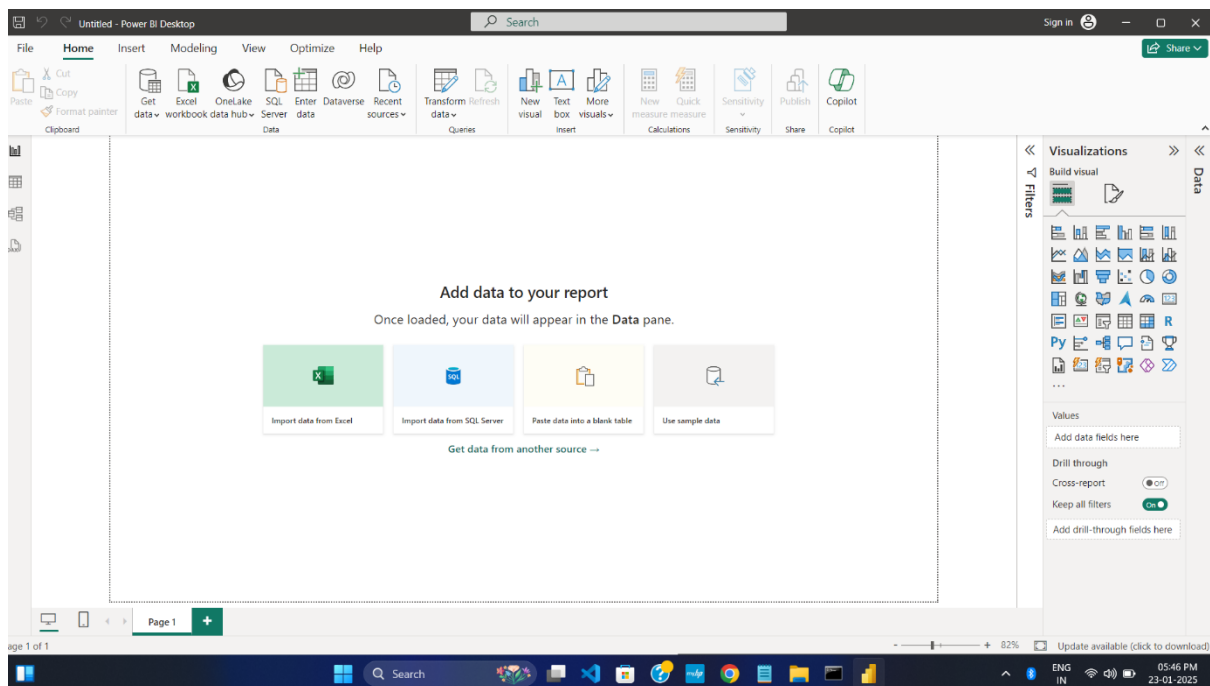


Basic Introduction of PowerBI and Handling the CSV file

