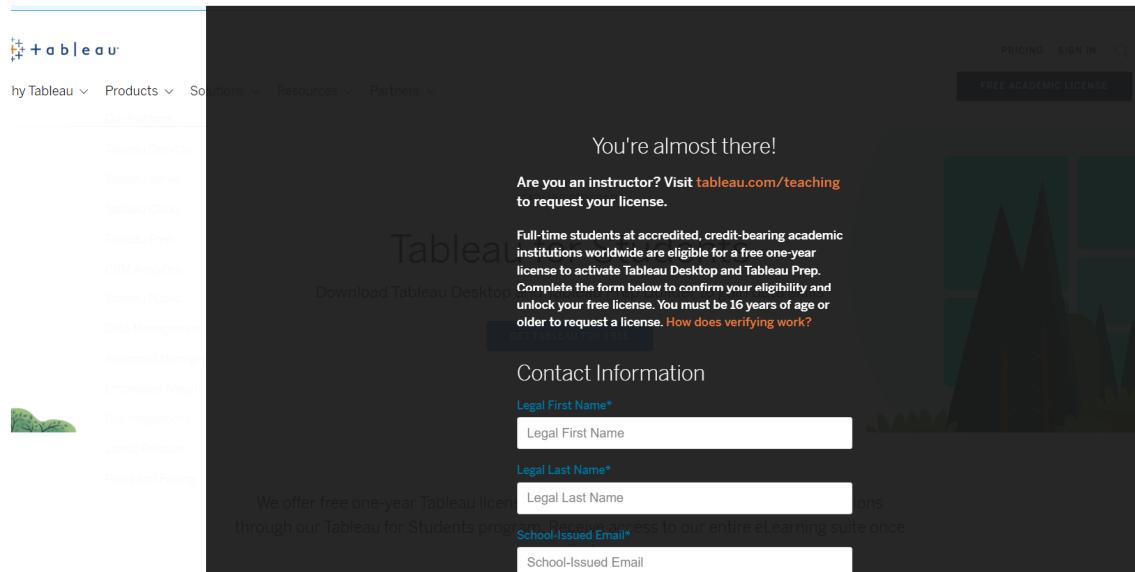
**1)Download tableau desktop & MYSQL in your PC or laptop**

**TO DOWNLOAD TABLEAU DESKTOP**

- At first, we go to the official website for tableau for students.

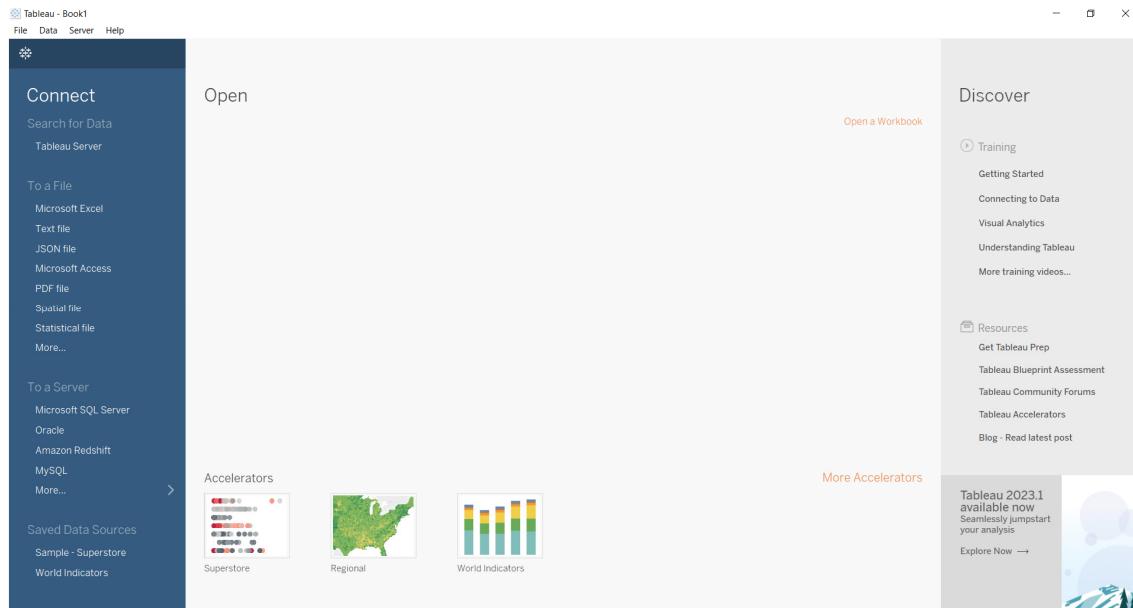


- Then we click on get tableau for free.



Then we fill all these details and click on verify student status.

- Then we get the product key in our mail.
- Then we get the link to download tableau desktop in mail. Click on it.
- After clicking on the tableau desktop link, we get an option to activate 14-day free trial. We have to fill all details such as organization name, business email (institution name), region, company size (1-20) etc.
- Click on download free trial.
- Tableau desktop starts downloading and after opening it, we activate it by using our product key.
- After activating it, we complete the registration process and click on register and continue.
- Now, we open tableau desktop.



The connect pane is visible in tableau desktop from where we can connect either flat files or more than 300 databases including MYSQL.

## DOWNLOADING MYSQL IN OUR SYSTEM

- Next step is to download MYSQL in our system. For that, we go to the official website of MYSQL as shown below.

- Then go to downloads and click on GPL downloads. Then go to MYSQL Installer for Windows and start download.

