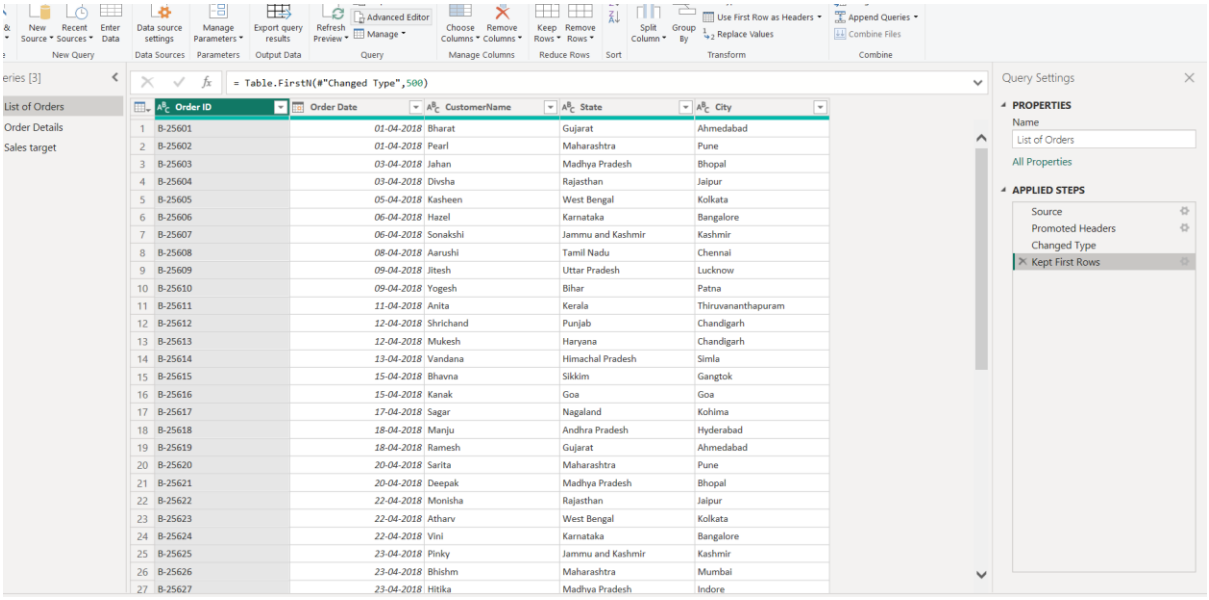
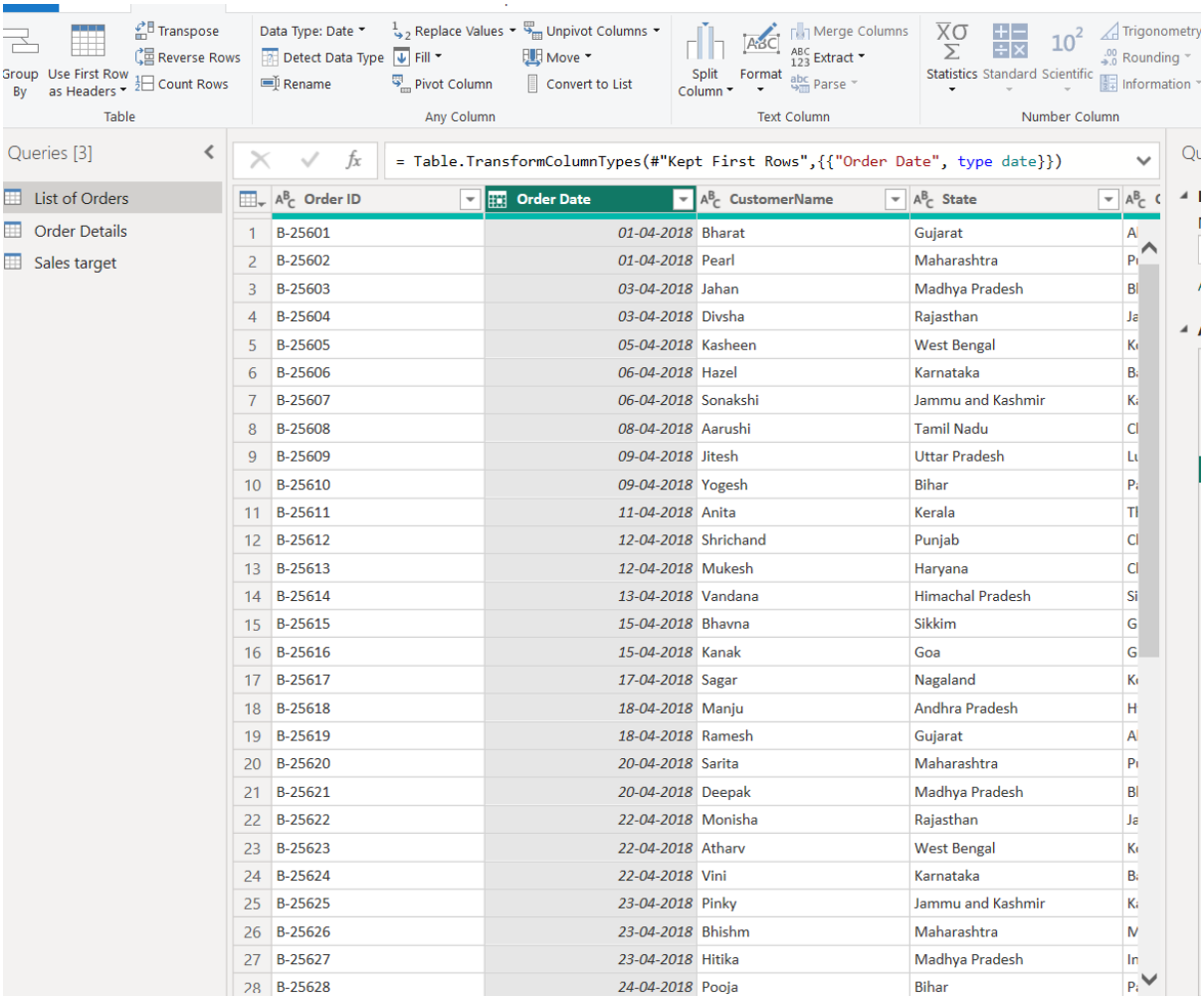
Data Transformation (Power Query Steps)

