

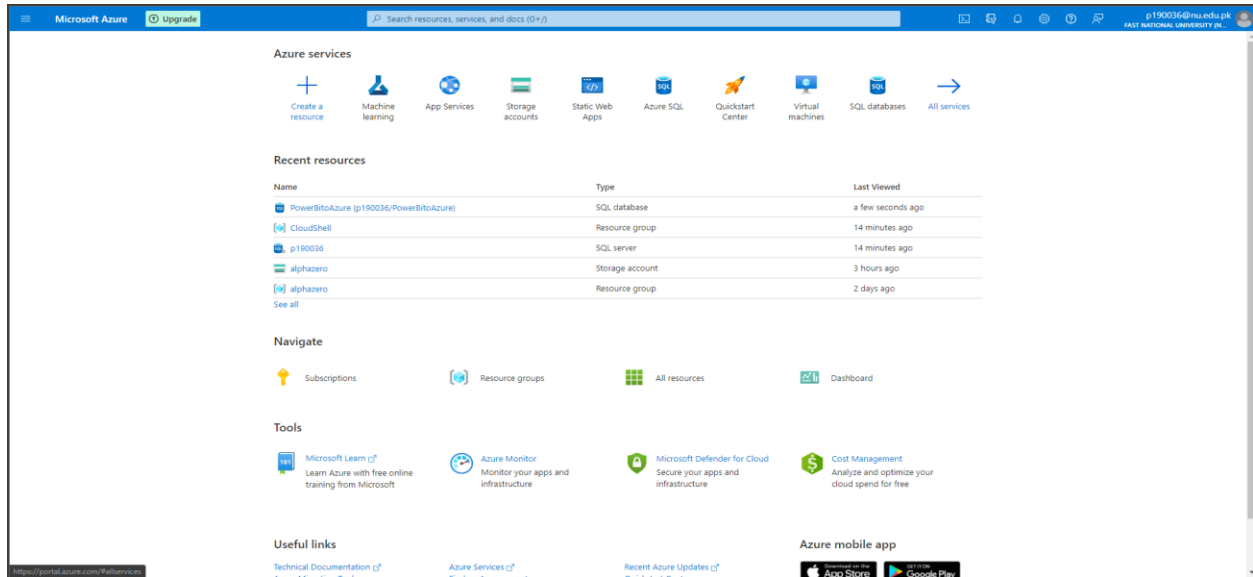
POWER BI IN AZURE

Muhammad Abdullah

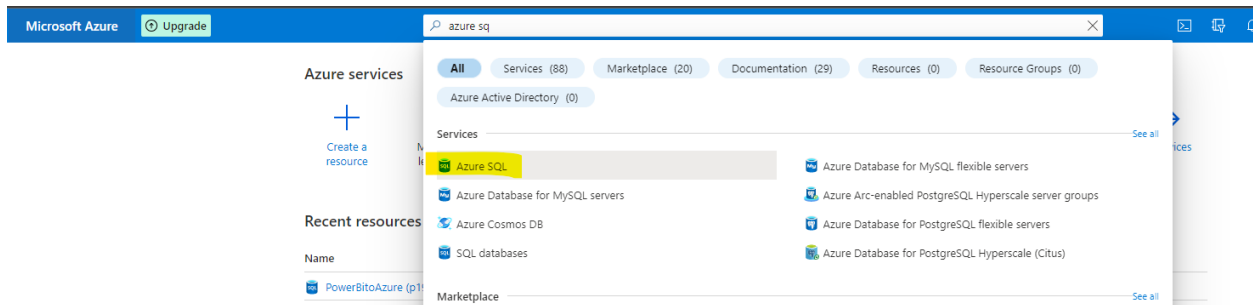
P19-0036 Section-6B

Power Bi in Azure

Step 1: Login to your Azure account



Step 2: Search for Azure SQL, and click on it.



Step 3: Now create a new server

Microsoft Azure

Upgrade

Search resources, services, and docs (G+/)

Home >

Azure SQL

FAST National University (nu.edu.pk)

Create

Reservations

Manage view

Refresh

Export to CSV

Open query

Assign tags

Delete

Feedback

Filter for any field...

