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## DATANATION Project Report

### Project Question/Objective

- Using the **DataNation** dataset, perform the following tasks:**Step-by-Step**
- Create separate **City names** by removing city codes.
- Create a **State → City hierarchy**
- Build a **Filled Map**
- Calculate **Death Rate** and show it using **Shape Map**
- Change color of shapes for better interpretation
- Create a Dashboard and Story

### Implementation Guide

#### Step 1: Data Connection & Preparation

1. Open Tableau Desktop
2. Connect to the **DataNation.csv** dataset
3. Check that fields like **State**, **City**, **Confirmed Cases**, and **Deaths** have correct data types

The screenshot shows the Tableau Desktop interface with the 'DataNation' dataset loaded. The left sidebar displays the 'Connections' section with 'DataNation Microsoft Excel' selected. Below it, the 'Sheets' section shows 'NationData' as the active sheet. The main workspace shows a table with 9 fields and 53 rows, titled 'NationData (DataNation)'. The table includes columns for City Name, State, Capital Ind, Non Metro, Population Current, Birth, and Death Rate. The 'Fields' pane on the left lists 'Type', 'Field Name', 'Physical Table', and 'Remote ...' for each column. A 'Go to Worksheet' button is visible at the bottom of the Fields pane. The bottom navigation bar includes 'Data Source', 'Sheet 1' (which is highlighted in orange), and other worksheet icons.

City Name	State	Capital Ind	Non Metro	Population Current	Birth	Death Rate
Agra[AG1]	Uttar Pradesh	Non Capital	Non Metro	1,080,000	14,800	8.3000
Ahmedabad[AH5]	Gujarat	Non Capital	Non Metro	1,770,000	14,200	9.3000
Allahabad[AL2]	Uttar Pradesh	Non Capital	Non Metro	910,000	13,700	9.4000
Amritsar[AM3]	Punjab	Non Capital	Non Metro	930,000	14,000	9.2000
Aurangabad[AU8]	Maharashtra	Non Capital	Non Metro	950,000	16,700	9.4000
Bengaluru[BA1]	Karnataka	Non Capital	Metro	1,820,000	14,100	7.9000

Data successfully loaded into Tableau with proper field recognition

Verified data types using Fields table at the bottom right of tableau.

**State** automatically recognized as **Geographic Role**

**City, Capital Ind, Metro Ind** recognized as **Text (ABC)**

**Population, Birth Rate, Death Rate, Per Person Income** recognized as **Number (#)**

**Last Election Date** identified correctly as **Date**.

**Step 2:** Create separate Cities by removing the Code associated with each cities.

Created a **calculated field** City with the formula:

Dragged City to **Rows shelf**

The screenshot shows the Tableau Data Source interface. On the left, the 'Connections' pane shows a single connection named 'DataNation' (Microsoft Excel). Below it, the 'Sheets' pane lists 'NationData' and other options. In the center, the 'NationData (DataNation)' sheet is selected, displaying its schema: 9 fields, 53 rows, and a primary key 'Name'. A context menu is open over the 'Name' column, with the 'Create Calculated Field...' option highlighted. On the right, the Fields table shows the following data:

Abc	NationData	NationData	NationData
Type	Field Name	Physical Table	Remote ...
#	Per Person Income	NationData	Per Perso...
◻	Last Election Date	NationData	Last Elect...

## Sheet 1

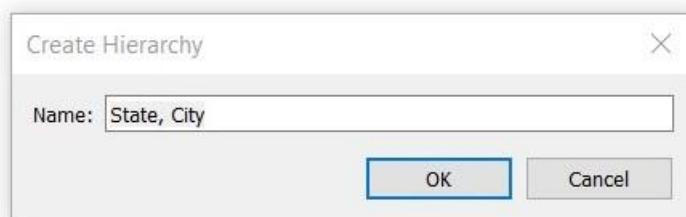
City	
Jaipur	Abc
Jodhpur	Abc
Kalyan	Abc
Kanpur	Abc
Kolkata	Abc
Kota	Abc
Lucknow	Abc
Ludhiana	Abc

City: Kanpur

### Step 3: Create a hierarchy of the state and city

Drag City onto State → Create Hierarchy → name it State → City.