1.Restrict “List of Orders” to only first 500 rows



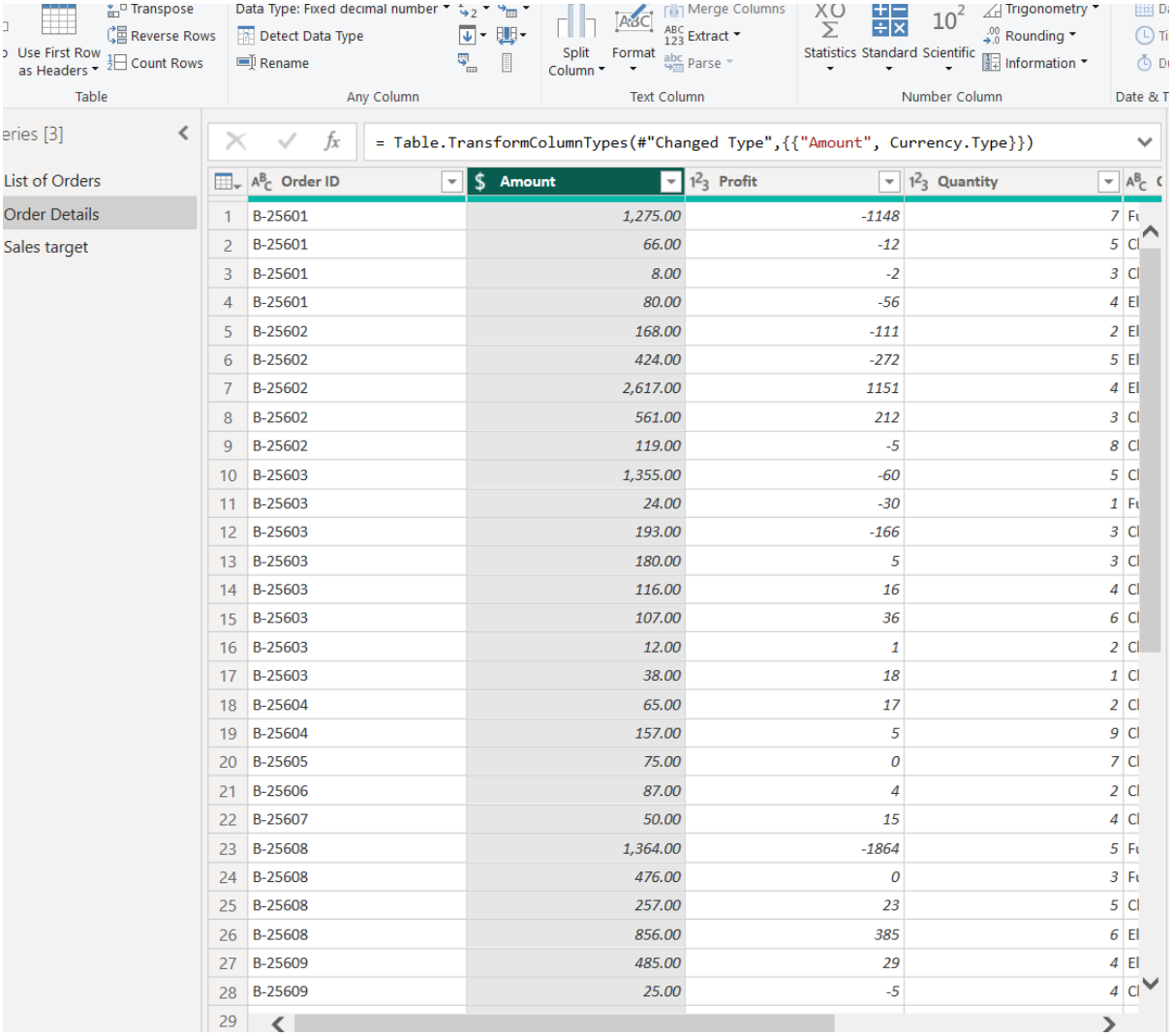
	Order ID	Order Date	CustomerName	State	City
1	B-25601	01-04-2018	Bharat	Gujarat	Ahmedabad
2	B-25602	01-04-2018	Pearl	Maharashtra	Pune
3	B-25603	03-04-2018	Jahan	Madhya Pradesh	Bhopal
4	B-25604	03-04-2018	Divsha	Rajasthan	Jaipur
5	B-25605	05-04-2018	Kasheen	West Bengal	Kolkata
6	B-25606	06-04-2018	Hazel	Karnataka	Bangalore
7	B-25607	06-04-2018	Sonakshi	Jammu and Kashmir	Kashmir
8	B-25608	08-04-2018	Aarushi	Tamil Nadu	Chennai
9	B-25609	09-04-2018	Jitesh	Uttar Pradesh	Lucknow
10	B-25610	09-04-2018	Yogesh	Bihar	Patna
11	B-25611	11-04-2018	Anita	Kerala	Thiruvananthapuram
12	B-25612	12-04-2018	Shrichand	Punjab	Chandigarh
13	B-25613	12-04-2018	Mukesh	Haryana	Chandigarh
14	B-25614	13-04-2018	Vandana	Himachal Pradesh	Simla
15	B-25615	15-04-2018	Bhavna	Sikkim	Gangtok
16	B-25616	15-04-2018	Kanak	Goa	Goa
17	B-25617	17-04-2018	Sagar	Nagaland	Kohima
18	B-25618	18-04-2018	Manju	Andhra Pradesh	Hyderabad
19	B-25619	18-04-2018	Ramesh	Gujarat	Ahmedabad
20	B-25620	20-04-2018	Sarita	Maharashtra	Pune
21	B-25621	20-04-2018	Deepak	Madhya Pradesh	Bhopal
22	B-25622	22-04-2018	Monisha	Rajasthan	Jaipur
23	B-25623	22-04-2018	Atharv	West Bengal	Kolkata
24	B-25624	22-04-2018	Vini	Karnataka	Bangalore
25	B-25625	23-04-2018	Pinky	Jammu and Kashmir	Kashmir
26	B-25626	23-04-2018	Bhishm	Maharashtra	Mumbai
27	B-25627	23-04-2018	Hitika	Madhya Pradesh	Indore

2.Ensure the “Order Date” column in the “List of Orders” table is set to data type 'Date'.



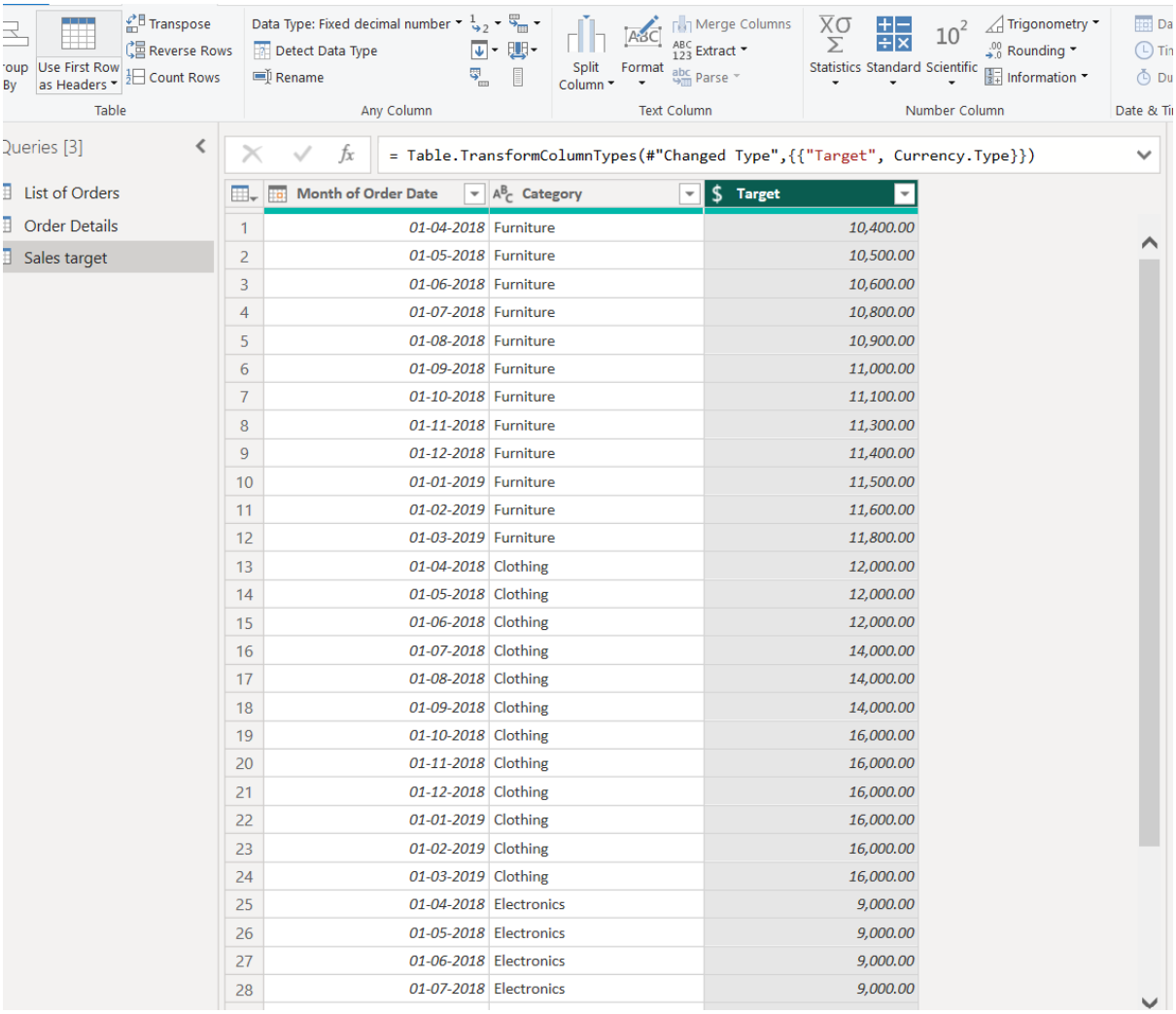
	Order ID	Order Date	CustomerName	State
1	B-25601	01-04-2018	Bharat	Gujarat
2	B-25602	01-04-2018	Pearl	Maharashtra
3	B-25603	03-04-2018	Jahan	Madhya Pradesh
4	B-25604	03-04-2018	Divsha	Rajasthan
5	B-25605	05-04-2018	Kasheen	West Bengal
6	B-25606	06-04-2018	Hazel	Karnataka
7	B-25607	06-04-2018	Sonakshi	Jammu and Kashmir
8	B-25608	08-04-2018	Aarushi	Tamil Nadu
9	B-25609	09-04-2018	Jitesh	Uttar Pradesh
10	B-25610	09-04-2018	Yogesh	Bihar
11	B-25611	11-04-2018	Anita	Kerala
12	B-25612	12-04-2018	Shrichand	Punjab
13	B-25613	12-04-2018	Mukesh	Haryana
14	B-25614	13-04-2018	Vandana	Himachal Pradesh
15	B-25615	15-04-2018	Bhavna	Sikkim
16	B-25616	15-04-2018	Kanak	Goa
17	B-25617	17-04-2018	Sagar	Nagaland
18	B-25618	18-04-2018	Manju	Andhra Pradesh
19	B-25619	18-04-2018	Ramesh	Gujarat
20	B-25620	20-04-2018	Sarita	Maharashtra
21	B-25621	20-04-2018	Deepak	Madhya Pradesh
22	B-25622	22-04-2018	Monisha	Rajasthan
23	B-25623	22-04-2018	Atharv	West Bengal
24	B-25624	22-04-2018	Vini	Karnataka
25	B-25625	23-04-2018	Pinky	Jammu and Kashmir
26	B-25626	23-04-2018	Bhishm	Maharashtra
27	B-25627	23-04-2018	Hitika	Madhya Pradesh
28	B-25628	24-04-2018	Pooja	Bihar

