

WEEK 1

Steps to Download Microsoft Power BI

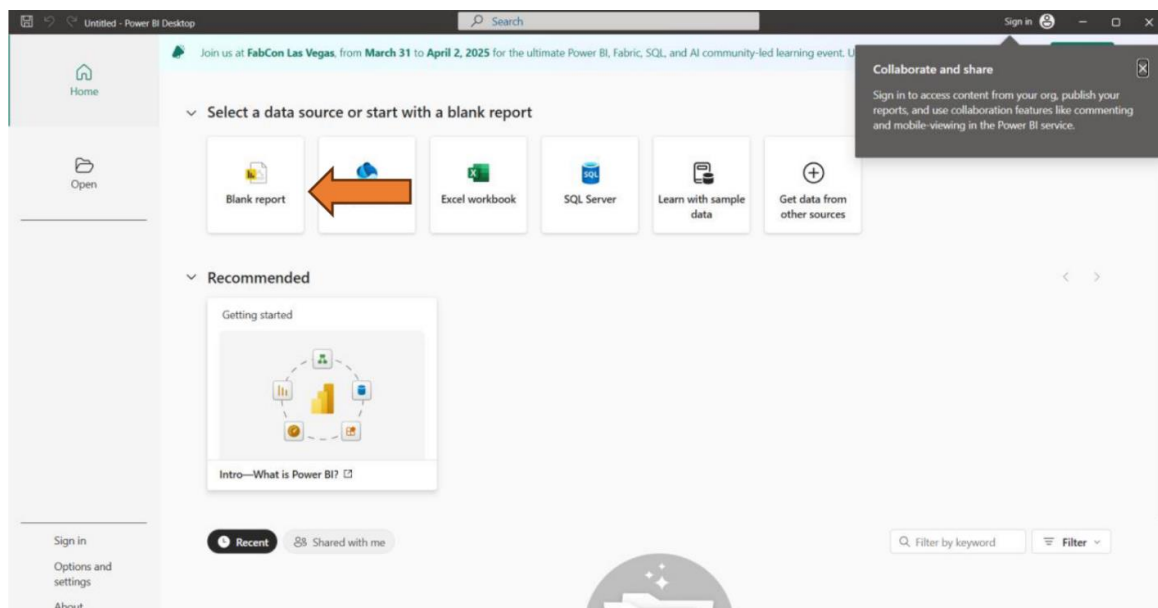
1. Visit: [Power BI Download Link](#)
2. Download based on system specifications.
3. Install Power BI (Next → Next → Finish).
4. Open the Power BI application.

ETL:

- Extract: Pull Data from Data Sources ex: Excel, Csv, text, database file
- Transform: Data Preprocessing, Data Cleaning
- Load: When data is Cleaned we Load it for analysis

Opening a New Project

- Open Power BI → Click "Blank Project"
- A new untitled Power BI window opens (also called Canvas/Power BI Desktop).