Step1:Open PowerBI Desktop

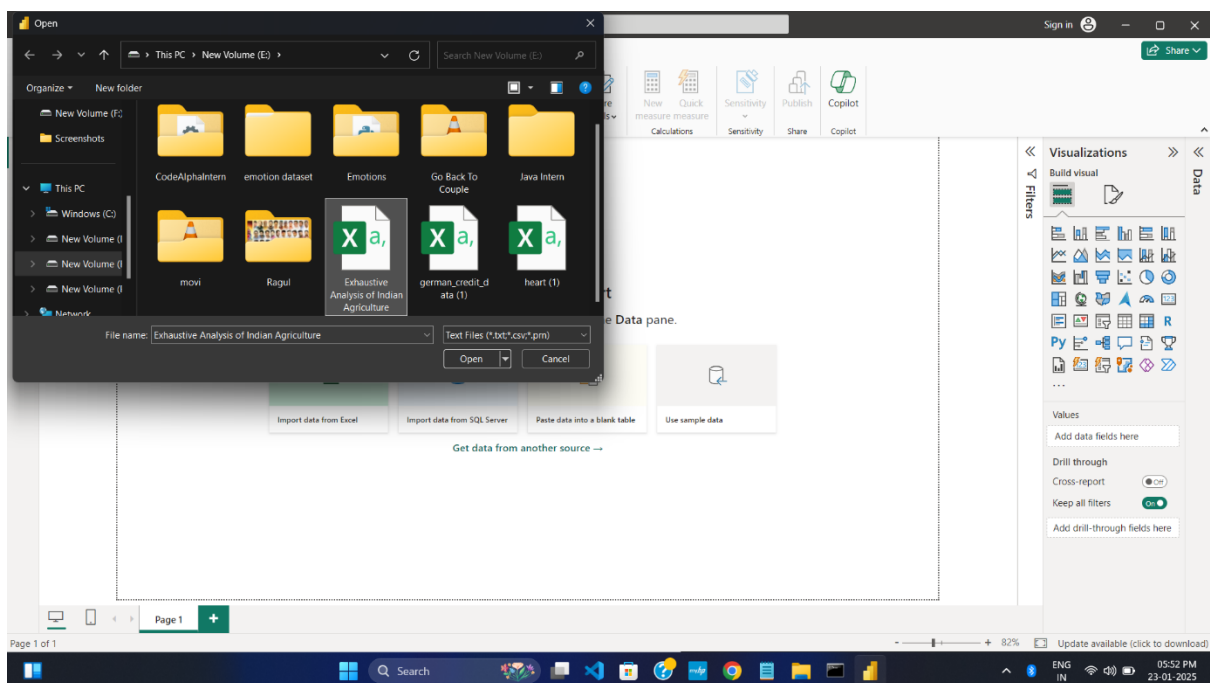
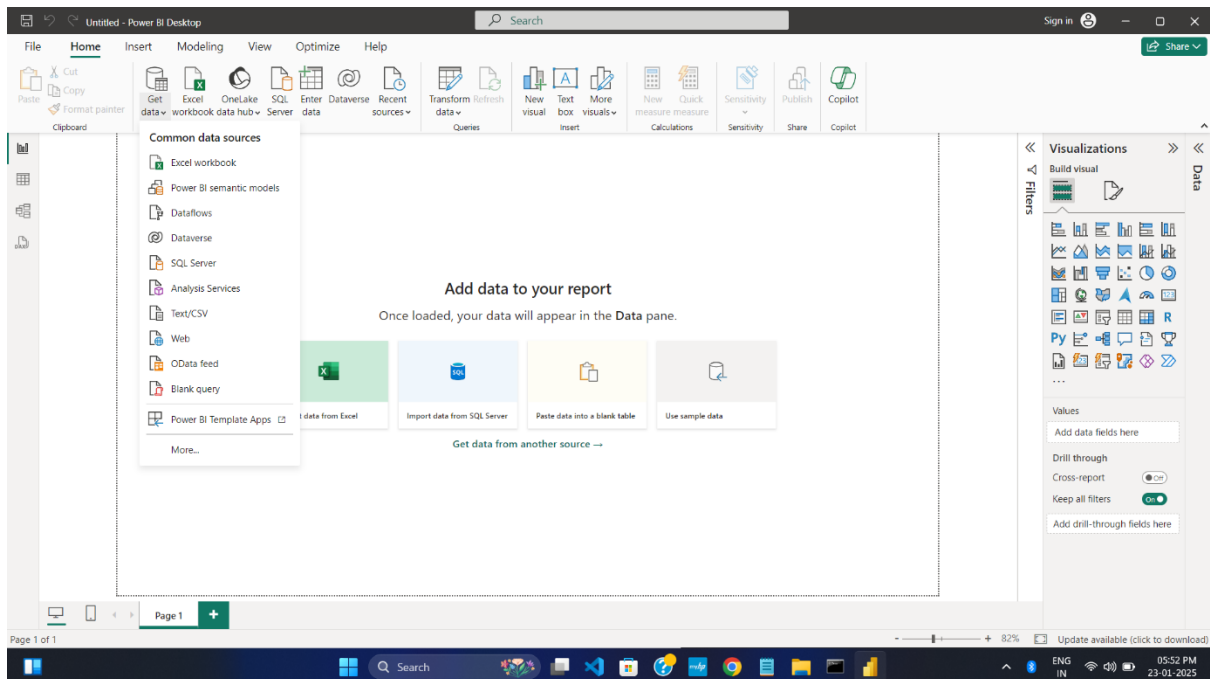