[MySQL HeatWave for Beginners](#)  
Thursday, May 25, 2023  
[MySQL Security from Data Protection to Regulation Compliance](#)  
Tuesday, June 06, 2023  
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[MySQL Community \(GPL\) Downloads »](#)

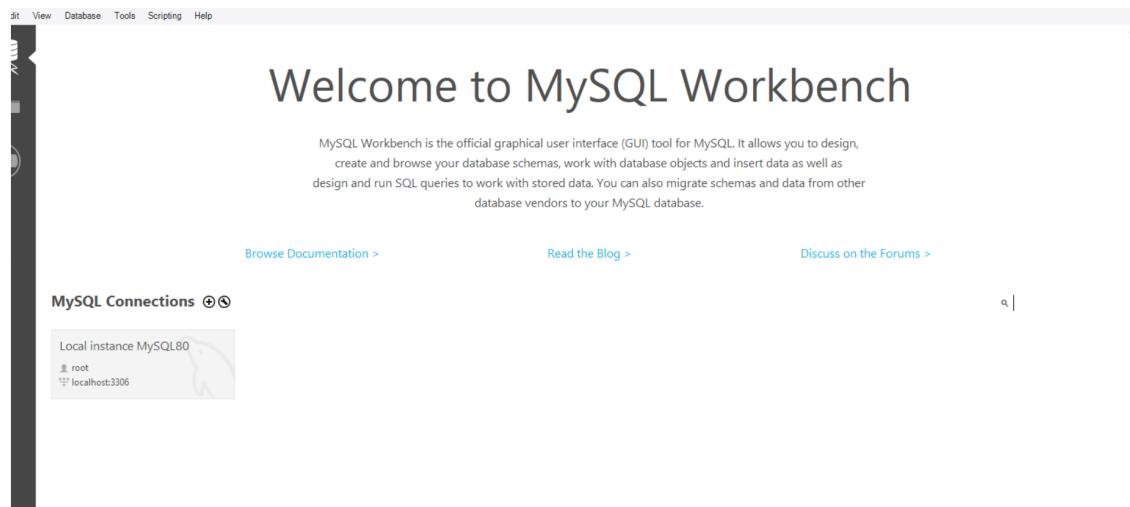
## ④ MySQL Community Downloads

- [MySQL Yum Repository](#)
- [MySQL APT Repository](#)
- [MySQL SUSE Repository](#)
- [MySQL Community Server](#)
- [MySQL Cluster](#)
- [MySQL Router](#)
- [MySQL Shell](#)
- [MySQL Operator](#)
- [MySQL NDB Operator](#)
- [MySQL Workbench](#)
- [MySQL Installer for Windows](#)
- [C API \(libmysqlclient\)](#)
- [Connector/C++](#)
- [Connector/J](#)
- [Connector/.NET](#)
- [Connector/Node.js](#)
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- The setup is done and MySQL Workbench, MySQL shell and MySQL Server are installed. The password is entered for MySQL Workbench.
- Now, we open MySQL as follows:

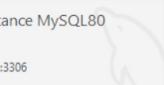


# Welcome to MySQL Workbench

MySQL Workbench is the official graphical user interface (GUI) tool for MySQL. It allows you to design, create and browse your database schemas, work with database objects and insert data as well as design and run SQL queries.

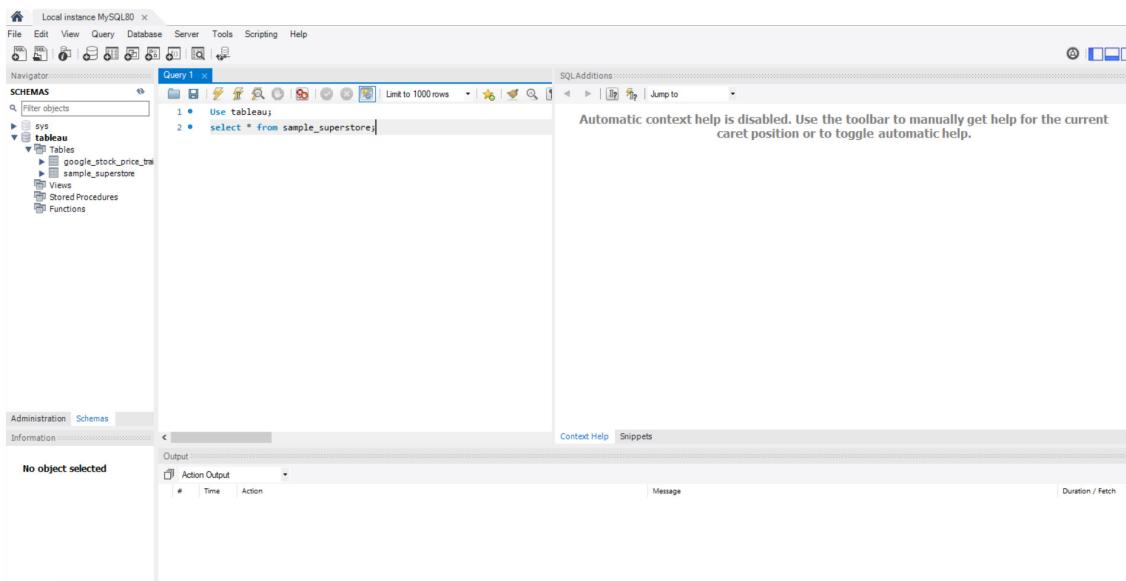
[Browse Documentation >](#) [Discuss on the Forums >](#)

**Connections**   

Local instance MySQL80  [Edit Connection](#)