Drag the hierarchy to Rows shelf to see states expandable to cities.



Rows	State	City
<b>Sheet 1</b>		
<b>State</b>	<b>City</b>	
Andhra Pradesh	Vijayawada	Abc
	Vishakhapatnam	Abc
Assam	Guwahati	Abc
Bihar	Patna	Abc
Chandigarh	Chandigarh	Abc
Chhattisgarh	Raipur	Abc
Delhi	New Delhi	Abc
Gujarat	Ahmadabad	Abc
	Rajkot	Abc
	Surat	Abc
	Vadodara	Abc
Haryana	Faridabad	Abc
Jammu and Kashmir	Srinagar	Abc
Jharkhand	Dhanbad	Abc
	Ranchi	Abc
Karnataka	Bengaluru	Abc
	Hubli	Abc
	Mysore	Abc
Madhya Pradesh	Bhopal	Abc
	Gwalior	Abc
	Indore	Abc
	Jabalpur	Abc
Maharashtra	Aurangabad	Abc
	Kalyan	Abc
	Mumbai	Abc
	Nagpur	Abc
	Nashik	Abc
	Navi Mumbai	Abc
	Pimpri-Chinchwad	Abc
	Pune	Abc
	Solapur	Abc
	Thane	Abc

### Step 4 : Visualize cities on a map.

1. In the **Data pane**, double-click **State** → Tableau will automatically create a map showing all states.
2. Double-click **City** → Tableau now plots city points on top of the states.

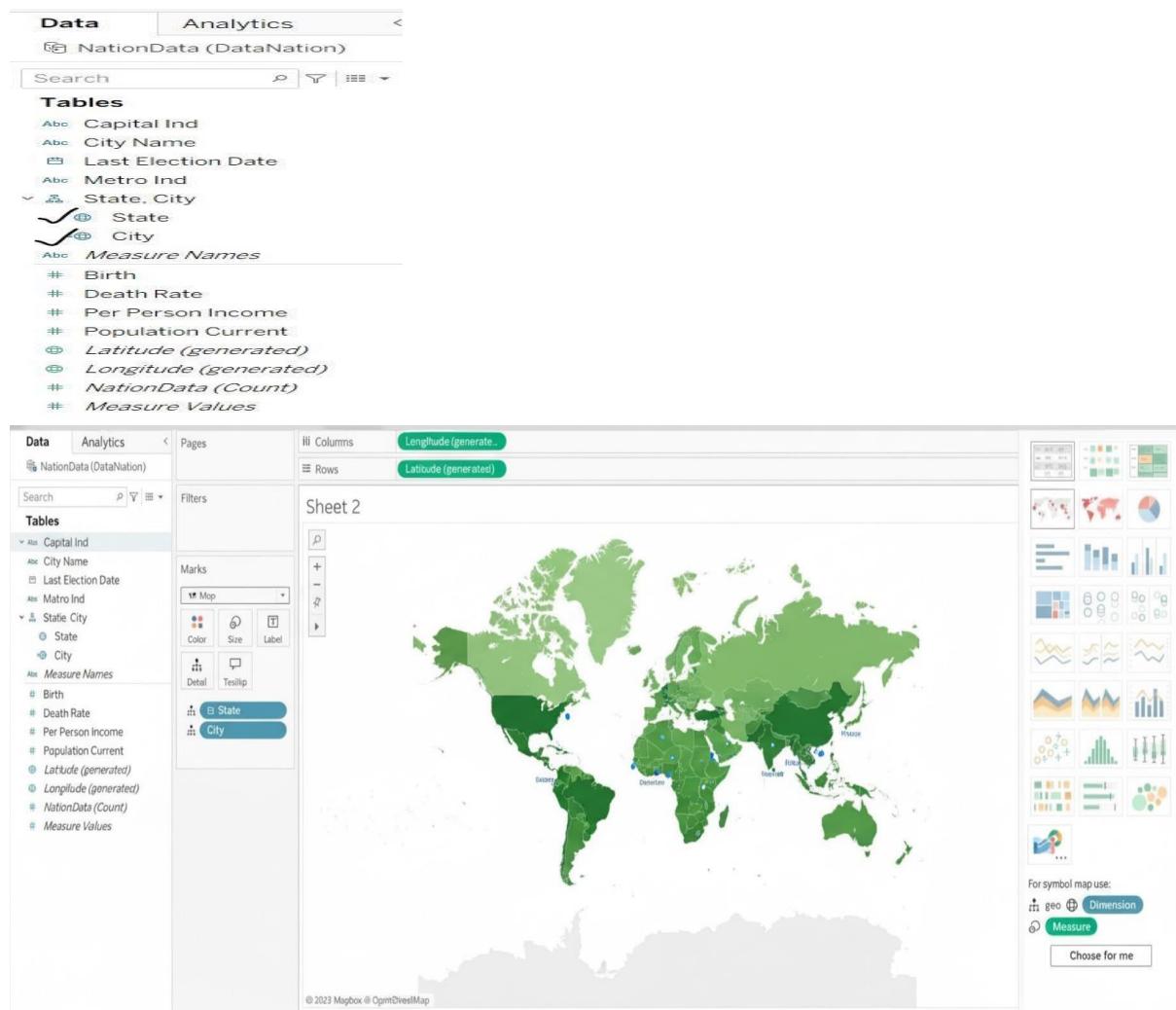
At this point, you should see small dots or marks representing each city.