Step2:Main Goal-ETL

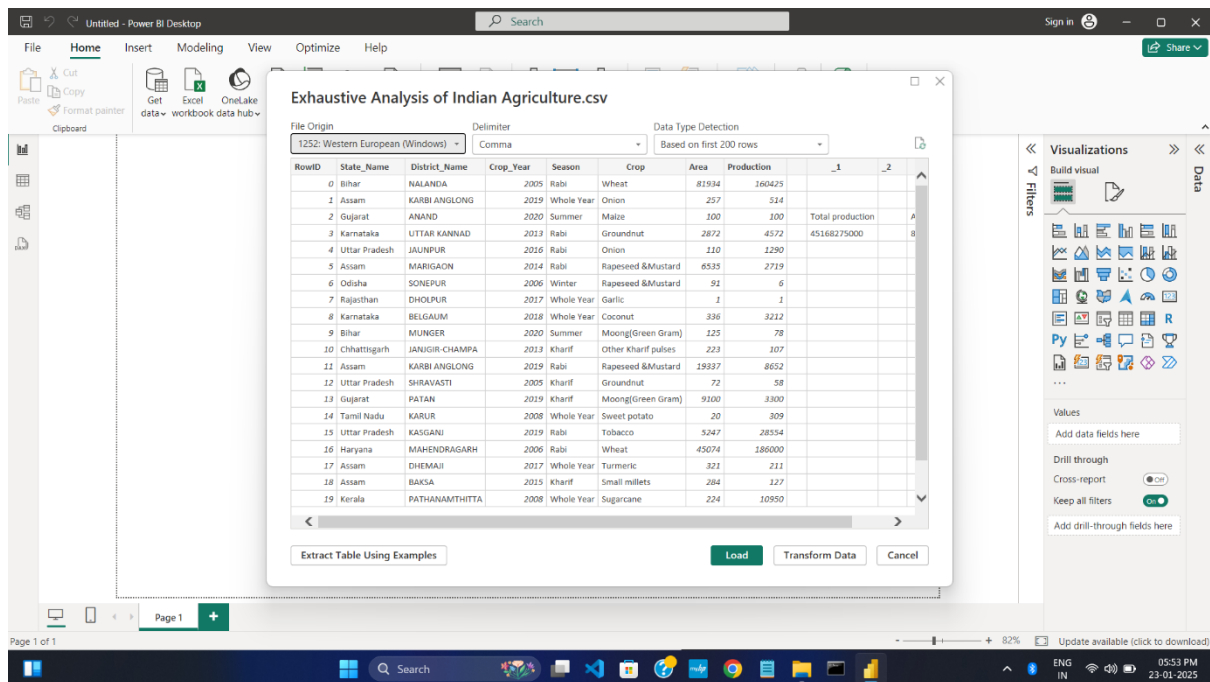
E-Extract,T-Transform,L-Load

- Extraction- Pull data from data source like .csv,excel,text ,video or audio etc.
- Transformation- Data Preprocessing like data cleaning ,data processing,data reduction etc.
- Loading- For analysing the dataset for insights via dashboards and facts.

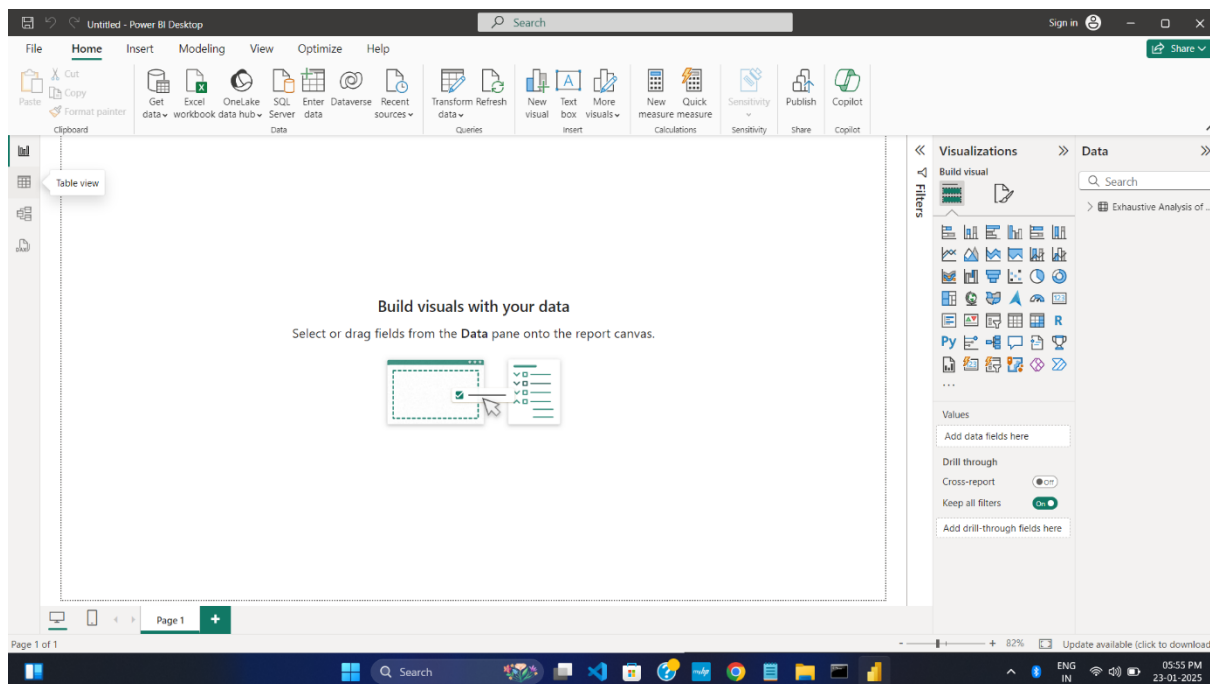
Step3:Extract the data by csv file in this project.