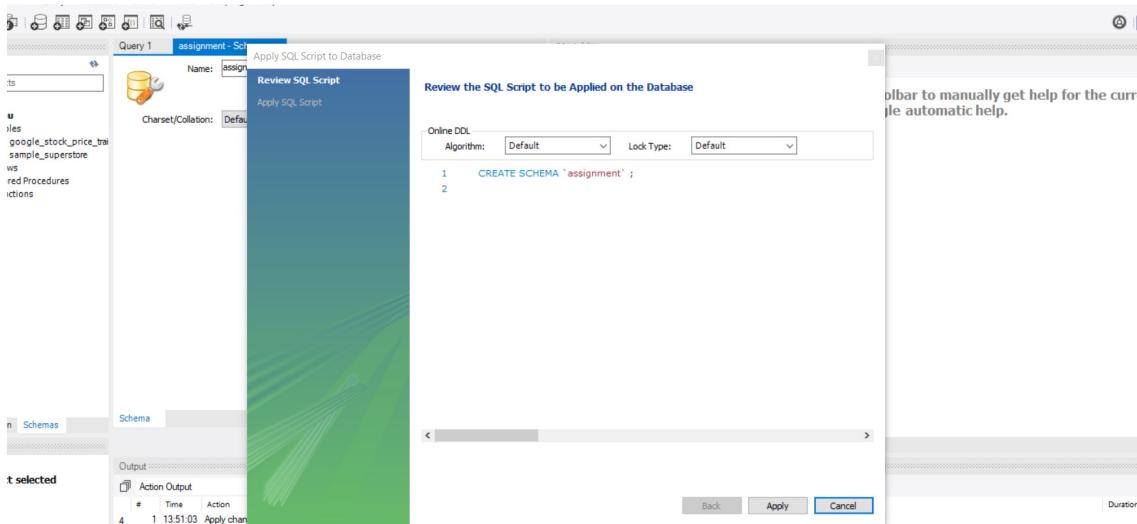
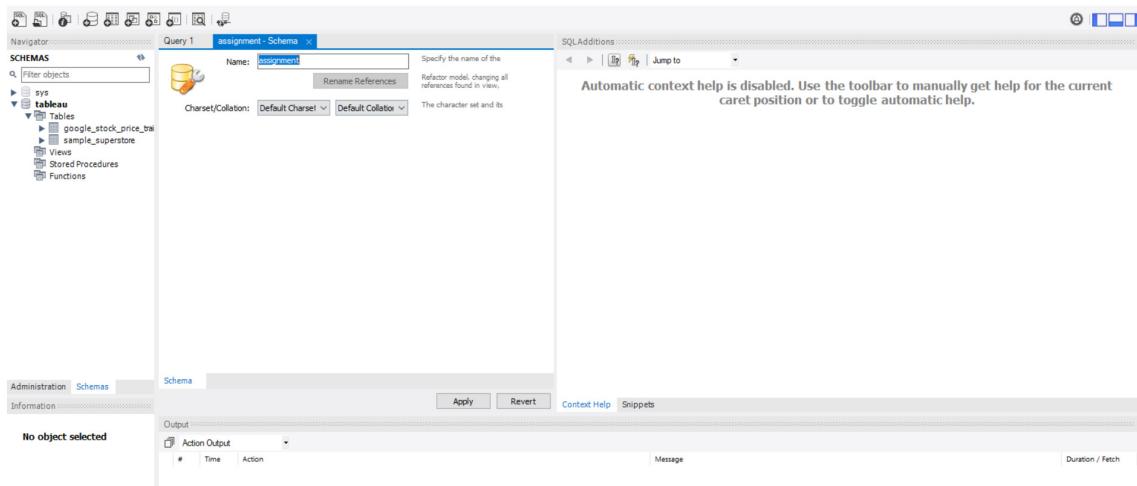
Service: Mysql@localhost:3306  
User: root  
Password:   Save password in vault

OK Cancel

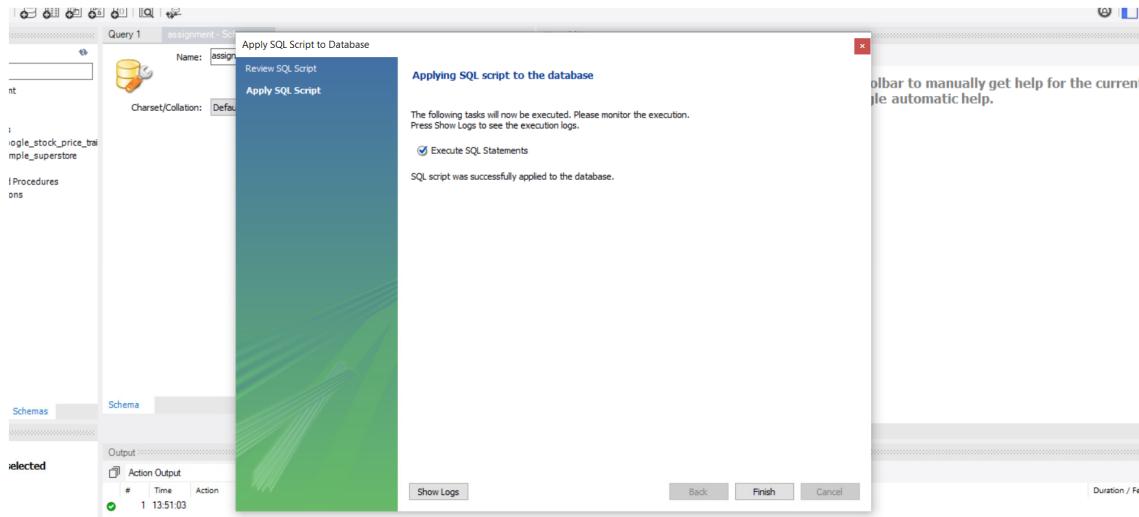


## 2) Create a new schema in your mysql workbench and upload your data.

- We create a new schema as follows:

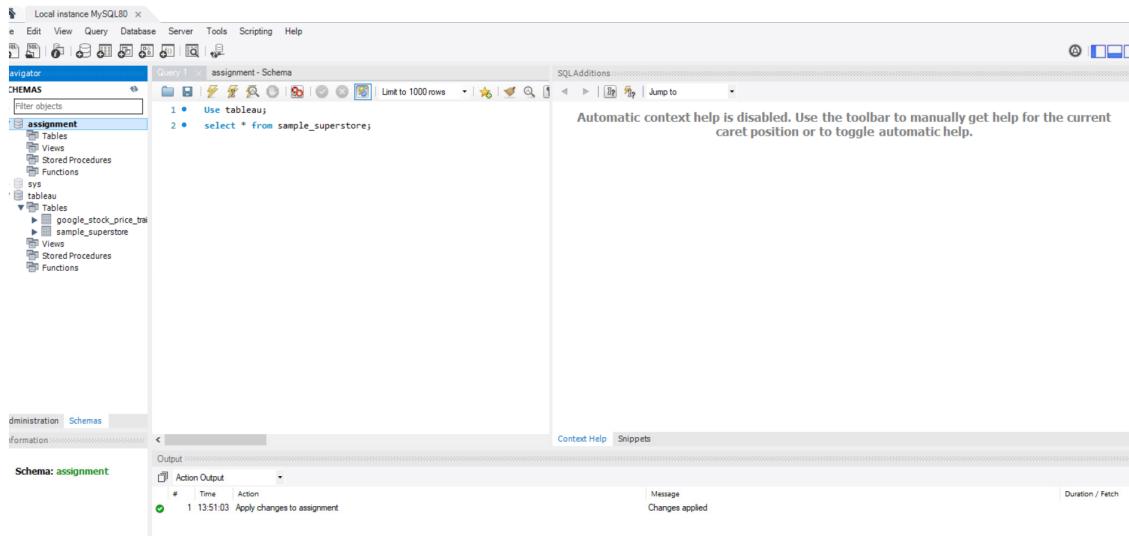


Click on apply.



Then finish.

- The schema is created as follows:



- We click on the drop-down arrow and reach the tables section from which after doing right click we can get Table Data Import Wizard.

Table Data Import

Select File to Import

Table Data Import allows you to easily import CSV, JSON datafiles. You can also create destination table on the fly.

File Path: C:\Users\AMRITA VARIER\Desktop\Sample - Superstore.csv

< Back Next > Cancel

AS

Select Destination

Select destination table and additional options.

Use existing table:

Create new table:  .

Drop table if exists

< Back Next > Cancel

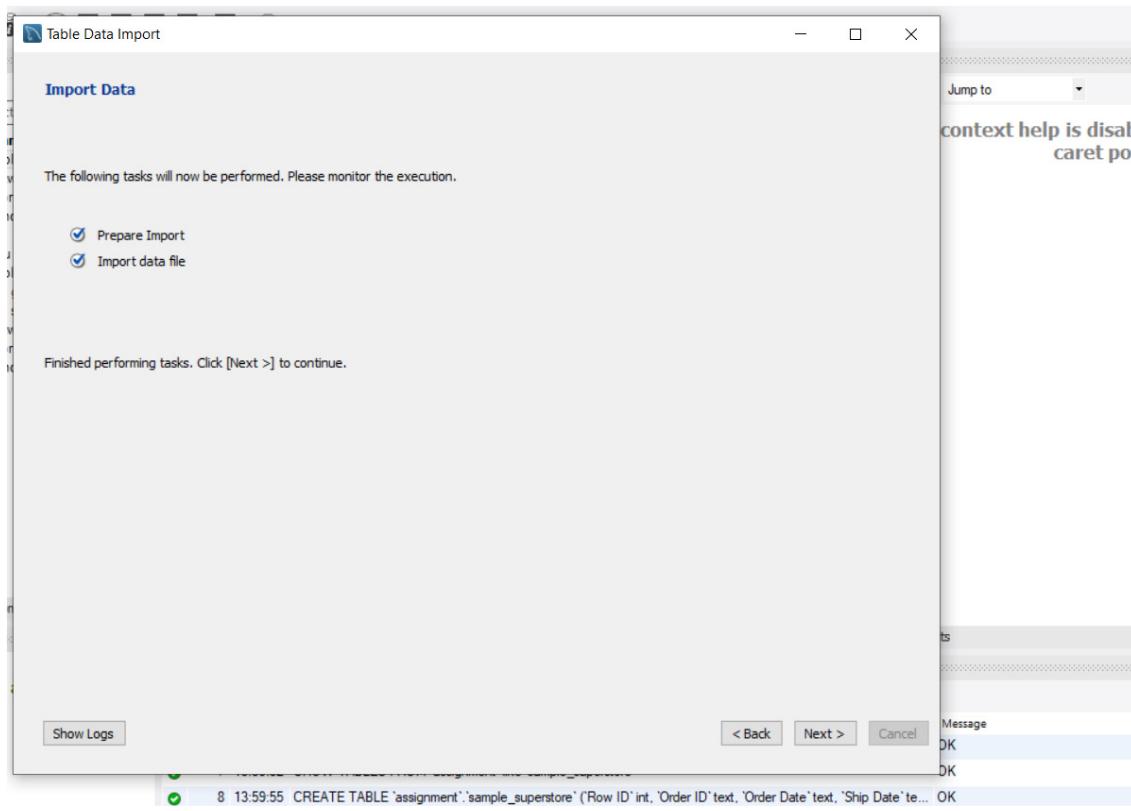
Jump to

context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Message Changes applied Duration / Fetch

3 13:59:00 SHOW DATABASES OK

4 13:59:01 SHOW SESSION VARIABLES LIKE 'lower\_case\_table\_names' OK



Next -> And then we click on finish.