Subscription == all

Resource group == all

Location == all

Add filter

<input type="checkbox"/>	Name ↑↓	Resour... ↑↓	Service tier ↑↓	Resource group ↑↓
<input type="checkbox"/>	p190036	SQL server	--	CloudShell
<input type="checkbox"/>	PowerBitoAzure (p190036/PowerBitoAzure)	SQL database	General Purpose: Ser...	CloudShell

Step 4: Choose SQL database

Microsoft Azure

Upgrade

Search resources, services, and docs (G+/)

Home > Azure SQL >

Select SQL deployment option

Microsoft

Feedback

How do you plan to use the service?

SQL databases

Best for modern cloud applications. Hyperscale and serverless options are available.

Resource type

Single database

Create

Show details

SQL managed instances

Best for most migrations to the cloud. Lift-and-shift ready.

Resource type

Single instance

Create

Show details

SQL virtual machines

Best for migrations and applications requiring OS-level access. Lift-and-shift ready.

Image

Create


Show details

Step 5: Now fill the form

[Home](#) > [Azure SQL](#) > [Select SQL deployment option](#) >

Create SQL Database ...

Microsoft

 Changing Basic options may reset selections you have made. Review all options prior to creating the resource.

Subscription * ⓘ	<div>Azure subscription 1</div>
Resource group * ⓘ	<div>CloudShell</div> Create new

Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name *	<div>DatabasePowerBis</div>
Server * ⓘ	<div>p190036 (East Asia)</div> Create new


Want to use SQL elastic pool? * ⓘ ☐ Yes ☒ No

Compute + storage * ⓘ
Standard S0
10 DTUs, 250 GB storage
[Configure database](#)

Backup storage redundancy

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is only available when geo-redundant storage is selected.

Backup storage redundancy ⓘ ☐ Locally-redundant backup storage
☐ Zone-redundant backup storage
☒ Geo-redundant backup storage

 Selected value for backup storage redundancy is Geo-redundant backup

[Review + create](#)

[Next : Networking >](#)

Step 6: Create Server which is in Database details

Create SQL Database Server ...

Microsoft

Server details

Enter required settings for this server, including providing a name and location. This server will be created in the same subscription and resource group as your database.

Server name *	<input type="text" value="Enter server name"/> ...database.windows.net
Location *	<input style="border-bottom: 1px solid #ccc;" type="text" value="(US) East US"/>

Authentication

Select your preferred authentication methods for accessing this server. Create a server admin login and password to access your server with SQL authentication, select only Azure AD authentication [Learn more ↗](#) using an existing Azure AD user, group, or application as Azure AD admin [Learn more ↗](#), or select both SQL and Azure AD authentication.

Authentication method	<div><input checked="" type="radio"/> Use SQL authentication</div> <div><input type="radio"/> Use only Azure Active Directory (Azure AD) authentication</div> <div><input type="radio"/> Use both SQL and Azure AD authentication</div>
Server admin login *	<input type="text" value="Enter server admin login"/>
Password *	<input type="password"/>
Confirm password *	<input type="password"/>

Step 7: review and create

Backup storage redundancy

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is only available when geo-redundant storage is selected.

Backup storage redundancy ⓘ

- ☐ Locally-redundant backup storage
- ☐ Zone-redundant backup storage
- ☒ Geo-redundant backup storage

⚠ Selected value for backup storage redundancy is Geo-redundant backup storage. Note that database backups will be geo-replicated to the paired region. [Learn more](#)

Review + create

Next : Networking >



Microsoft.SQLDatabase.newDatabaseExistingServer_259d429b56414ea6 | Overview ⚙ ...

Deployment

Search (Ctrl+/) <<

Delete Cancel Redeploy Refresh

Overview

Inputs

Outputs

Template

👉 We'd love your feedback! →

✓ Your deployment is complete



Deployment name: Microsoft.SQLDatabase.newDatabaseExistingSe... Start time: 4/6/2022, 2:16:07 PM
Subscription: [Azure subscription 1](#) Correlation ID: 0fb305b7-90d6-4613-b11b-116b51a6f282
Resource group: [CloudShell](#)

▼ Deployment details [\(Download\)](#)

^ Next steps

[Go to resource](#)