3. Change the data type of “Amount” and “Target” columns to ‘Fixed Decimal Number’.



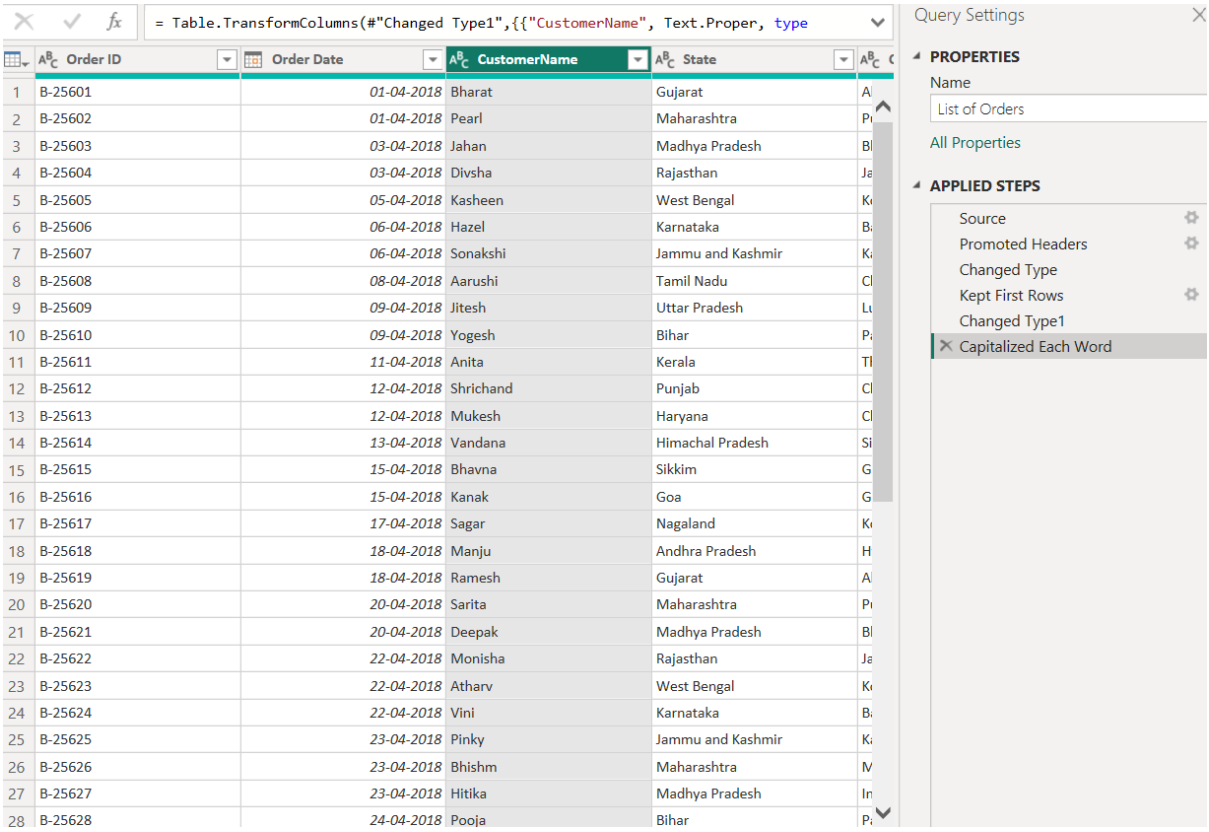
	Order ID	Amount	Profit	Quantity
1	B-25601	1,275.00	-1148	7
2	B-25601	66.00	-12	5
3	B-25601	8.00	-2	3
4	B-25601	80.00	-56	4
5	B-25602	168.00	-111	2
6	B-25602	424.00	-272	5
7	B-25602	2,617.00	1151	4
8	B-25602	561.00	212	3
9	B-25602	119.00	-5	8
10	B-25603	1,355.00	-60	5
11	B-25603	24.00	-30	1
12	B-25603	193.00	-166	3
13	B-25603	180.00	5	3
14	B-25603	116.00	16	4
15	B-25603	107.00	36	6
16	B-25603	12.00	1	2
17	B-25603	38.00	18	1
18	B-25604	65.00	17	2
19	B-25604	157.00	5	9
20	B-25605	75.00	0	7
21	B-25606	87.00	4	2
22	B-25607	50.00	15	4
23	B-25608	1,364.00	-1864	5
24	B-25608	476.00	0	3
25	B-25608	257.00	23	5
26	B-25608	856.00	385	6
27	B-25609	485.00	29	4
28	B-25609	25.00	-5	4
29				

Target column:



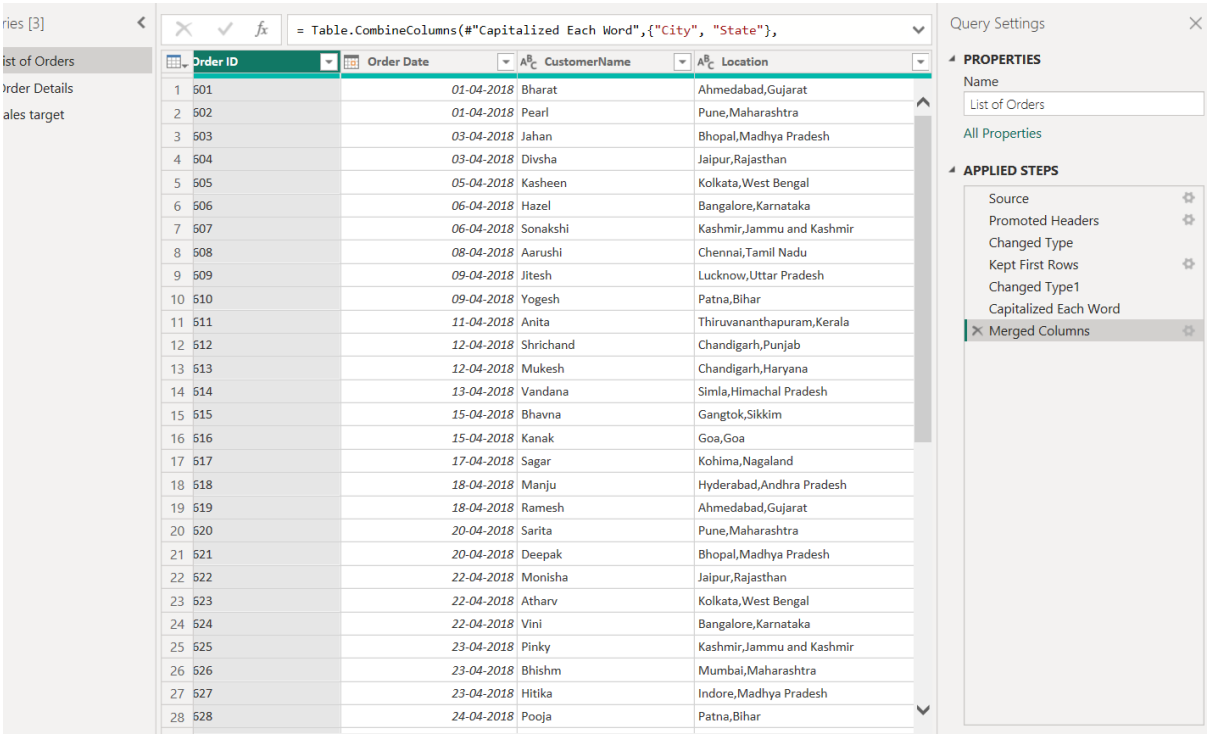
	Month of Order Date	Category	Target
1	01-04-2018	Furniture	10,400.00
2	01-05-2018	Furniture	10,500.00
3	01-06-2018	Furniture	10,600.00
4	01-07-2018	Furniture	10,800.00
5	01-08-2018	Furniture	10,900.00
6	01-09-2018	Furniture	11,000.00
7	01-10-2018	Furniture	11,100.00
8	01-11-2018	Furniture	11,300.00
9	01-12-2018	Furniture	11,400.00
10	01-01-2019	Furniture	11,500.00
11	01-02-2019	Furniture	11,600.00
12	01-03-2019	Furniture	11,800.00
13	01-04-2018	Clothing	12,000.00
14	01-05-2018	Clothing	12,000.00
15	01-06-2018	Clothing	12,000.00
16	01-07-2018	Clothing	14,000.00
17	01-08-2018	Clothing	14,000.00
18	01-09-2018	Clothing	14,000.00
19	01-10-2018	Clothing	16,000.00
20	01-11-2018	Clothing	16,000.00
21	01-12-2018	Clothing	16,000.00
22	01-01-2019	Clothing	16,000.00
23	01-02-2019	Clothing	16,000.00
24	01-03-2019	Clothing	16,000.00
25	01-04-2018	Electronics	9,000.00
26	01-05-2018	Electronics	9,000.00
27	01-06-2018	Electronics	9,000.00
28	01-07-2018	Electronics	9,000.00

4. Format the "CustomerName" column into proper case, ensuring consistent capitalization for each word.



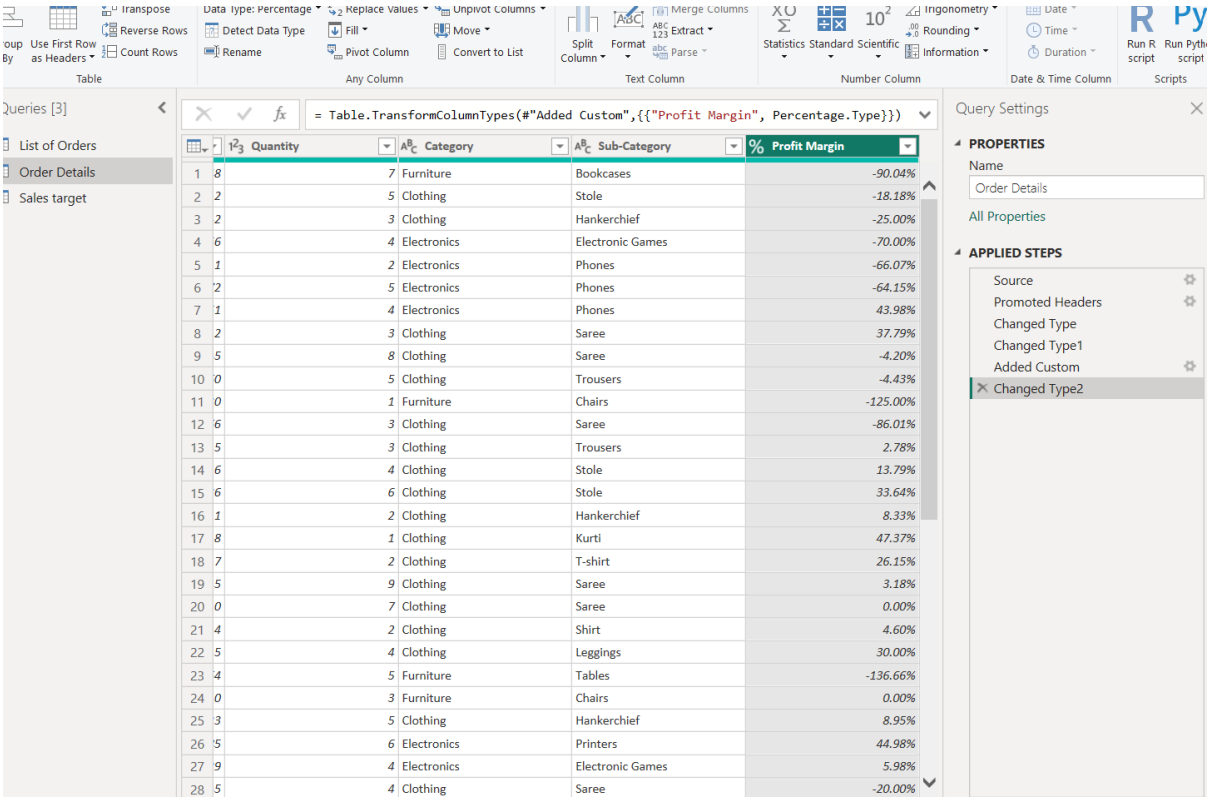
	Order ID	Order Date	CustomerName	State
1	B-25601	01-04-2018	Bharat	Gujarat
2	B-25602	01-04-2018	Pearl	Maharashtra
3	B-25603	03-04-2018	Jahan	Madhya Pradesh
4	B-25604	03-04-2018	Divsha	Rajasthan
5	B-25605	05-04-2018	Kasheen	West Bengal
6	B-25606	06-04-2018	Hazel	Karnataka
7	B-25607	06-04-2018	Sonakshi	Jammu and Kashmir
8	B-25608	08-04-2018	Aarushi	Tamil Nadu
9	B-25609	09-04-2018	Jitesh	Uttar Pradesh
10	B-25610	09-04-2018	Yogesh	Bihar
11	B-25611	11-04-2018	Anita	Kerala
12	B-25612	12-04-2018	Shrichand	Punjab
13	B-25613	12-04-2018	Mukesh	Haryana
14	B-25614	13-04-2018	Vandana	Himachal Pradesh
15	B-25615	15-04-2018	Bhavna	Sikkim
16	B-25616	15-04-2018	Kanak	Goa
17	B-25617	17-04-2018	Sagar	Nagaland
18	B-25618	18-04-2018	Manju	Andhra Pradesh
19	B-25619	18-04-2018	Ramesh	Gujarat
20	B-25620	20-04-2018	Sarita	Maharashtra
21	B-25621	20-04-2018	Deepak	Madhya Pradesh
22	B-25622	22-04-2018	Monisha	Rajasthan
23	B-25623	22-04-2018	Atharv	West Bengal
24	B-25624	22-04-2018	Vini	Karnataka
25	B-25625	23-04-2018	Pinky	Jammu and Kashmir
26	B-25626	23-04-2018	Bhishm	Maharashtra
27	B-25627	23-04-2018	Hitika	Madhya Pradesh
28	B-25628	24-04-2018	Pooja	Bihar