- Then we write the following query and execute it. We get to see the data.

Schemas

Filter objects

assignment

- sample\_superstore
- Views
- Stored Procedures
- Functions

sys

tableau

Query 1

1 • Use assignment;  
2 • select \* from sample\_superstore;

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	Country	City
1	CA-2016-152156	11/8/2016	11/11/2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Hender
2	CA-2016-152156	11/8/2016	11/11/2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Hender
3	CA-2016-138688	6/12/2016	6/16/2016	Second Class	DV-13045	Darrin Van Huff	Corporate	United States	Los An
4	US-2015-108966	10/11/2015	10/18/2015	Standard Class	SO-20335	Sean O'Donnell	Consumer	United States	Fort La
5	US-2015-108966	10/11/2015	10/18/2015	Standard Class	SO-20335	Sean O'Donnell	Consumer	United States	Fort La
6	CA-2014-115812	6/9/2014	6/14/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los An
7	CA-2014-115812	6/9/2014	6/14/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los An
8	CA-2014-115812	6/9/2014	6/14/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los An
9	CA-2014-115812	6/9/2014	6/14/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los An
10	CA-2014-115812	6/9/2014	6/14/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los An
11	CA-2014-115812	6/9/2014	6/14/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los An

Administration Schemas Information

e\_superstore1 x

Action Output

Time Action Message Duration / Fetch

1 14.02.19 Use assignment 0 row(s) affected 0.000 sec

2 14.02.19 select \* from sample\_superstore LIMIT 0, 1000 138 row(s) returned 0.000 sec / 0.000 sec

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Result Grid | Form Editor | Field Types | Read Only | Context Help | Snippets

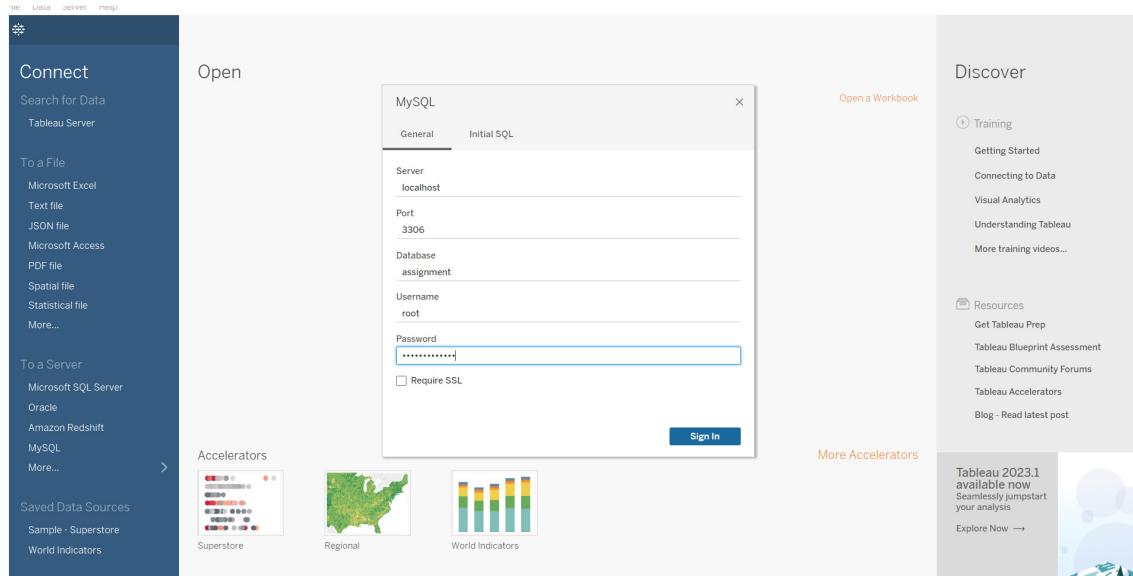
Output

e\_superstore1 x

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Result Grid | Form Editor | Field Types | Read Only | Context Help | Snippets

### 3) Connect MYSQL and tableau.

- We choose MYSQL from the connect pane and do the following:



- Click on sign in. We get the following:

Name	Type	Field Name	Physical Table	Remote...
#	Row ID	sample_superstore	Row ID	
Abc	Order ID	sample_superstore	Order ID	
Abc	Order Date	sample_superstore	Order Date	

Click on update now.

The screenshot shows the Tableau Data Source interface. On the left, the 'Connections' pane shows a connection to 'localhost MySQL' with the database set to 'assignment'. Under 'Table', there is a single entry: 'sample\_superstore'. The main workspace displays the 'sample\_superstore' table with 138 rows and 21 fields. A preview window shows the first six rows of the table.