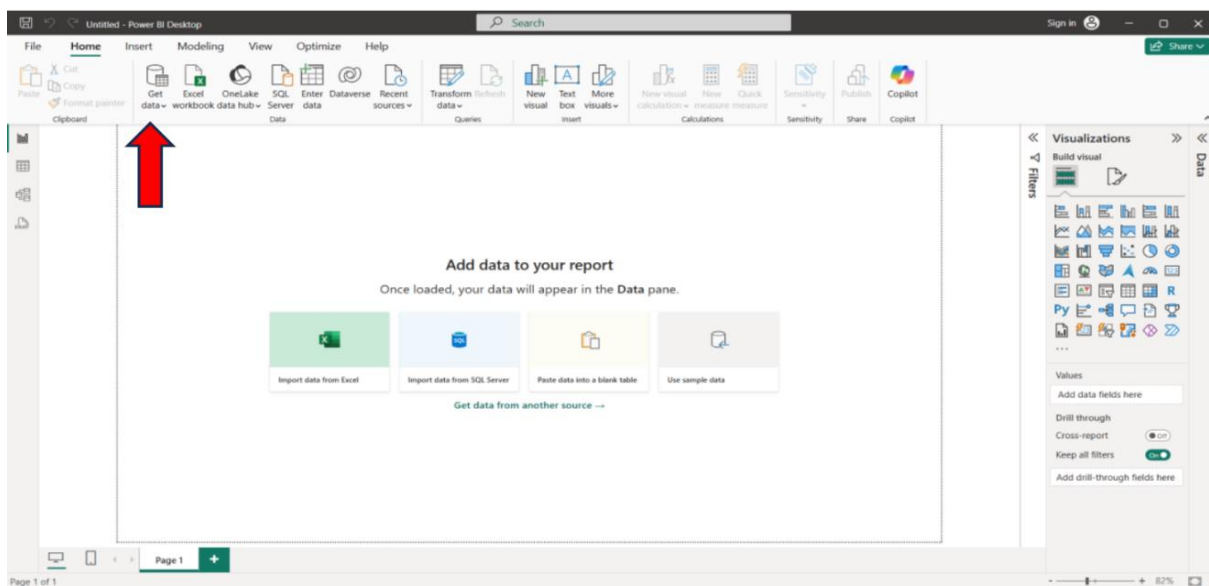
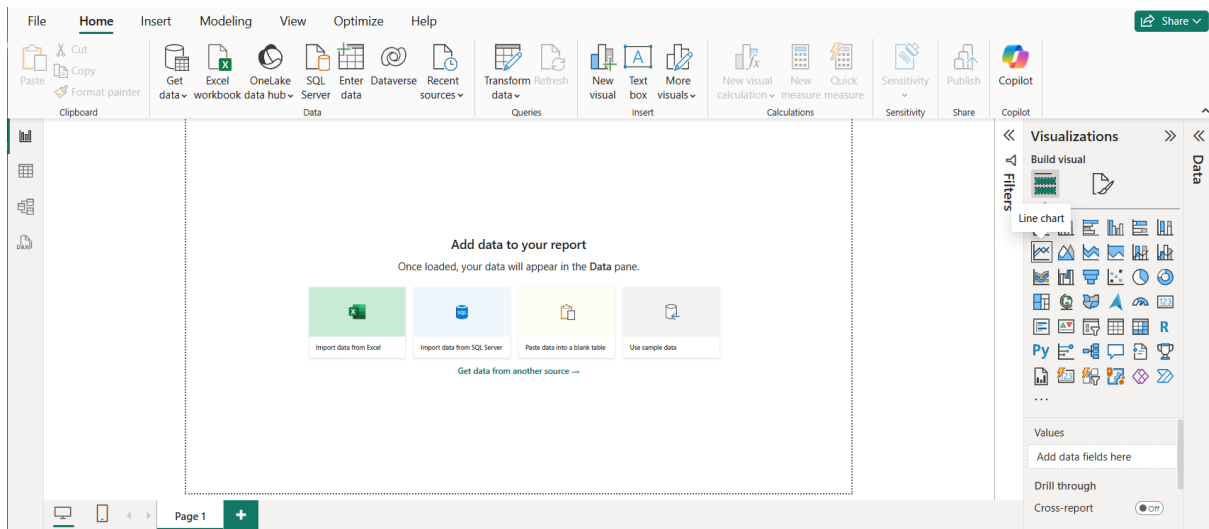
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Extracting Data