Step4:Click the Load button to load the data



Step5:After Loading the data ,click the table view in the left corner side



Step6:You can see the head of the whole dataset (like 200 record)

The screenshot shows the Power BI Desktop interface with the 'Table tools' ribbon active. The data table is displayed with the following columns: RowID, State_Name, District_Name, Crop_Year, Season, Crop, Area, Production, and several blank columns. The table contains 200 rows of data, primarily from Uttar Pradesh, detailing various crops and their production over time.

RowID	State_Name	District_Name	Crop_Year	Season	Crop	Area	Production	Column1	.1	.2	.3
48	Uttar Pradesh	PILIBHIT	2009	Kharif	Moong(Green Gram)	1	0.1				
657	Uttar Pradesh	AMBEDKAR NAGAR	2012	Kharif	Small millets	1	0				
959	Uttar Pradesh	MUZAFFARNAGAR	2012	Kharif	Sannhamp	1	0				
1469	Uttar Pradesh	VARANASI	2018	Kharif	Groundnut	1	1				
1477	Uttar Pradesh	GORAKHPUR	2020	Kharif	Dry chillies	1	1				
1864	Uttar Pradesh	BALRAMPUR	2010	Kharif	Moong(Green Gram)	1	0				
2081	Uttar Pradesh	AGRA	2010	Kharif	Sunflower	1	1				
3989	Uttar Pradesh	AURAIYA	2018	Kharif	Sannhamp	1	0				
4944	Uttar Pradesh	ETAH	2012	Kharif	Soyabean	1	1				
4963	Uttar Pradesh	SIDDHARTH NAGAR	2006	Kharif	Moong(Green Gram)	1	0				
6377	Uttar Pradesh	HATHRAS	2012	Kharif	Groundnut	1	1				
6498	Uttar Pradesh	MUZAFFARNAGAR	2022	Kharif	Sannhamp	1	1				
7358	Uttar Pradesh	MATHURA	2010	Kharif	Small millets	1	1				
8253	Uttar Pradesh	KAUSHAMBI	2011	Kharif	Sunflower	1	2				
8499	Uttar Pradesh	HAMIRPUR	2014	Kharif	Cotton(lint)	1	0				
8508	Uttar Pradesh	KANNAUJ	2009	Kharif	Moth	1	0.1				
9248	Uttar Pradesh	MAHARAJGANJ	2016	Kharif	Small millets	1	1				
9773	Uttar Pradesh	BALRAMPUR	2008	Kharif	Moong(Green Gram)	1	1				
9775	Uttar Pradesh	CHANDAULI	2014	Kharif	Small millets	1	1				
11191	Uttar Pradesh	GONDA	2015	Kharif	Sannhamp	1	0				
11891	Uttar Pradesh	CHANDAULI	2012	Kharif	Small millets	1	0				
12339	Uttar Pradesh	BAREILLY	2022	Kharif	Moong(Green Gram)	1	0				
12883	Uttar Pradesh	PRATAPGARH	2008	Kharif	Groundnut	1	1				
13936	Uttar Pradesh	JALAUN	2010	Kharif	Sunflower	1	1				
15748	Uttar Pradesh	MEERUT	2008	Kharif	Groundnut	1	1				
17448	Uttar Pradesh	SAHARANPUR	2019	Kharif	Arhar/Tur	1	1				

Step7:After that ,main step is to transform(Power query editor) the data like cleaning and processing the data.