#	sample_superstore Row ID	Abc sample_superstore Order ID	Abc sample_superstore Order Date	Abc sample_superstore Ship Date	Abc sample_superstore Ship Mode	Abc sample_superstore Customer ID	Abc sample_superstore Customer Name
1	CA-2016-152156	11/8/2016	11/11/2016	Second Class	CG-12520	Claire Gute	
2	CA-2016-152156	11/8/2016	11/11/2016	Second Class	CG-12520	Claire Gute	
3	CA-2016-138688	6/12/2016	6/16/2016	Second Class	DV-13045	Darrin Van Huff	
4	US-2015-108966	10/11/2015	10/18/2015	Standard Class	SO-20335	Sean O'Donnell	
5	US-2015-108966	10/11/2015	10/18/2015	Standard Class	SO-20335	Sean O'Donnell	
6	CA-2014-115812	6/9/2014	6/14/2014	Standard Class	BH-11710	Brosina Hoffman	

#### 4) Create the below 5 charts/plots

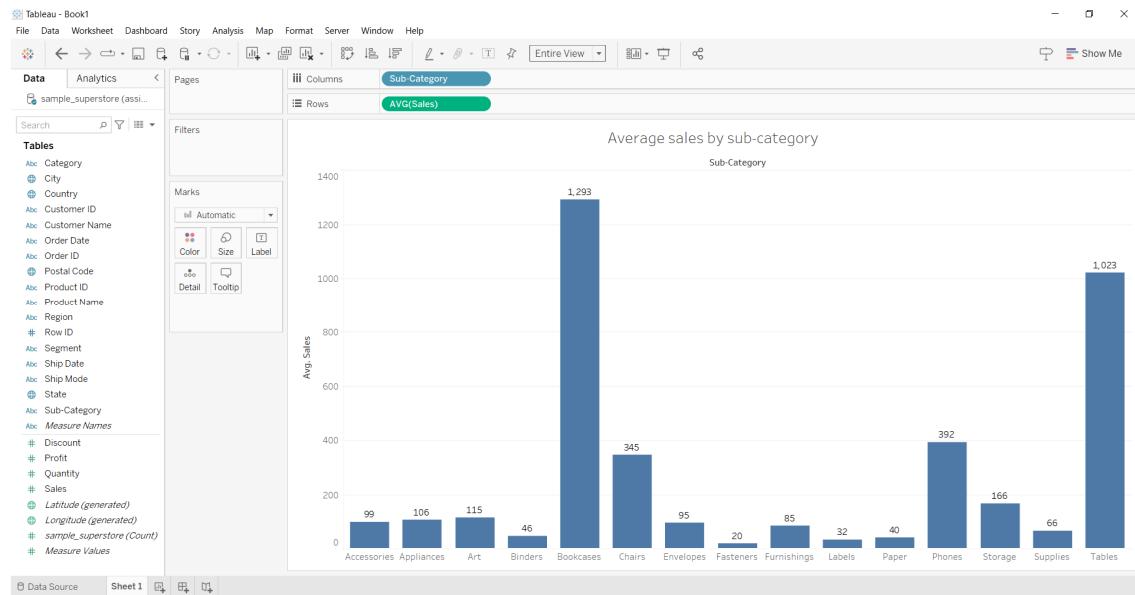
- Bar chart
- Tree map
- Heatmap
- Pie chart
- Horizontal bar chart

The screenshot shows the Tableau Analytics interface. On the left, the 'Analytics' pane lists various dimensions and measures such as Category, City, Country, Customer ID, etc. The main workspace displays a 'View Data: sample\_superstore (assignment)' window. The table preview shows data for categories like Furniture and Office Supplies across cities like Henderson, Los Angeles, and Fort Lauderdale, with details on country, customer ID, and customer name.

Category	City	Country	Customer ID	Customer Name
Furniture	Henderson	United States	CG-12520	Claire Gute
Furniture	Henderson	United States	CG-12520	Claire Gute
Office Supplies	Los Angeles	United States	DV-13045	Darrin Van Huff
Furniture	Fort Lauderdale	United States	SO-20335	Sean O'Donnell
Office Supplies	Fort Lauderdale	United States	SO-20335	Sean O'Donnell
Furniture	Los Angeles	United States	BH-11710	Brosina Hoffman
Office Supplies	Los Angeles	United States	BH-11710	Brosina Hoffman
Technology	Los Angeles	United States	BH-11710	Brosina Hoffman
Office Supplies	Los Angeles	United States	BH-11710	Brosina Hoffman
Office Supplies	Los Angeles	United States	BH-11710	Brosina Hoffman