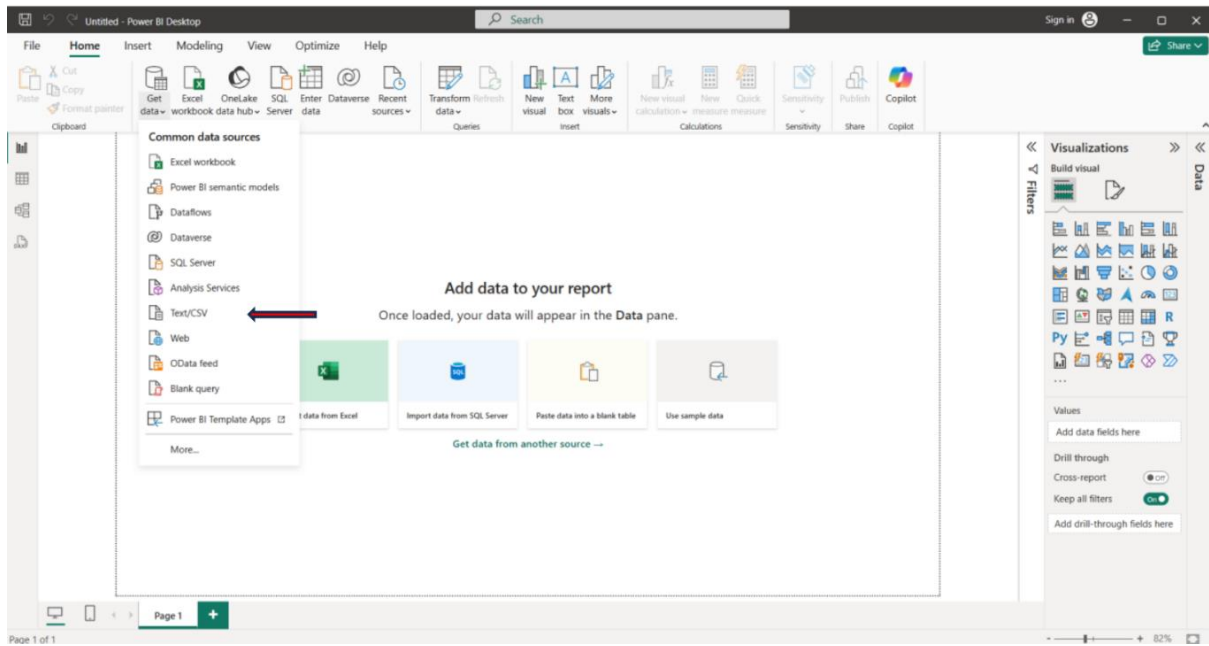
Supported File Types: Excel, CSV, Text, Database Files

Steps to Extract Data:

1. Go to the **Home Tab**
2. Click **Get Data**
3. Download & add the required dataset



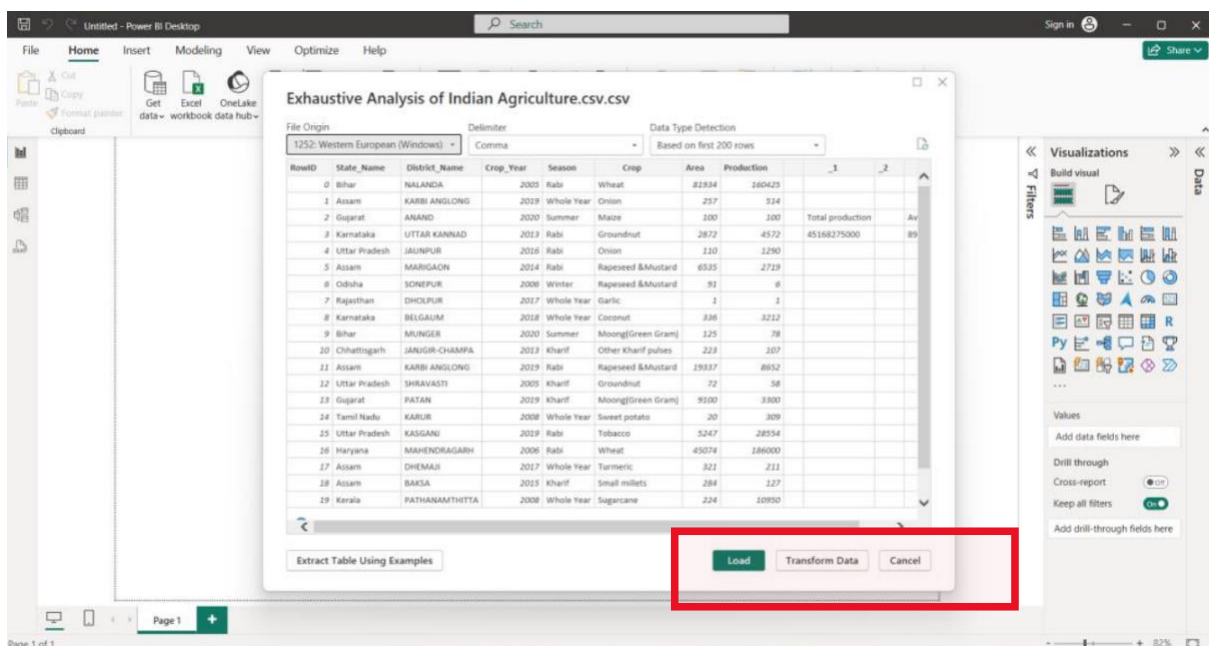
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Data Load & Transformation Options