The screenshot shows the Power BI Desktop interface with the 'Transform data' menu open in the Power Query Editor. The data table is displayed with the following columns: RowID, State_Name, District_Name, Crop_Year, Season, Crop, Area, Production, and several blank columns. The table contains 200 rows of data, primarily from Uttar Pradesh, detailing various crops and their production over time.

RowID	State_Name	District_Name	Crop_Year	Season	Crop	Area	Production	Column1	.1	.2	.3
48	Uttar Pradesh	PILIBHIT	2009	Kharif	Moong(Green Gram)	1	0.1				
657	Uttar Pradesh	AMBEDKAR NAGAR	2012	Kharif	Small millets	1	0				
959	Uttar Pradesh	MUZAFFARNAGAR	2012	Kharif	Sannhamp	1	0				
1469	Uttar Pradesh	VARANASI	2018	Kharif	Groundnut	1	1				
1477	Uttar Pradesh	GORAKHPUR	2020	Kharif	Dry chillies	1	1				
1864	Uttar Pradesh	BALRAMPUR	2010	Kharif	Moong(Green Gram)	1	0				
2081	Uttar Pradesh	AGRA	2010	Kharif	Sunflower	1	1				
3989	Uttar Pradesh	AURAIYA	2018	Kharif	Sannhamp	1	0				
4944	Uttar Pradesh	ETAH	2012	Kharif	Soyabean	1	1				
4963	Uttar Pradesh	SIDDHARTH NAGAR	2006	Kharif	Moong(Green Gram)	1	0				
6377	Uttar Pradesh	HATHRAS	2012	Kharif	Groundnut	1	1				
6498	Uttar Pradesh	MUZAFFARNAGAR	2022	Kharif	Sannhamp	1	1				
7358	Uttar Pradesh	MATHURA	2010	Kharif	Small millets	1	1				
8253	Uttar Pradesh	KAUSHAMBI	2011	Kharif	Sunflower	1	2				
8499	Uttar Pradesh	HAMIRPUR	2014	Kharif	Cotton(lint)	1	0				
8508	Uttar Pradesh	KANNAUJ	2009	Kharif	Moth	1	0.1				
9248	Uttar Pradesh	MAHARAJGANJ	2016	Kharif	Small millets	1	1				
9773	Uttar Pradesh	BALRAMPUR	2008	Kharif	Moong(Green Gram)	1	1				
9775	Uttar Pradesh	CHANDAULI	2014	Kharif	Small millets	1	1				
11191	Uttar Pradesh	GONDA	2015	Kharif	Sannhamp	1	0				
11891	Uttar Pradesh	CHANDAULI	2012	Kharif	Small millets	1	0				
12339	Uttar Pradesh	BAREILLY	2022	Kharif	Moong(Green Gram)	1	0				
12883	Uttar Pradesh	PRATAPGARH	2008	Kharif	Groundnut	1	1				
13936	Uttar Pradesh	JALAUN	2010	Kharif	Sunflower	1	1				
15748	Uttar Pradesh	MEERUT	2008	Kharif	Groundnut	1	1				
17448	Uttar Pradesh	SAHARANPUR	2019	Kharif	Arhar/Tur	1	1				
18278	Uttar Pradesh	AGRA	2011	Kharif	Groundnut	1	1				

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Sources Enter Data Data source settings Manage Parameters Refresh Preview Advanced Editor Manage Choose Columns Remove Columns Keep Rows Remove Rows Split Columns Group By Data Type: Whole Number Use First Row as Headers Replace Values Merge Queries Append Queries Combine Files Text Analytics Vision Azure Machine Learning AI Insights

Queries [1] x ✓ fx = Table.TransformColumnTypes(#Promoted Headers,{"(RowID", Int64.Type), {"State_Name", type text}, {"District_Name", type text},