Step 8: Go to resource, and click on compute + storage

The screenshot shows the Microsoft Azure portal interface for configuring a DatabasePowerBi resource. The left sidebar contains navigation links: Overview, Activity log, Tags, Diagnose and solve problems, Quick start, Query editor (preview), Power Platform (Power BI, Power Apps, Power Automate), Settings (Compute + storage, Connection strings, Properties, Locks), Data management (Replicas, Sync to other databases), and Integrations. The main content area is titled 'DatabasePowerBi (p190036/DatabasePowerBi) | Compute + storage'. It features a 'Service and compute tier' section with a dropdown menu set to 'General Purpose (Scalable compute and storage options)'. Below this, the 'Compute tier' is set to 'Serverless'. The 'Compute Hardware' section shows 'Gen5' hardware configuration. The 'Max vCores' is set to 2, and 'Min vCores' is set to 0.5. The 'Data max size (GB)' is set to 15. The 'Backup storage redundancy' is set to 'Geo-redundant backup storage'. A 'Database utilization' chart is visible on the right, showing DTU percentage and data space used. A 'Cost summary' table is also present, showing estimated storage cost and compute cost. A 'NOTES' section at the bottom states: 'Serverless databases are billed in vCores based on a combination of CPU and memory utilization. Learn more about serverless billing.'

Microsoft Azure Upgrade Search resources, services, and docs (G+)

Home > Microsoft.SQLDatabase.newDatabaseExistingServer_259d429b56414ea6 > DatabasePowerBi (p190036/DatabasePowerBi)

DatabasePowerBi (p190036/DatabasePowerBi) | Compute + storage

SQL database

Search (Ctrl+/)

Feedback

Overview

Activity log

Tags

Diagnose and solve problems

Quick start

Query editor (preview)

Power Platform

Power BI

Power Apps

Power Automate

Settings

Compute + storage

Connection strings

Properties

Locks

Data management

Replicas

Sync to other databases

Integrations

Service and compute tier

Select from the available tiers based on the needs of your workload. The vCore model provides a wide range of configuration controls and offers Hyperscale and Serverless to automatically scale your database based on your workload needs. Alternately, the DTU model provides set price/performance packages to choose from for easy configuration. [Learn more](#)

Service tier

General Purpose (Scalable compute and storage options)

Compare service tiers

Compute tier

Provisioned - Compute resources are pre-allocated. Billed per hour based on vCores configured.

Serverless - Compute resources are auto-scaled. Billed per second based on vCores used.

Compute Hardware

Select the hardware configuration based on your workload requirements. Availability of compute optimized, memory optimized, and confidential computing hardware depends on the region, service tier, and compute tier.

Hardware Configuration

Gen5

up to 40 vCores, up to 120 GB memory

Change configuration

Max vCores

2

Min vCores

0.5 vCores

2.02 GB MIN MEMORY 3 GB MAX MEMORY

Database utilization

DTU percentage (Max) p190036(databasepowerbi) 2%

Data space used perc... p190036(databasepowerbi) 0%

Cost summary

Gen5 - General Purpose (GP, S, Gen5, T)

Cost per GB (in USD) 0.17

Max storage selected (in GB) x 19.5

ESTIMATED STORAGE COST / MONTH 3.36 USD

COMPUTE COST / VCORE / SECOND 0.000216 USD

NOTES

1 Serverless databases are billed in vCores based on a combination of CPU and memory utilization. [Learn more about serverless billing](#)

Auto-pause delay

The database automatically pauses if it is inactive for the time period specified here, and automatically resumes when database activity recurs. Alternatively, auto-pausing can be disabled.

☒ Enable auto-pause

Days Hours Minutes

0 1 0

Data max size (GB)

15

4.5 GB LOG SPACE ALLOCATED

Backup storage redundancy

- ☐ Locally-redundant backup storage
- ☐ Zone-redundant backup storage
- ☒ Geo-redundant backup storage

Selected value for backup storage redundancy is Geo-redundant backup storage. Note that database backups will be geo-replicated to the paired region. [Learn more](#)

Apply

Step 9: Set server firewall

Microsoft Azure Upgrade Search resources, services, and docs (G+)

Home > Microsoft.SQLDatabase.newDatabaseExistingServer_259d429b56414ea6 >

DatabasePowerBi (p190036/DatabasePowerBi) SQL database

Search (Ctrl+/) << Copy Restore Export **Set server firewall** Delete Connect with... Feedback

Overview

- Activity log
- Tags
- Diagnose and solve problems
- Quick start
- Query editor (preview)