Three Options in Power BI:

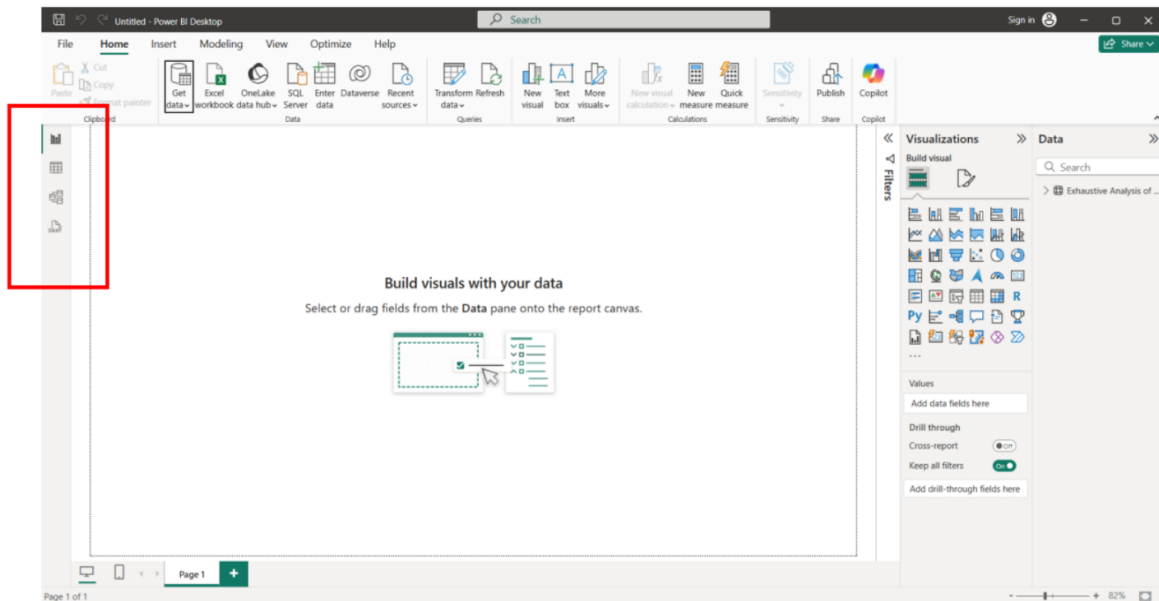
1. **Load** – Directly import cleaned data
2. **Transform Data** – Process & clean data before loading
3. **Cancel** – Discard data import