RowID	State_Name	District_Name	Crop_Year	Season	Area
1	Bihar	NALANDA	2005	Rabi	Wheat
2	Assam	KARBI ANGLONG	2019	Whole Year	Onion
3	Gujarat	ANAND	2020	Summer	Maize
4	Karnataka	UTTAR KANNAD	2013	Rabi	Groundnut
5	Uttar Pradesh	JAINPUR	2016	Rabi	Onion
6	Assam	MARIGAON	2014	Rabi	Rapeseed & Mustard
7	Odisha	SONEPUR	2006	Winter	Rapeseed & Mustard
8	Rajasthan	DHOLPUR	2017	Whole Year	Garlic
9	Karnataka	BEIGALUM	2018	Whole Year	Coconut
10	Bihar	MUNGER	2020	Summer	Moong(Green Gram)
11	Chhattisgarh	JANGIR-CHAMPA	2013	Kharif	Other kharif pulses
12	Assam	KARBI ANGLONG	2019	Rabi	Rapeseed & Mustard
13	Uttar Pradesh	SHRAVASTI	2005	Kharif	Groundnut
14	Gujarat	PATAN	2019	Kharif	Moong(Green Gram)
15	Tamil Nadu	KARUR	2008	Whole Year	Sweet potato
16	Uttar Pradesh	KASGANJ	2019	Rabi	Tobacco
17	Haryana	MAHENDRAGARH	2006	Rabi	Wheat
18	Assam	DHEMAJI	2017	Whole Year	Turmeric
19	Assam	BAKSA	2015	Kharif	Small millets
20	Kerala	PATHANAMTHITTA	2008	Whole Year	Sugarcane
21	Chhattisgarh	JANGIR-CHAMPA	2018	Rabi	Linsseed
22	Chhattisgarh	DHAMTARI	2020	Whole Year	Banana
23	Karnataka	BELLARY	2016	Rabi	Maize
24	Assam	TINSUKIA	2020	Autumn	Rice

12 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 05:59 PM

Humid Now

Search

ENG IN

06:01 PM
23-01-2023

The screenshot displays the Microsoft Power Query Editor interface. The main workspace shows a table with the following columns: RowID, State_Name, District_Name, Crop, and Season. The data is organized into rows, with the first row being a header row. The table contains data for various states in India, including Bihar, Assam, Gujarat, Karnataka, Uttar Pradesh, Odisha, Rajasthan, Karnataka, Bihar, Chhattisgarh, Assam, Gujarat, Tamil Nadu, Uttar Pradesh, Haryana, Assam, Assam, Kerala, Chhattisgarh, Chhattisgarh, Karnataka, and Assam. The 'Crop' column lists various agricultural products like Wheat, Maize, Groundnut, Onion, Rapeseed & Mustard, Winter, Garlic, Coconut, Moong(Green Gram), Other Kharif pulses, Rapeseed & Mustard, Groundnut, Moong(Green Gram), Sweet potato, Tobacco, Wheat, Turmeric, Small millets, Sugarcane, Linseed, Banana, Maize, and Rice. The 'Season' column lists the corresponding seasons for each crop, such as Rabi, Kharif, and Winter. The interface includes a ribbon at the top with tabs for File, Home, Transform, Add Column, View, Tools, and Help. The right-hand pane contains sections for Query Settings, Properties, and Applied Steps. The Applied Steps section shows a list of steps, including 'Source', 'Promoted Headers', and 'Changed Type'. The bottom status bar indicates that there are 12 columns, 999+ rows, and that column profiling is based on the top 1000 rows. The preview download is scheduled for 05:59 PM on 23-01-2024.

Power Query Editor interface showing a data table with 12 columns and 999 rows. The table is titled "Table.TransformColumnTypes(*Promoted Headers*,...". The columns are: 1.2 Area, 1.2 Production, 1.2 District, 1.2 District Name, 1.2 District Type, 1.2 District Type Name, 1.2 District Type Name, 1.2 District Type Name, 1.2 District Type Name, 1.2 District Type Name, 1.2 District Type Name, 1.2 District Type Name. The data is organized into a grid with rows numbered 1 to 25. The right sidebar shows the "Query Settings" pane with the "Properties" tab selected, displaying the query name "Exhaustive Analysis of Indian Agriculture" and the "Applied Steps" list.