Power Platform

- Power BI
- Power Apps
- Power Automate

Online - Updating database pricing tier →

Essentials

Resource group (move) : CloudShell

Status : Online

Location : East Asia

Subscription (move) : Azure subscription 1

Subscription ID : 837f3c6c-e51c-4820-9ef6-9289a727a613

Tags (edit) : Click here to add tags

Show data for last: 1 hour 24 hours 7 days

Compute utilization

Microsoft Azure Upgrade Search resources, services, and docs

Home > Microsoft.SQLDatabase.newDatabaseExistingServer_259d429b56414ea6 > DatabasePowerBi (p190036/DatabasePowerBi)

Firewall settings p190036 (SQL server)

Save Discard **Add client IP**

☐ Deny public network access

Minimum TLS Version ⓘ

1.0 1.1 **1.2**

Connection Policy ⓘ

Default Proxy Redirect

Allow Azure services and resources to access this server ⓘ

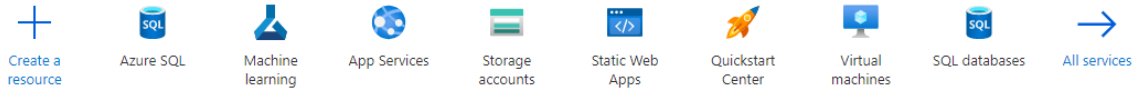
Yes **No**

Client IP address 182.185.115.114

Rule name	Start IP	End IP	
			...
ClientIPAddress_2022-4-...	182.185.115.114	182.185.115.114	...
ClientIPAddress_2022-4-1_1-...	182.185.90.244	182.185.90.244	...

Step 10: Go to home page and click on your database

Azure services



Recent resources

Name	Type	Last Viewed
DatabasePowerBi (p190036/DatabasePowerBi)	SQL database	10 minutes ago
CloudShell	Resource group	13 minutes ago
PowerBitoAzure (p190036/PowerBitoAzure)	SQL database	40 minutes ago
p190036	SQL server	54 minutes ago
alphazero	Storage account	4 hours ago
alphazero	Resource group	2 days ago

[See all](#)

Step 10: Go to query editor

Microsoft Azure Upgrade

Home >

DatabasePowerBi (p190036/DatabasePowerBi)

SQL database

<< Copy Restore Export Set server firewall Delete Connect with... Feedback

Overview

Activity log

Tags

Diagnose and solve problems

Quick start

Query editor (preview)

Essentials

Resource group [\(move\)](#) : [CloudShell](#)

Status : Online

Location : East Asia

Subscription [\(move\)](#) : [Azure subscription 1](#)

Subscription ID : 837f3c6c-e51c-4820-9ef6-9289a727a613

Tags [\(edit\)](#) : [Click here to add tags](#)



Step 11: login to your database



Welcome to SQL Database Query Editor

SQL server authentication

Login *

Password *




OK

Active Directory authentication

Continue as p190036@nu.edu.pk

OR

Step 12: Add query to your database, I'm use dummy data from [Mockaroo - Random Data Generator and API Mocking Tool | JSON / CSV / SQL / Excel](#)

SCHEMASDATASETSMOCK APISSCENARIOSPROJECTS


Looking to generate **fake data** based on your **production data**? Mimic your databases with a trial account from

Need some mock data to test your app? Mockaroo lets you generate up to 1,000 rows of realistic test data in CSV, JSON, SQL, and Excel formats.
Need more data? Plans start at just \$60/year. Mockaroo is also available as a [docker image](#) that you can deploy in your own private cloud.

Field Name	Type	Options
<div>⋮</div> <input type="text" value="id"/>	Row Number	blank: 0 % Σ ✕
<div>⋮</div> <input type="text" value="first_name"/>	First Name	blank: 0 % Σ ✕
<div>⋮</div> <input type="text" value="country"/>	Country	restrict countries...
<div>⋮</div> <input type="text" value="product"/>	Product (Grocery)	blank: 0 % Σ ✕
<div>⋮</div> <input type="text" value="gender"/>	Gender	blank: 0 % Σ ✕
<div>⋮</div> <input type="text" value="ip_address"/>	IP Address v4	blank: 0 % Σ ✕

ADD ANOTHER FIELD

Rows: Format: Table Name: ☒ include CREATE TABLE

 Follow @mockarodev

Mock your back-end API and start coding your UI today.

It's hard to put together a meaningful UI prototype without making real data. [DOWNLOAD DATA](#) [PREVIEW](#) [SAVE THIS SCHEMA](#) [MORE ▾](#)

Step 13: Open your query in query editor

Home > DatabasePowerBi (p190036/DatabasePowerBi)

DatabasePowerBi (p190036/DatabasePowerBi) | Query editor (preview) ...