5. Merge the "State" and "City" columns to create a new column named "Location" in the format ‘City, State’.



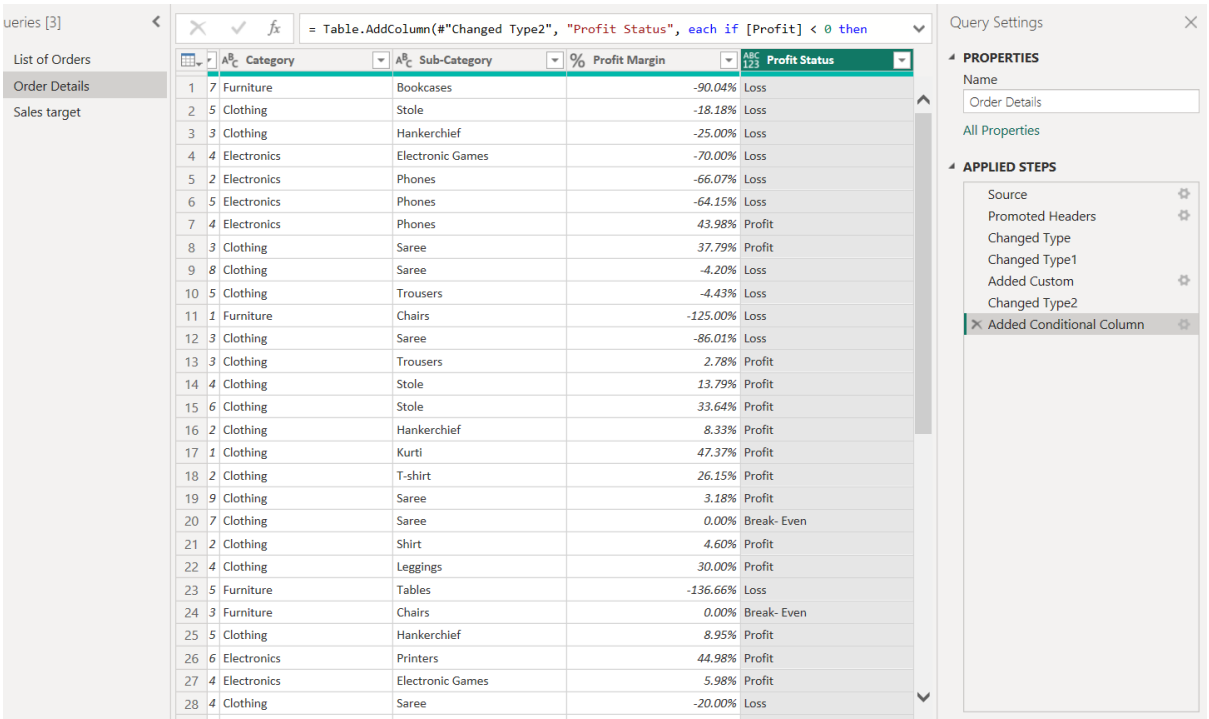
	Order ID	Order Date	CustomerName	Location
1	501	01-04-2018	Bharat	Ahmedabad,Gujarat
2	502	01-04-2018	Pearl	Pune,Maharashtra
3	503	03-04-2018	Jahan	Bhopal,Madhya Pradesh
4	504	03-04-2018	Divsha	Jaipur,Rajasthan
5	505	05-04-2018	Kasheen	Kolkata,West Bengal
6	506	06-04-2018	Hazel	Bangalore,Karnataka
7	507	06-04-2018	Sonakshi	Kashmir,Jammu and Kashmir
8	508	08-04-2018	Aarushi	Chennai,Tamil Nadu
9	509	09-04-2018	Jitesh	Lucknow,Uttar Pradesh
10	510	09-04-2018	Yogesh	Patna,Bihar
11	511	11-04-2018	Anita	Thiruvananthapuram,Kerala
12	512	12-04-2018	Shrichand	Chandigarh,Punjab
13	513	12-04-2018	Mukesh	Chandigarh,Haryana
14	514	13-04-2018	Vandana	Simla,Himachal Pradesh
15	515	15-04-2018	Bhavna	Gangtok,Sikkim
16	516	15-04-2018	Kanak	Goa,Goa
17	517	17-04-2018	Sagar	Kohima,Nagaland
18	518	18-04-2018	Manju	Hyderabad,Andhra Pradesh
19	519	18-04-2018	Ramesh	Ahmedabad,Gujarat
20	520	20-04-2018	Sarita	Pune,Maharashtra
21	521	20-04-2018	Deepak	Bhopal,Madhya Pradesh
22	522	22-04-2018	Monisha	Jaipur,Rajasthan
23	523	22-04-2018	Atharv	Kolkata,West Bengal
24	524	22-04-2018	Vini	Bangalore,Karnataka
25	525	23-04-2018	Pinky	Kashmir,Jammu and Kashmir
26	526	23-04-2018	Bhishm	Mumbai,Maharashtra
27	527	23-04-2018	Hitika	Indore,Madhya Pradesh
28	528	24-04-2018	Pooja	Patna,Bihar

6. Create a new custom column named "Profit Margin" as the percentage of "Profit"divided by "Amount".



	Quantity	Category	Sub-Category	Profit Margin
1	7	Furniture	Bookcases	-90.04%
2	5	Clothing	Stole	-18.18%
3	3	Clothing	Hankerchief	-25.00%
4	4	Electronics	Electronic Games	-70.00%
5	2	Electronics	Phones	-66.07%
6	5	Electronics	Phones	-64.15%
7	4	Electronics	Phones	43.98%
8	3	Clothing	Saree	37.79%
9	8	Clothing	Saree	-4.20%
10	5	Clothing	Trousers	-4.43%
11	1	Furniture	Chairs	-125.00%
12	3	Clothing	Saree	-86.01%
13	3	Clothing	Trousers	2.78%
14	4	Clothing	Stole	13.79%
15	6	Clothing	Stole	33.64%
16	2	Clothing	Hankerchief	8.33%
17	1	Clothing	Kurti	47.37%
18	2	Clothing	T-shirt	26.15%
19	9	Clothing	Saree	3.18%
20	7	Clothing	Saree	0.00%
21	2	Clothing	Shirt	4.60%
22	4	Clothing	Leggings	30.00%
23	5	Furniture	Tables	-136.66%
24	3	Furniture	Chairs	0.00%
25	5	Clothing	Hankerchief	8.95%
26	6	Electronics	Printers	44.98%
27	4	Electronics	Electronic Games	5.98%
28	4	Clothing	Saree	-20.00%