Go to the **Marks card** (middle-left of the screen).

Currently, it might say **Automatic**. Click the dropdown.

Select **Map** → **Filled Map**.

Now each state appears as a filled shape, and cities are marked on it.



### Step 5: Find the Death Rate for Cities with a ShapeCard.

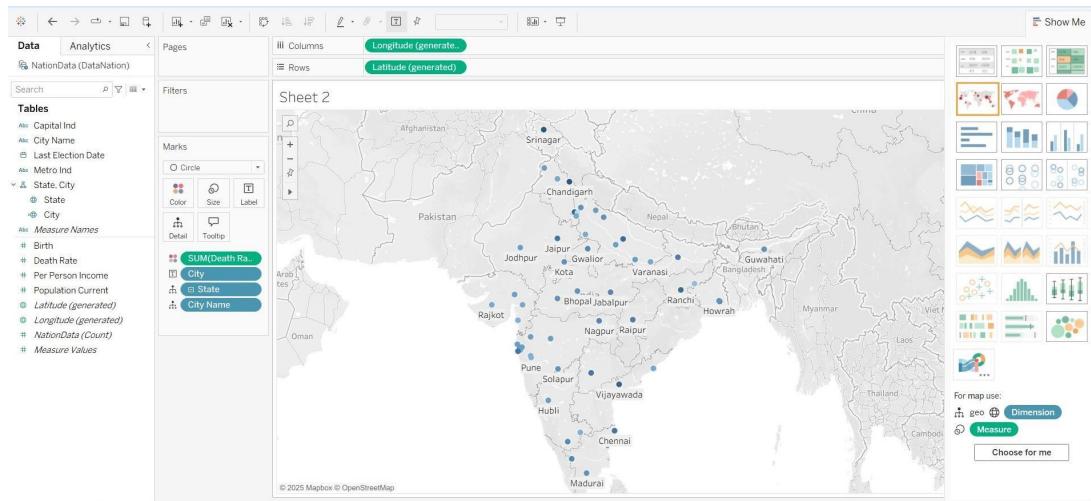
The **State** and **City** fields were set with correct **Geographical Roles**.

The **City** field was used to generate the map view.

The **Marks card** was changed to **Shape** to represent each city.

**Death Rate** was dragged to **Shape** and **Color** to visually indicate variations.

Colors were adjusted to highlight differences in death rate clearly.



## Tools Used

- Tableau Desktop/Public
- Data nation.csv dataset

## Files Created

- 'Data nation.twbx' (Tableau packaged workbook)
- Project Report Document