SQL database

Search (Ctrl+/) << Login + New Query ↑ Open query Feedback

Overview
Activity log
Tags
Diagnose and solve problems
Quick start
Query editor (preview)
Power Platform

DatabasePowerBi (abdullah)

Showing limited object explorer here. For full capability please open SSDT.

Tables
> Views
> Stored Procedures

Query 1 ×

Run ☐ Cancel query ↓ Save query ↓ Export d

1

Open SQL query

SQL files (You can upload 10 files at maximum) *

"MOCK_DATA.sql"

OK

Cancel

Step 14: Run query

Query 3 ×

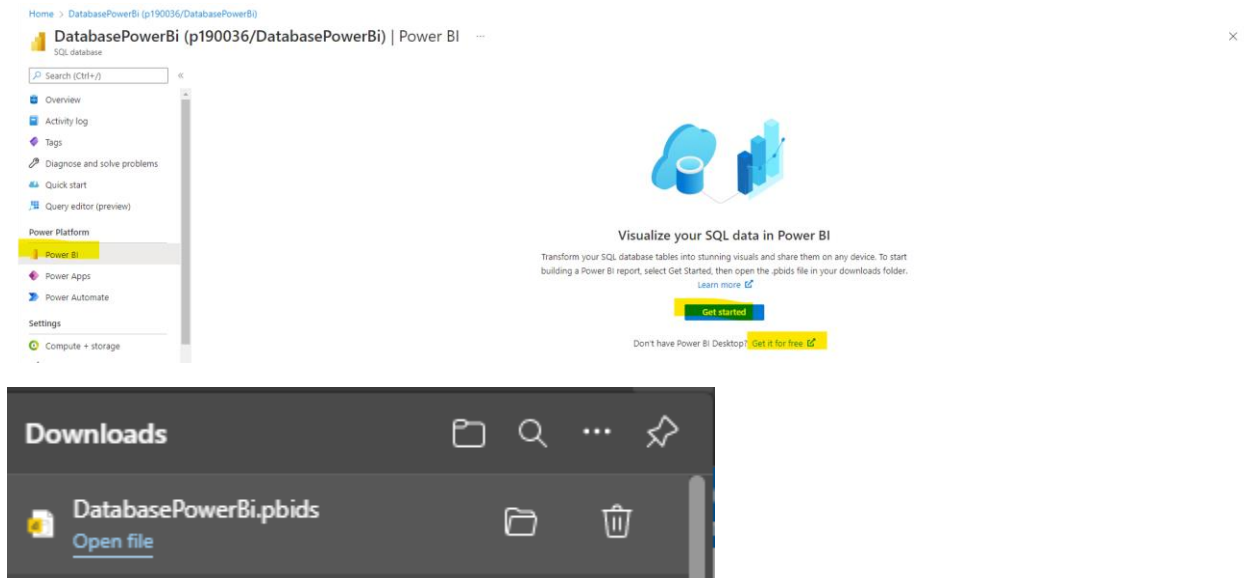
Run ☐ Cancel query ↓ Save query ↓ Export data as v Show only Editor

```
1 create table MOCK_DATA (  
2   id INT,  
3   first_name VARCHAR(50),  
4   country VARCHAR(50),  
5   product VARCHAR(50),  
6   gender VARCHAR(50),  
7   ip_address VARCHAR(20)  
8 );  
9 insert into MOCK_DATA (id, first_name, country, product, gender, ip_address) values (1, 'Britt', 'Sweden', 'Bread - French Baguette', 'Male', '242.203.109.  
10 insert into MOCK_DATA (id, first_name, country, product, gender, ip_address) values (2, 'Darelle', 'Czech Republic', 'Tea - Jasmin Green', 'Female', '67.12  
11 insert into MOCK_DATA (id, first_name, country, product, gender, ip_address) values (3, 'Thebault', 'Greece', 'Longos - Grilled Veg Sandwiches', 'Male', '1  
12 insert into MOCK_DATA (id, first_name, country, product, gender, ip_address) values (4, 'Hashim', 'Russia', 'Steel Wool S.o.s', 'Male', '173.102.59.200');  
13 insert into MOCK_DATA (id, first_name, country, product, gender, ip_address) values (5, 'Rosalia', 'Sweden', 'Trueblue - Blueberry', 'Female', '161.35.55.1  
14 insert into MOCK_DATA (id, first_name, country, product, gender, ip_address) values (6, 'Isabel', 'United States', 'Bourbon - Apple', 'Female', '143.436
```