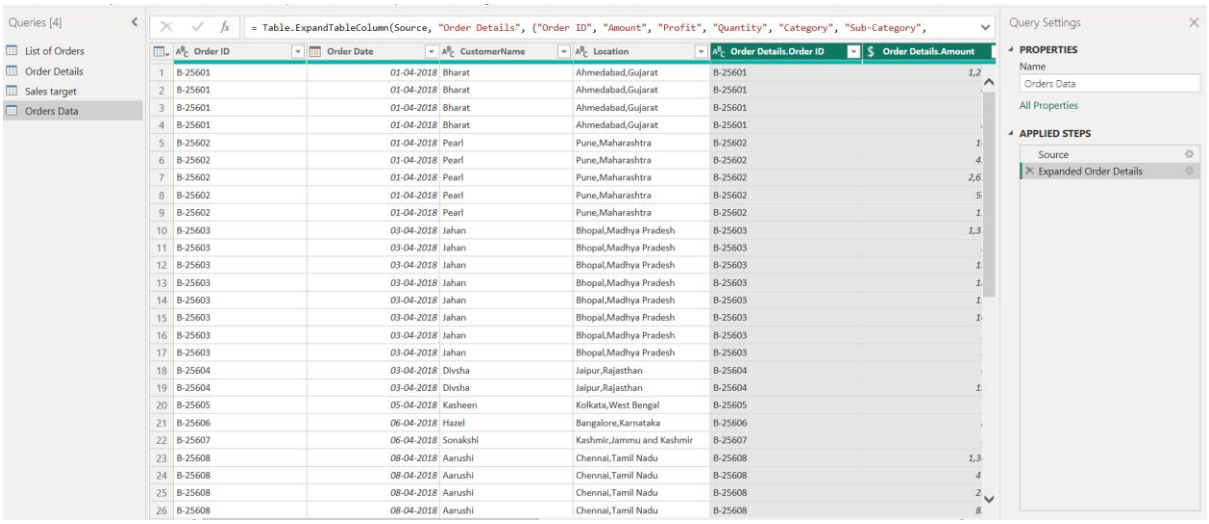
7. Add a new conditional column named "Profit Status" based on the values in the"Profit" column. The conditions are as follows: if the profit is less than 0, the labelshould be "Loss"; if the profit equals 0, the label should be "Break-Even"; and if theprofit is greater than 0, the label should be "Profit".



	Category	Sub-Category	Profit Margin	Profit Status
1	Furniture	Bookcases	-90.04%	Loss
2	Clothing	Stole	-18.18%	Loss
3	Clothing	Hankerchief	-25.00%	Loss
4	Electronics	Electronic Games	-70.00%	Loss
5	Electronics	Phones	-66.07%	Loss
6	Electronics	Phones	-64.15%	Loss
7	Electronics	Phones	43.98%	Profit
8	Clothing	Saree	37.79%	Profit
9	Clothing	Saree	-4.20%	Loss
10	Clothing	Trousers	-4.43%	Loss
11	Furniture	Chairs	-125.00%	Loss
12	Clothing	Saree	-86.01%	Loss
13	Clothing	Trousers	2.78%	Profit
14	Clothing	Stole	13.79%	Profit
15	Clothing	Stole	33.64%	Profit
16	Clothing	Hankerchief	8.33%	Profit
17	Clothing	Kurti	47.37%	Profit
18	Clothing	T-shirt	26.15%	Profit
19	Clothing	Saree	3.18%	Profit
20	Clothing	Saree	0.00%	Break- Even
21	Clothing	Shirt	4.60%	Profit
22	Clothing	Leggings	30.00%	Profit
23	Furniture	Tables	-136.66%	Loss
24	Furniture	Chairs	0.00%	Break- Even
25	Clothing	Hankerchief	8.95%	Profit
26	Electronics	Printers	44.98%	Profit
27	Electronics	Electronic Games	5.98%	Profit
28	Clothing	Saree	-20.00%	Loss

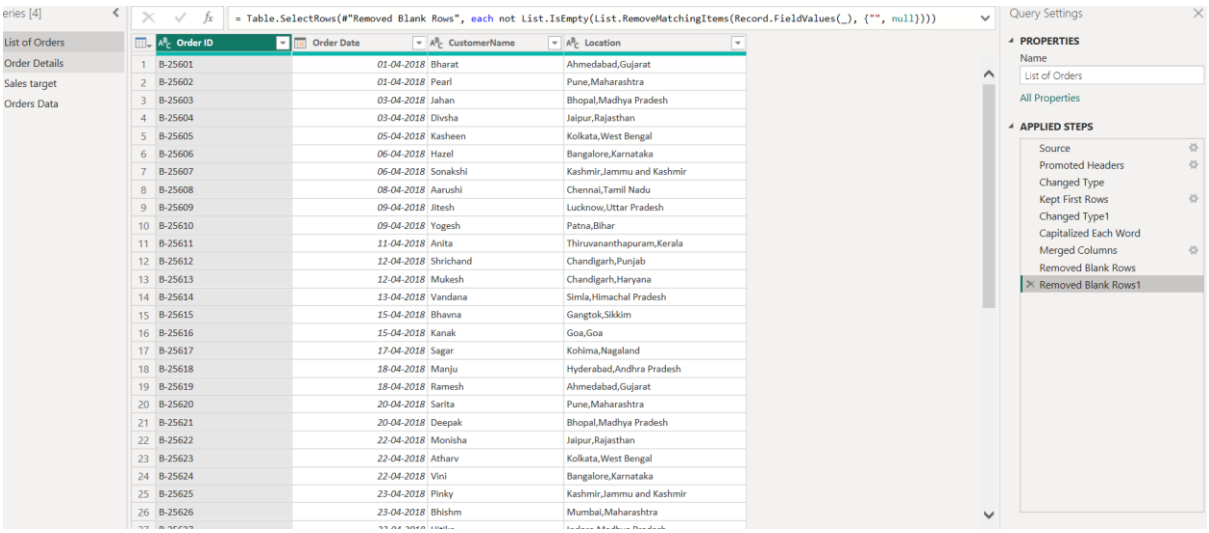
Merging Data (Joins):

Merge the "List of Orders" and "Order Details" tables into a new single table named"Orders Data" based on the "Order ID" relationship.



Handling Missing Data & Duplicate Data:

- Identify missing values in the data and determine a strategy to address them.
- Check for duplicate rows and define a strategy to handle duplicates.

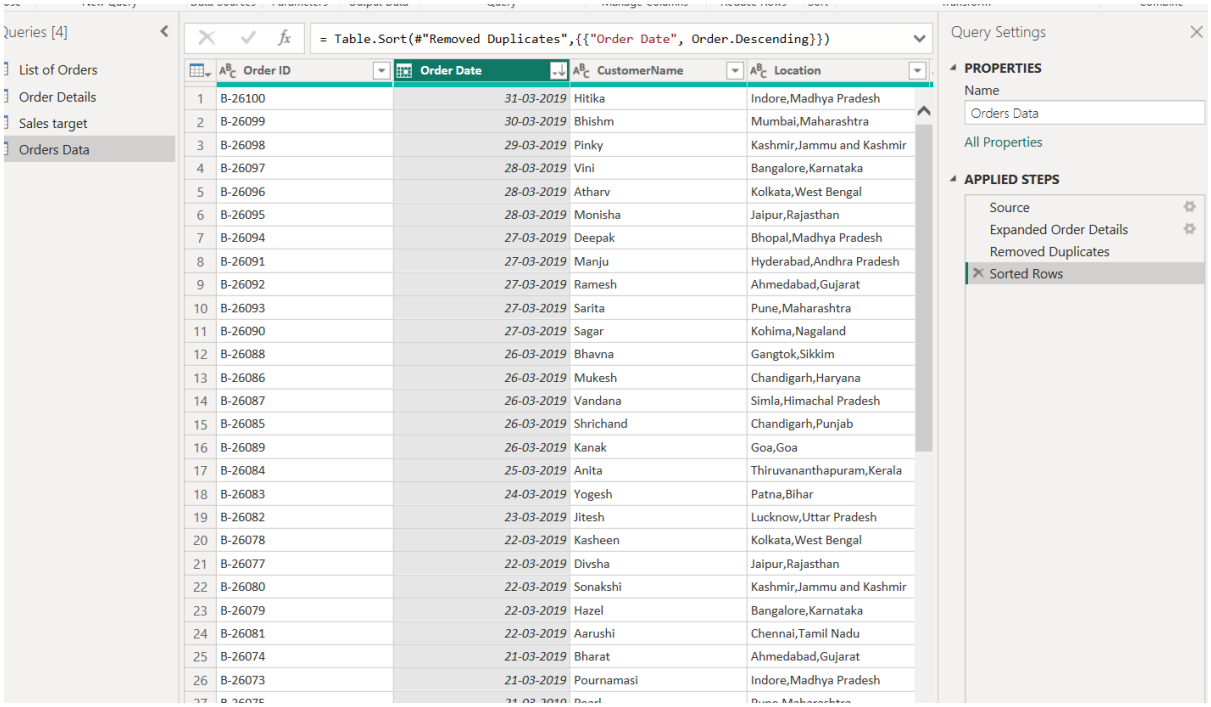


Sorting and Filtering Data:

● In the ‘Orders Data’ table, utilize sorting and filtering techniques on columns like

Order Date, State or Category to analyze data based on specific criteria:

- Sort the orders by Order Date in descending order to analyze recent trends



Queries [4]

List of Orders
Order Details
Sales target
Orders Data

```
= Table.Sort(#"Removed Duplicates",{{"Order Date", Order.Descending}})
```

	Order ID	Order Date	CustomerName	Location
1	B-26100	31-03-2019	Hitika	Indore,Madhya Pradesh
2	B-26099	30-03-2019	Bhishm	Mumbai,Maharashtra
3	B-26098	29-03-2019	Pinky	Kashmir,Jammu and Kashmir
4	B-26097	28-03-2019	Vini	Bangalore,Karnataka
5	B-26096	28-03-2019	Atharv	Kolkata,West Bengal
6	B-26095	28-03-2019	Monisha	Jaipur,Rajasthan
7	B-26094	27-03-2019	Deepak	Bhopal,Madhya Pradesh
8	B-26091	27-03-2019	Manju	Hyderabad,Andhra Pradesh
9	B-26092	27-03-2019	Ramesh	Ahmedabad,Gujarat
10	B-26093	27-03-2019	Sarita	Pune,Maharashtra
11	B-26090	27-03-2019	Sagar	Kohima,Nagaland
12	B-26088	26-03-2019	Bhavna	Gangtok,Sikkim
13	B-26086	26-03-2019	Mukesh	Chandigarh,Haryana
14	B-26087	26-03-2019	Vandana	Simla,Himachal Pradesh
15	B-26085	26-03-2019	Shrichand	Chandigarh,Punjab
16	B-26089	26-03-2019	Kanak	Goa,Goa
17	B-26084	25-03-2019	Anita	Thiruvananthapuram,Kerala
18	B-26083	24-03-2019	Yogesh	Patna,Bihar
19	B-26082	23-03-2019	Jitesh	Lucknow,Uttar Pradesh
20	B-26078	22-03-2019	Kasheen	Kolkata,West Bengal
21	B-26077	22-03-2019	Divsha	Jaipur,Rajasthan
22	B-26080	22-03-2019	Sonakshi	Kashmir,Jammu and Kashmir
23	B-26079	22-03-2019	Hazel	Bangalore,Karnataka
24	B-26081	22-03-2019	Aarushi	Chennai,Tamil Nadu
25	B-26074	21-03-2019	Bharat	Ahmedabad,Gujarat
26	B-26073	21-03-2019	Pournamasi	Indore,Madhya Pradesh

Query Settings

PROPERTIES

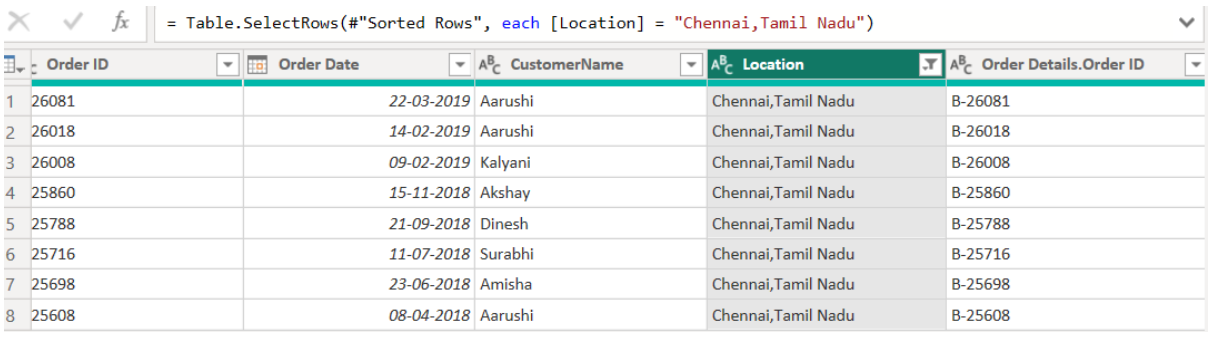
Name: Orders Data

All Properties

APPLIED STEPS

Source
Expanded Order Details
Removed Duplicates
Sorted Rows

- Filter the orders to focus only on a specific state (e.g., Tamil Nadu) for regional analysis.



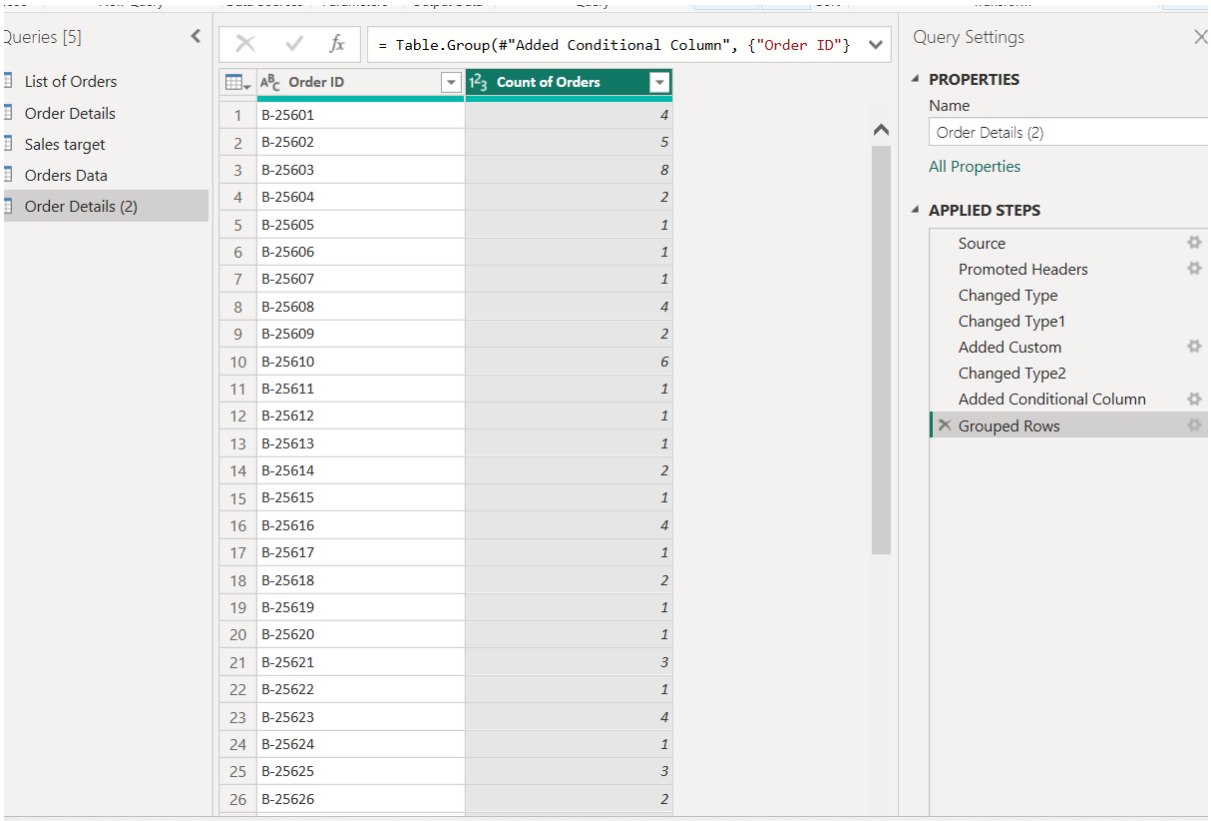
```
= Table.SelectRows(#"Sorted Rows", each [Location] = "Chennai,Tamil Nadu")
```