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Power BI Views

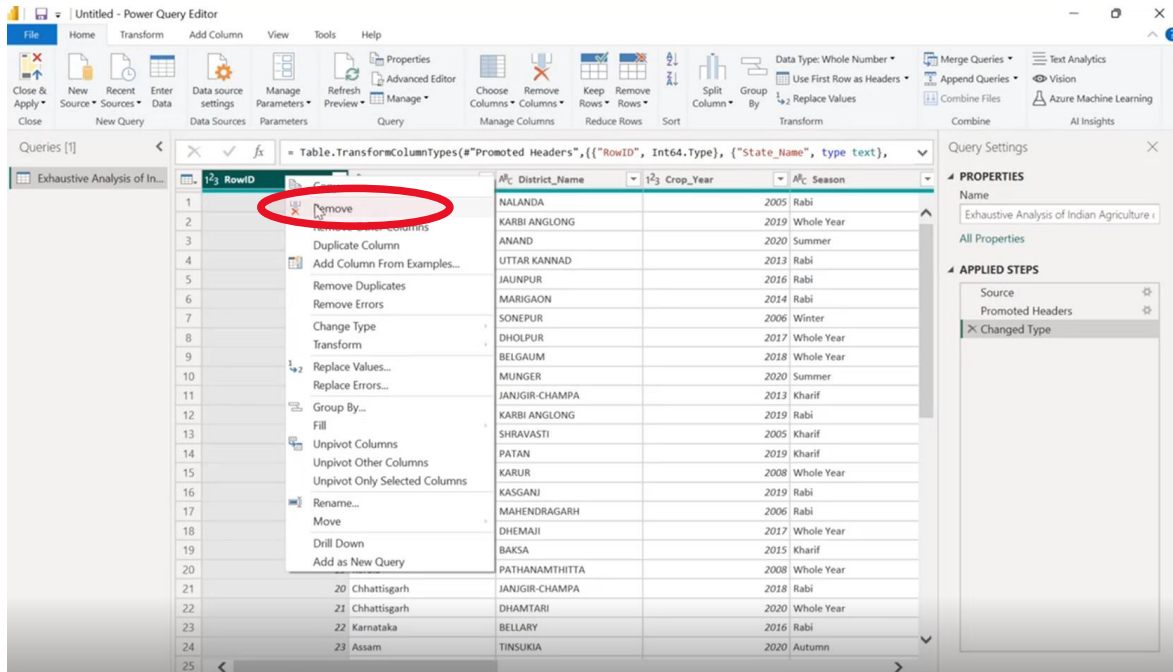
- **Report View:** Visualizations & dashboards
- **Table View:** Data in tabular format
- **Model View:** Creating relationships between datasets



Data Transformation - Removing Blank Columns

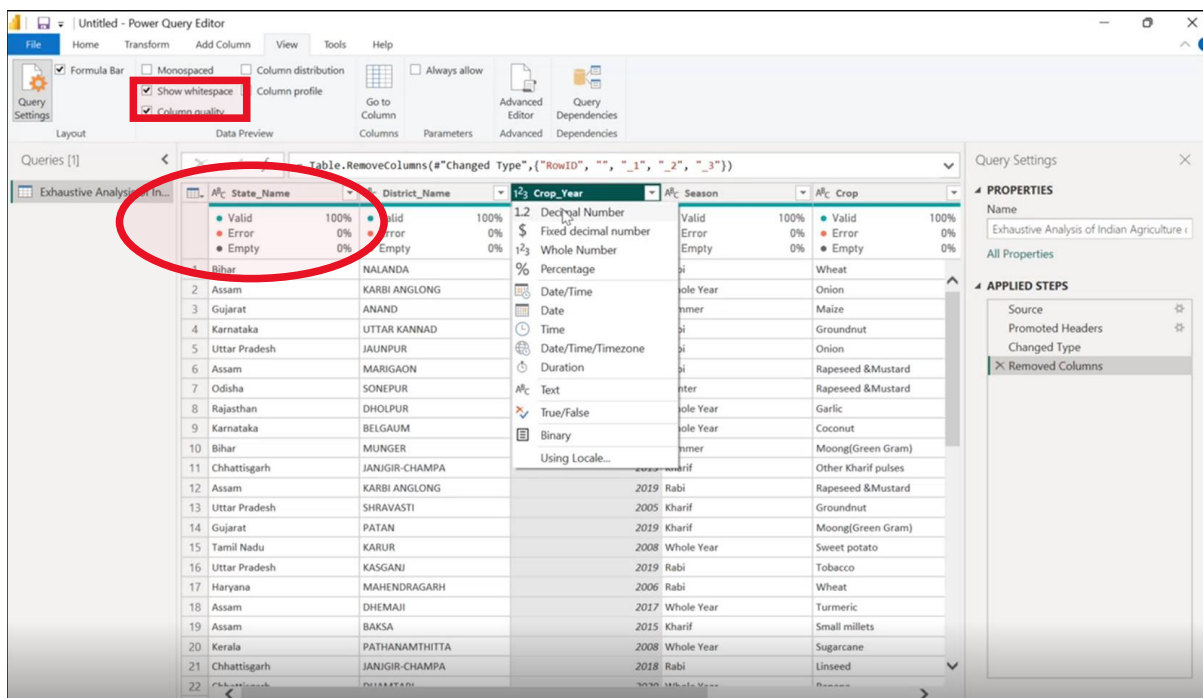
1. Right-click on the blank column.
2. Select **Remove** to delete it.