- BAR CHART

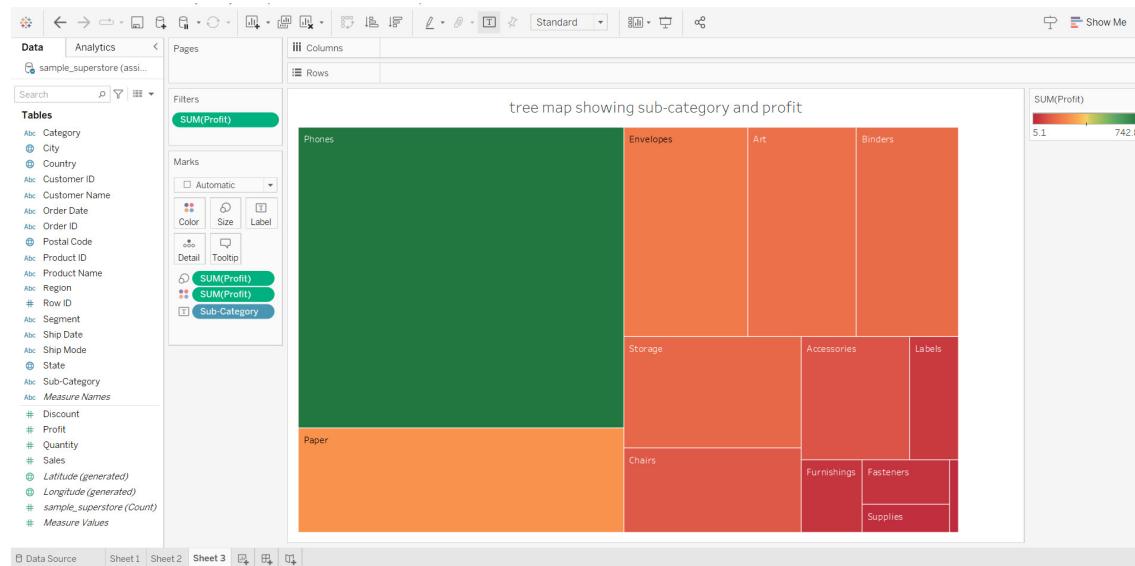
Here, we take the dimension sub-category for rows and the measure sales (average) in columns section.



The inference is that bookcase has the highest average sales out of all the sub categories.

## • TREE MAP

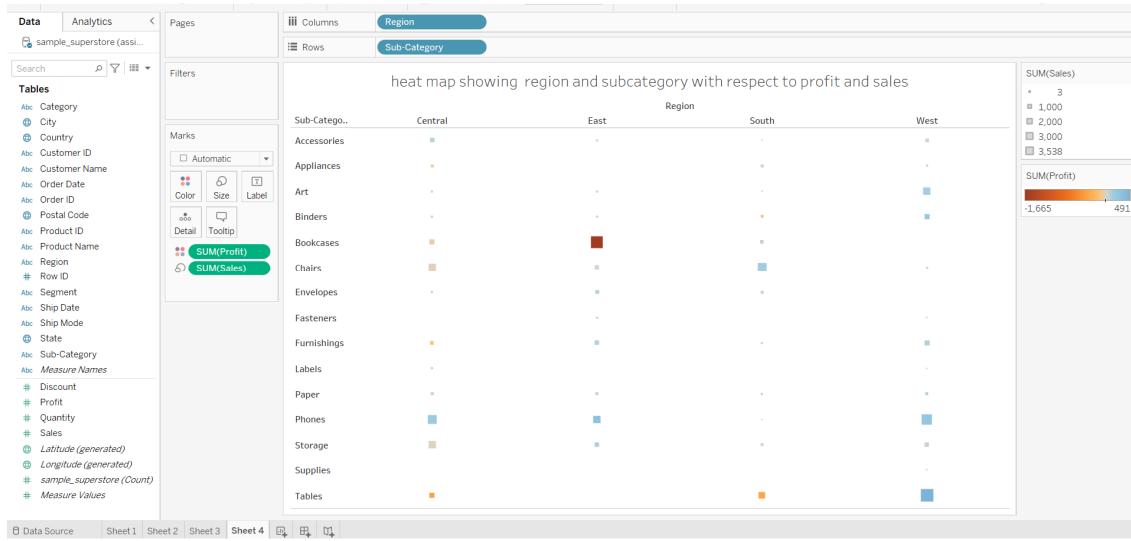
Here, we take sub-category in columns and profit in rows.



Inference from the following tree map is that phones have the highest profit (742.8). Also, appliances have the lowest profit of 5.1 among all the sub-categories.

## • HEAT MAP

We give sub-category in rows and region in columns section. Also, we give profit to color and sales to size. Then on selecting heat map, we obtain the following:

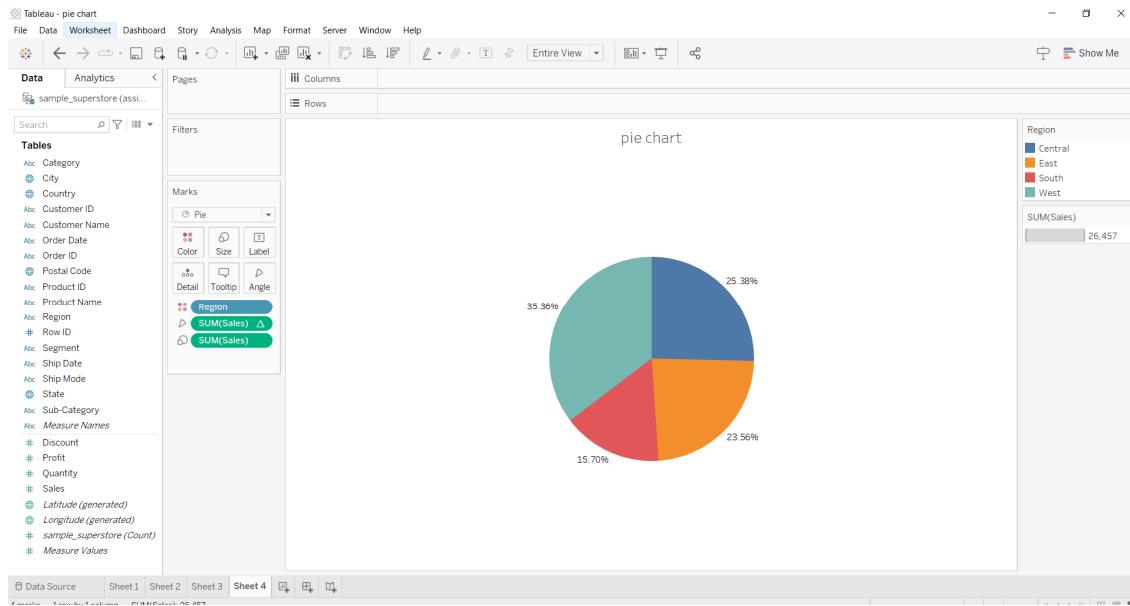


Here, we see that the bookcases in the east have a good sale seeing the size of the rectangle but profit is the lowest since the rectangle is the brownest.