	Order ID	Order Date	CustomerName	Location	Order Details.Order ID
1	26081	22-03-2019	Aarushi	Chennai,Tamil Nadu	B-26081
2	26018	14-02-2019	Aarushi	Chennai,Tamil Nadu	B-26018
3	26008	09-02-2019	Kalyani	Chennai,Tamil Nadu	B-26008
4	25860	15-11-2018	Akshay	Chennai,Tamil Nadu	B-25860
5	25788	21-09-2018	Dinesh	Chennai,Tamil Nadu	B-25788
6	25716	11-07-2018	Surabhi	Chennai,Tamil Nadu	B-25716
7	25698	23-06-2018	Amisha	Chennai,Tamil Nadu	B-25698
8	25608	08-04-2018	Aarushi	Chennai,Tamil Nadu	B-25608

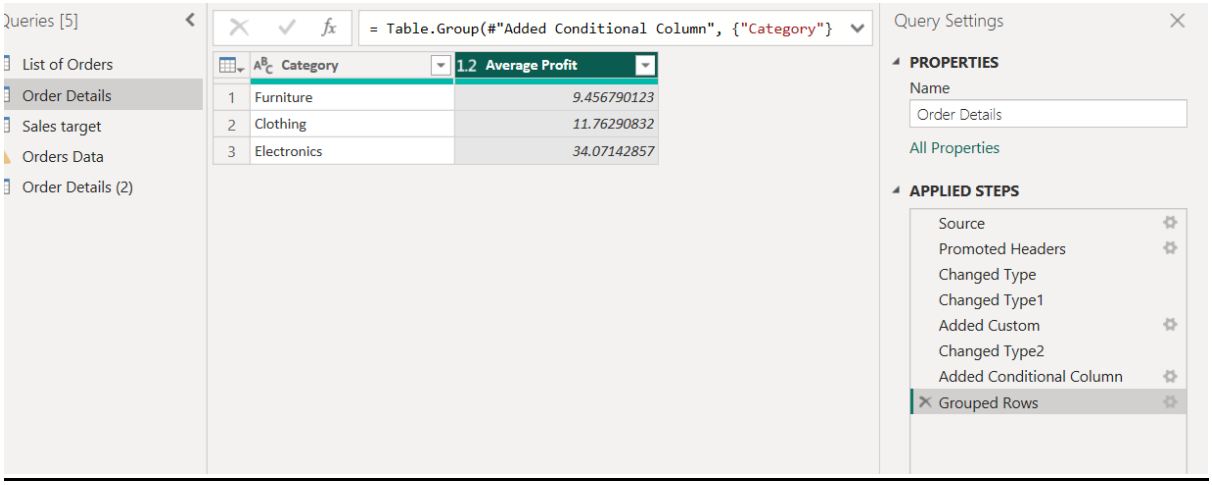
Grouping and Aggregating Data:

● Duplicate the “Order Details” table and calculate the count of each Order ID, average profit by Category or total amount by Sub-Category.

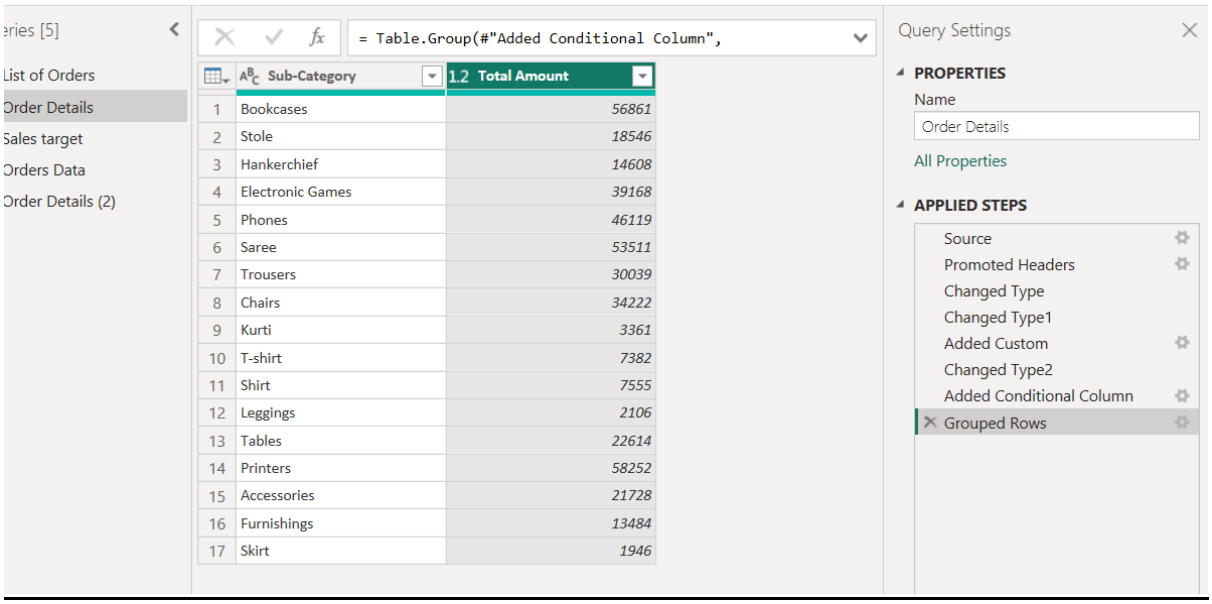
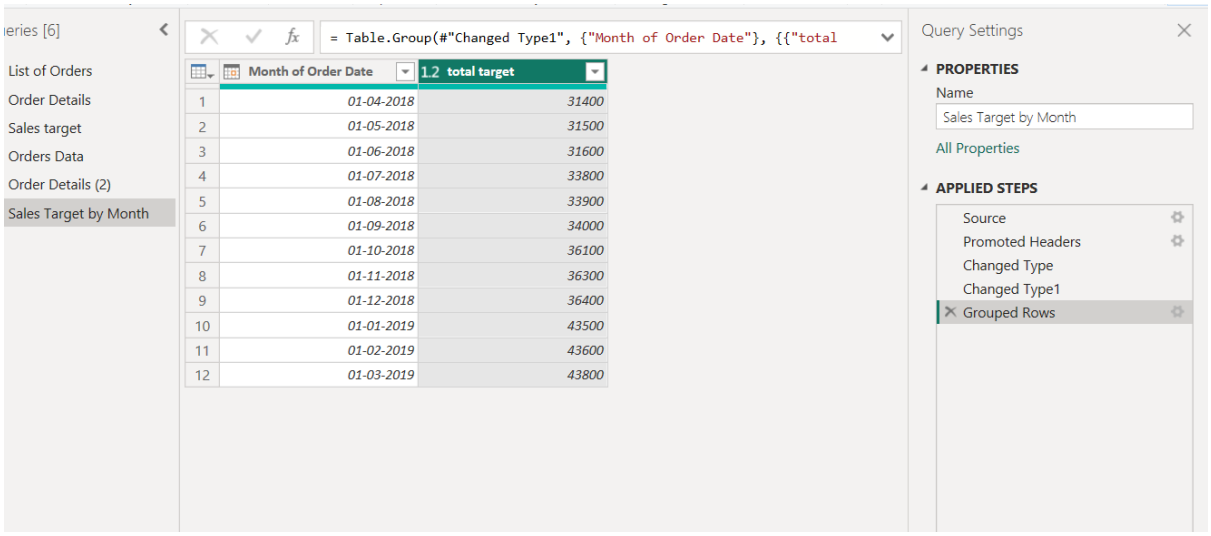
Order details table calculate order id count



Average Profit by Category



Total Amount by Sub-Category



● Duplicate the “Sales Target” table and aggregate the total target amount by Month of Order Date.