Results Messages

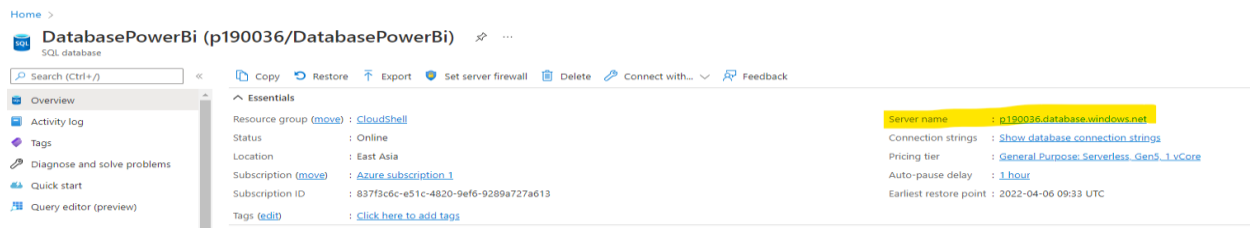
Query succeeded: Affected rows: 1000

Step 15: click on power bi, and then click Get started to get .pbids file if you already have power bi desktop application otherwise download Power Bi from [Power BI Desktop—Interactive Reports | Microsoft Power BI](#)



Step 16: Open power bi, and connect to your database server

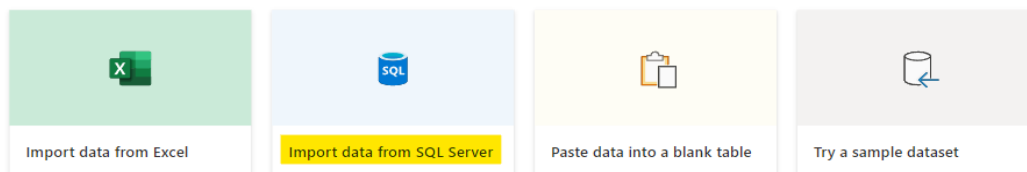
Get server name from here



On Power Bi select Import from SQL server

Add data to your report

Once loaded, your data will appear in the Fields pane.



SQL Server database

Server ⓘ

p190036.database.windows.net

Database (optional)

Data Connectivity mode ⓘ

☒ Import

☐ DirectQuery

▸ Advanced options

OK

Cancel

Step 17: Load the table you want to visualize in Power Bi

Navigator

Display Options ▾

▾ p190036.database.windows.net [2]

▾ DatabasePowerBi [3]

☐ sys.database_firewall_rules

☐ sys.ipv6_database_firewall_rules

☒ MOCK_DATA

▸ PowerBitoAzure

MOCK_DATA

id	first_name	country	product
1	Britt	Sweden	Bread - French Baquette
2	Darelle	Czech Republic	Tea - Jasmin Green
3	Thebault	Greece	Longos - Grilled Veg Sandwiches
4	Hashim	Russia	Steel Wool S.o.s
5	Rosalia	Sweden	Trueblue - Blueberry
6	Joann	United States	Peppercorns - Green
7	Malissa	Russia	Chocolate - Milk, Callets
8	Ursola	Sweden	Oil - Olive
9	Tyrus	Turkmenistan	Pate - Liver
10	Elizabeth	Sweden	Veal - Insides Provini
11	Darla	Cameroon	Ham Black Forest
12	Gran	Nepal	Knife Plastic - White
13	Dorette	Greece	V8 - Vegetable Cocktail
14	Kit	Iceland	Table Cloth 81x81 Colour
15	Darlene	Philippines	Salmon - Atlantic, No Skin
16	Gelya	Indonesia	Bread - Olive Dinner Roll
17	Malia	Vietnam	Soup - Base Broth Beef
18	Giffer	China	Cheese - Cheddar, Medium
19	Selby	Greece	Glaze - Apricot
20	Robin	Japan	Pastry - Lemon Danish - Mini
21	Toiboid	Thailand	Wine - Peller Estates Late
22	Emile	Colombia	Cookie Dough - Double
23	Bartram	China	Food Colouring - Red

Select Related Tables

Load

Transform Data

Cancel

Step 18: Visualize the data you loaded