12 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 05:59 PM

[illegible]

Step12: In PowerBI ,you can undo the previous action when you can do any mistake in that by applied steps in the right corner.

Power Query Editor interface showing a table with columns: RowID, State_Name, District_Name, Crop_Year, Season, Crop, and Area. The table contains 25 rows of data. The 'Applied Steps' pane on the right shows 'Removed Blank Rows' as the last step. The 'Query Settings' pane shows the query name 'Exhaustive Analysis of Indian Agriculture'.

RowID	State_Name	District_Name	Crop_Year	Season	Crop	Area
1	Bihar	NALANDA	2005	Rabi	Wheat	
2	Assam	KARBI ANGLONG	2019	Whole Year	Onion	
3	Gujarat	ANAND	2020	Summer	Maize	
4	Karnataka	UTTAR KANNAD	2013	Rabi	Groundnut	
5	Uttar Pradesh	JAUNPUR	2016	Rabi	Onion	
6	Assam	MARIGAON	2014	Rabi	Rapeseed & Mustard	
7	Odisha	SONEPUR	2006	Winter	Rapeseed & Mustard	
8	Rajasthan	DHOLPUR	2017	Whole Year	Garlic	
9	Karnataka	BELGAUM	2018	Whole Year	Coconut	
10	Bihar	MUNGER	2020	Summer	Moong(Green Gram)	
11	Chhattisgarh	JANIGIR-CHAMPA	2013	Kharif	Other Kharif pulses	
12	Assam	KARBI ANGLONG	2019	Rabi	Rapeseed & Mustard	
13	Uttar Pradesh	SHRAVASTI	2005	Kharif	Groundnut	
14	Gujarat	PATAN	2019	Kharif	Moong(Green Gram)	
15	Tamil Nadu	KARUR	2008	Whole Year	Sweet potato	
16	Uttar Pradesh	KASGANJ	2019	Rabi	Tobacco	
17	Haryana	MAHENDRAGARH	2006	Rabi	Wheat	
18	Assam	DHEMAJ	2017	Whole Year	Turmeric	
19	Assam	BAKSA	2015	Kharif	Small millets	
20	Kerala	PATHANAMTHITTA	2008	Whole Year	Sugarcane	
21	Chhattisgarh	JANIGIR-CHAMPA	2018	Rabi	Linsed	
22	Chhattisgarh	DHAMTARI	2020	Whole Year	Banana	
23	Karnataka	BELLARY	2016	Rabi	Maize	
24	Assam	TINSUKIA	2020	Autumn	Rice	
25						

Step13: After done the all transform operation what you need to analysis. You can click the apply and close button in left top corner.

Power Query Editor interface showing a table with columns: State_Name, District_Name, Crop_Year, Season, Crop, Area, and Production. The table contains 25 rows of data. The 'Applied Steps' pane on the right shows 'Removed Errors' as the last step. The 'Query Settings' pane shows the query name 'Exhaustive Analysis of Indian Agriculture'.

State_Name	District_Name	Crop_Year	Season	Crop	Area	Production
Bihar	NALANDA	2005	Rabi	Wheat		81934
Assam	KARBI ANGLONG	2019	Whole Year	Onion		257
Gujarat	ANAND	2020	Summer	Maize		100
Karnataka	UTTAR KANNAD	2013	Rabi	Groundnut		2872
Uttar Pradesh	JAUNPUR	2016	Rabi	Onion		110
Odisha	SONEPUR	2006	Winter	Rapeseed & Mustard		91
Rajasthan	DHOLPUR	2017	Whole Year	Garlic		1
Chhattisgarh	JANIGIR-CHAMPA	2013	Kharif	Other Kharif pulses		223
Tamil Nadu	KARUR	2008	Whole Year	Sweet potato		20
Haryana	MAHENDRAGARH	2006	Rabi	Wheat		45074
Kerala	PATHANAMTHITTA	2008	Whole Year	Sugarcane		224
Madhya Pradesh	NEMUCH	2019	Whole Year	Sesamum		780
West Bengal	BARDHAMAN	2015	Kharif	Sannhamp		37
Punjab	AMRITSAR	2006	Rabi	Peas & beans (Pulses)		400
Andhra Pradesh	KADAPA	2012	Kharif	Ragi		25
Maharashtra	PARBHANI	2012	Kharif	Arhar/Tur		63900
Telangana	RANGAREDDI	2021	Rabi	Rice		17986
Nagaland	DIMAPUR	2017	Rabi	Barley		60
Meghalaya	WEST GARO HILLS	2007	Whole Year	Arecanut		2424
Jharkhand	GODDA	2011	Rabi	Gram		1181.77
Uttarakhand	RUDRA PRAYAG	2016	Kharif	Ragi		6504
Himachal Pradesh	KULLU	2013	Whole Year	Potato		1300
Arunachal Pradesh	UPPER SIANG	2010	Kharif	Maize		950
Mizoram	KOLASIB	2013	Kharif	Groundnut		3