Also, we infer that tables in the west have the best sales seeing the size of the rectangle (largest). Also, the profit is the best (that can be inferred from the color of rectangle which is the darkest blue).

## • PIE CHART

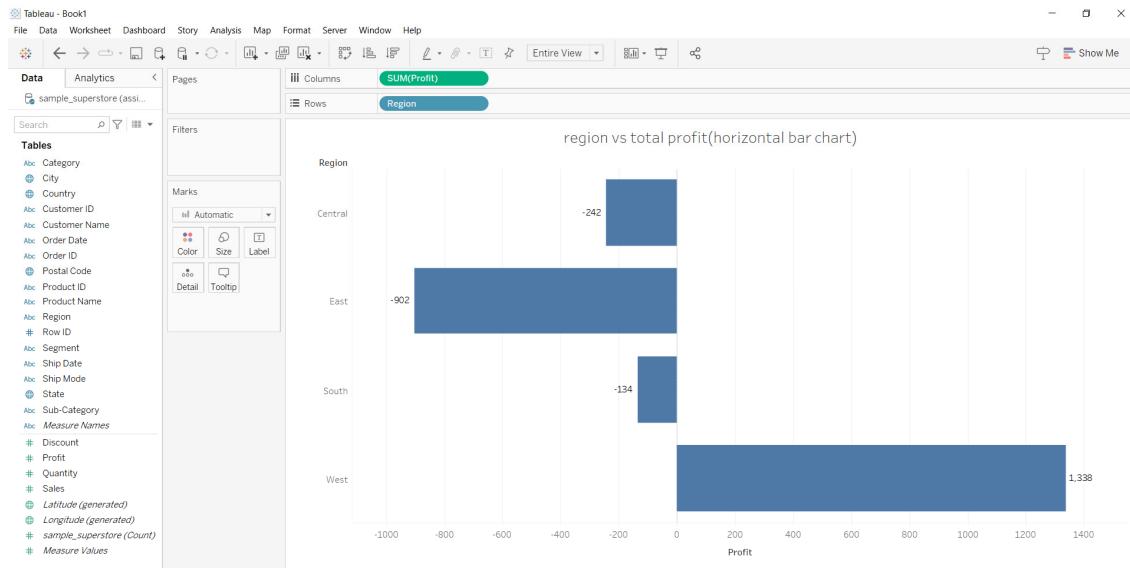
We take the dimension region and the measure sales to create a pie chart.



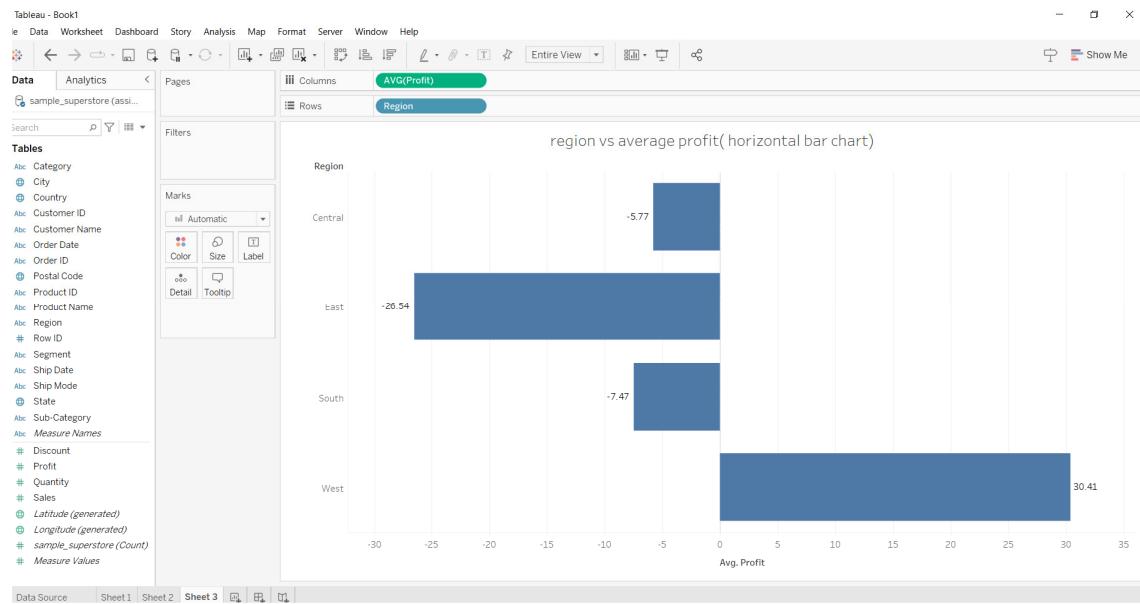
The inference from the pie chart is that the west region has maximum sales. (35.36%) Also, the south region has the lowest sales. (15.70 %)

## • HORIZONTAL BAR CHART

Here, we take region as dimension in rows and profit as measure for columns.



We infer from the horizontal bar chart that west region has maximum profit (1,338) than other regions.



Here, we infer that average profit for west region is highest.