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Data Quality & Checking Null Values

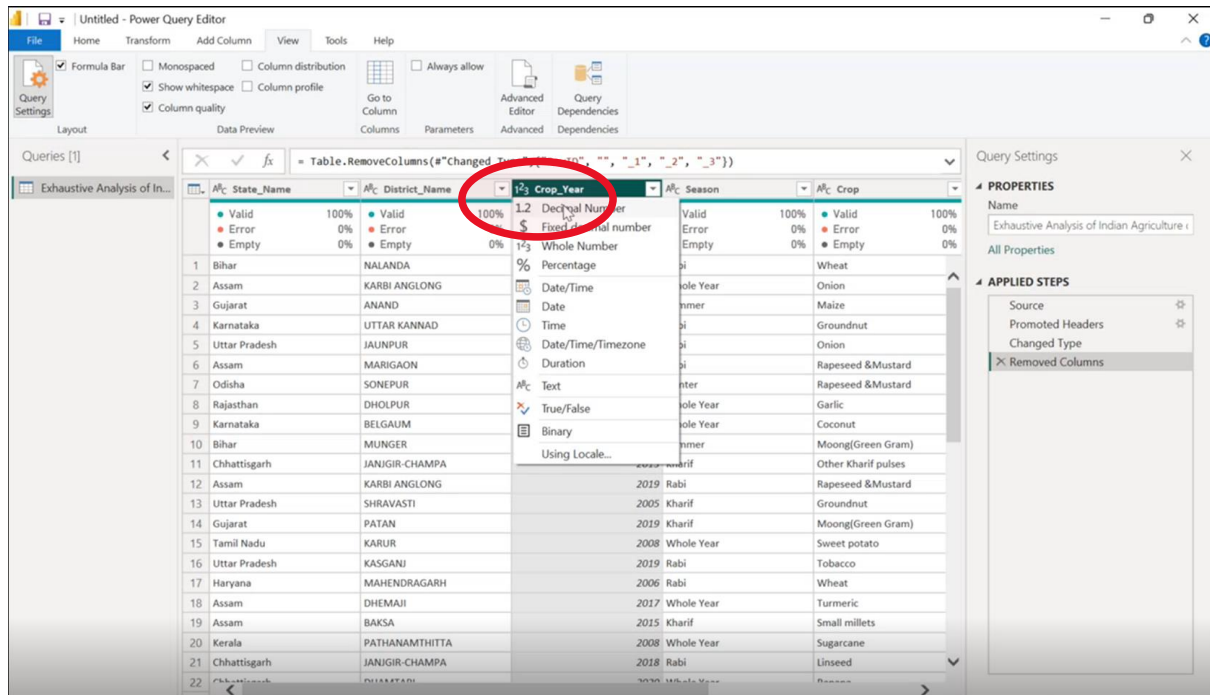
1. Click on the **View** Tab.
2. Select **Column Quality**.
3. Analyze the dataset for completeness & accuracy.