Step14:After you can use the transformed datasets for analyze purpose for you project

The screenshot displays the Microsoft Power BI Desktop interface. The main area shows a data table with 33 rows and 10 columns. The columns are: State_Name, District_Name, Crop_Year, Season, Crop, Area, Production, Column1, .1, .2, and .3. The data includes information for various Indian states such as Bihar, Assam, Gujarat, Karnataka, Uttar Pradesh, Odisha, Rajasthan, Chhattisgarh, Tamil Nadu, Haryana, Kerala, Madhya Pradesh, West Bengal, Punjab, Andhra Pradesh, Maharashtra, Telangana, Nagaland, Meghalaya, Jharkhand, Uttarakhand, Himachal Pradesh, Arunachal Pradesh, Mizoram, Manipur, Puducherry, and Dadra and Nagar Haveli. The table also includes summary rows for 'Total production' and 'Average'. The bottom status bar indicates the table is titled 'Table: Exhaustive Analysis of Indian Agriculture (33 rows)' and shows the language is set to 'IND - ENG'.

State_Name	District_Name	Crop_Year	Season	Crop	Area	Production	Column1	.1	.2	.3
Bihar	NALANDA	2005	Rabi	Wheat	81934	160425				
Assam	KARBI ANGLONG	2019	Whole Year	Onion	257	514				
Gujarat	ANAND	2020	Summer	Maize	100	100				
Karnataka	UTTAR KANNAD	2013	Rabi	Groundnut	2872	4572				
Uttar Pradesh	JAINPUR	2016	Rabi	Onion	110	1290				
Odisha	SONEPUR	2006	Winter	Rapeseed & Mustard	91	6				
Rajasthan	DHOLPUR	2017	Whole Year	Garlic	1	1				
Chhattisgarh	JANIGIR-CHAMPA	2013	Kharif	Other Kharif pulses	223	107				
Tamil Nadu	KARUR	2008	Whole Year	Sweet potato	20	309				
Haryana	MAHENDRAGARH	2006	Rabi	Wheat	45074	186000				
Kerala	PATHANAMTHITTA	2008	Whole Year	Sugarcane	224	10950				
Madhya Pradesh	NEEMUCH	2019	Whole Year	Sesamum	780	456				
West Bengal	BARDHAMAN	2015	Kharif	Sannhamp	37	275				
Punjab	AMRITSAR	2006	Rabi	Peas & beans (Pulses)	400	300				
Andhra Pradesh	KADAPA	2012	Kharif	Ragi	25	35				
Maharashtra	PARBHANI	2012	Kharif	Arhar/Tur	63900	21500				
Telangana	RANGAREDDI	2021	Rabi	Rice	17986	40163				
Nagaland	DIMAPUR	2017	Rabi	Barley	60	90				
Meghalaya	WEST GARO HILLS	2007	Whole Year	Arecanut	2424	3384				
Jharkhand	GODDA	2011	Rabi	Gram	1181.77	1114.41				
Uttarakhand	RUDRA PRAYAG	2016	Kharif	Ragi	6504	10941				
Himachal Pradesh	KULLU	2013	Whole Year	Potato	1300	6535				
Arunachal Pradesh	UPPER SIANG	2010	Kharif	Maize	950	1100				
Mizoram	KOLASIB	2013	Kharif	Groundnut	3	2				
Manipur	TAMENGLONG	2011	Whole Year	Jack Fruit	5	23				
Puducherry	PONDICHERRY	2022	Summer	Ragi	32	58				
Dadra and Nagar Haveli	DADRA AND NAGAR HAVELI	2021	Rabi	Rice	325	631				
Chandigarh	CHANDIGARH	2016	Rabi	Maize	600	3800				