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Data Type

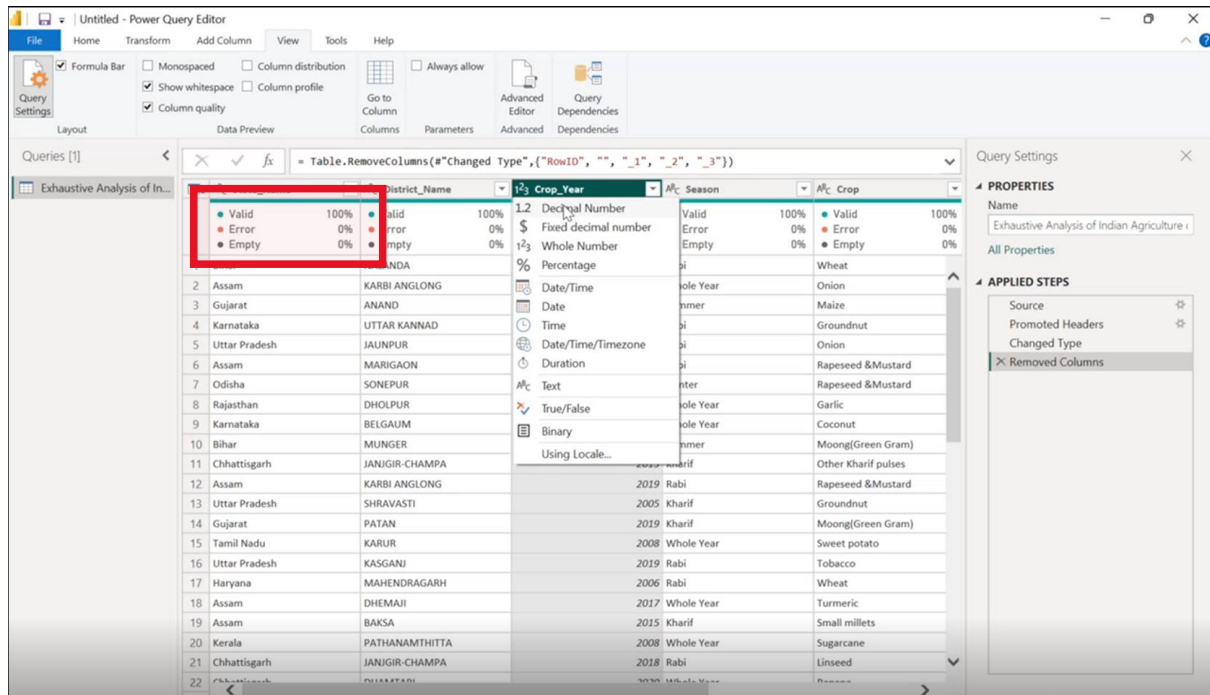
- We can view and change Data type by clicking on the left numeric or alphabetic value



Data Quality & Checking Null Values

1. Click on the **View Tab**.
2. Select **Column Quality**.
3. Analyze the dataset for completeness & accuracy.

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Saving and Applying Changes

1. Click on the **Home Tab**.
2. Select **Close & Apply**.
3. Changes are now applied to the Power BI dashboard.

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The screenshot shows the Microsoft Power Query Editor interface. The 'Home' tab is active, and the 'Close & Apply' button is circled in red. The main area displays a data table with the following columns: State_Name, District_Name, Crop_Year, Season, and Crop. The table contains 22 rows of data. The right sidebar shows the 'Query Settings' pane with the 'Properties' section expanded, displaying the query name 'Exhaustive Analysis of Indian Agriculture' and the 'Applied Steps' section, which lists the steps: Source, Promoted Headers, Changed Type, and Removed Columns.

State_Name	District_Name	Crop_Year	Season	Crop
Bihar	NALANDA	2005	Rabi	Wheat
Assam	KARBI ANGLONG	2019	Whole Year	Onion
Gujarat	ANAND	2020	Summer	Maize
Karnataka	UTTAR KANNAD	2013	Rabi	Groundnut
Uttar Pradesh	JAUNPUR	2016	Rabi	Onion
Assam	MARIGAON	2014	Rabi	Rapeseed & Mustard
Odisha	SONEPUR	2006	Winter	Rapeseed & Mustard
Rajasthan	DHOLPUR	2017	Whole Year	Garlic
Karnataka	BELGAUM	2018	Whole Year	Coconut
Bihar	MUNGER	2020	Summer	Moong(Green Gram)
Chhattisgarh	JANIGIR-CHAMPA	2013	Kharif	Other Kharif pulses
Assam	KARBI ANGLONG	2019	Rabi	Rapeseed & Mustard
Uttar Pradesh	SHRAVASTI	2005	Kharif	Groundnut
Gujarat	PATAN	2019	Kharif	Moong(Green Gram)
Tamil Nadu	KARUR	2008	Whole Year	Sweet potato
Uttar Pradesh	KASGANI	2019	Rabi	Tobacco
Haryana	MAHENDRAGARH	2006	Rabi	Wheat
Assam	DHEMAJI	2017	Whole Year	Turmeric
Assam	BAKSA	2015	Kharif	Small millets
Kerala	PATHANAMTHITTA	2008	Whole Year	Sugarcane
Chhattisgarh	JANIGIR-CHAMPA	2018	Rabi	Linseed