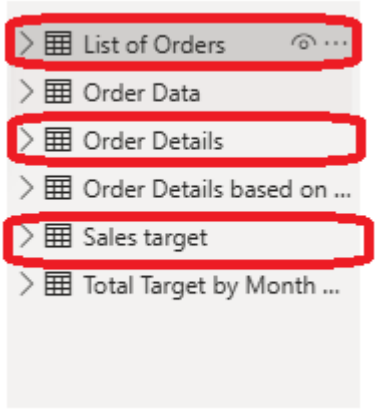
Power BI Assignment 1 – Data Transformation & Data Modeling

Import Data:

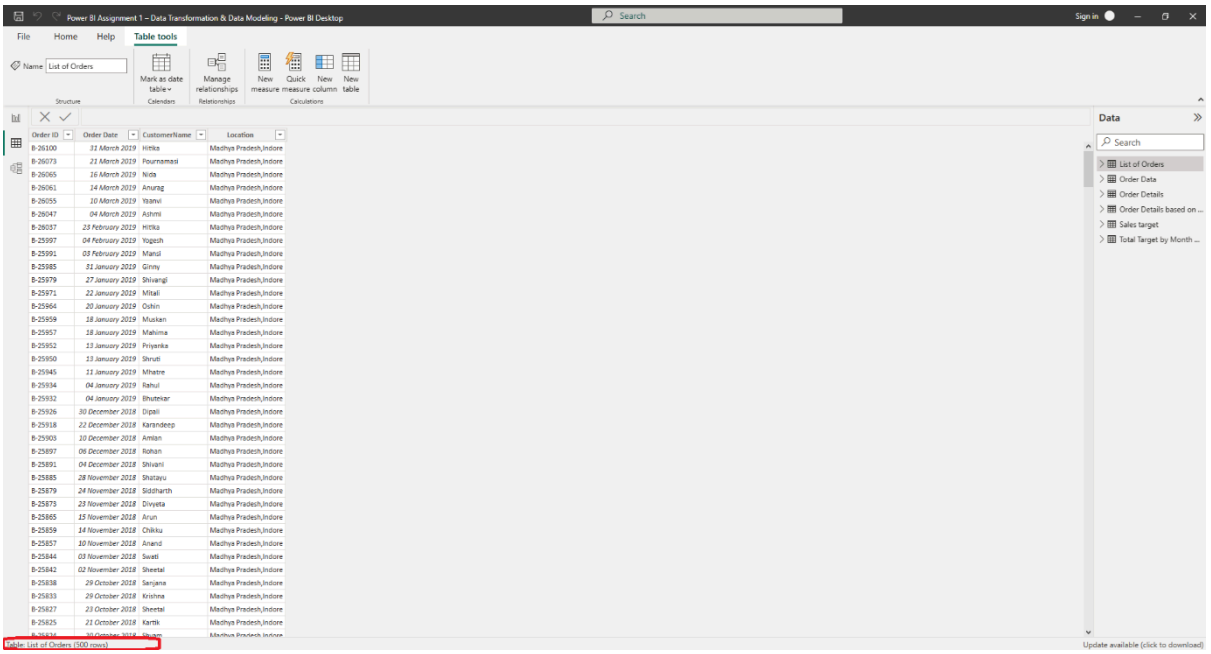


Restrict the "List of Orders" table to only the first 500 rows.

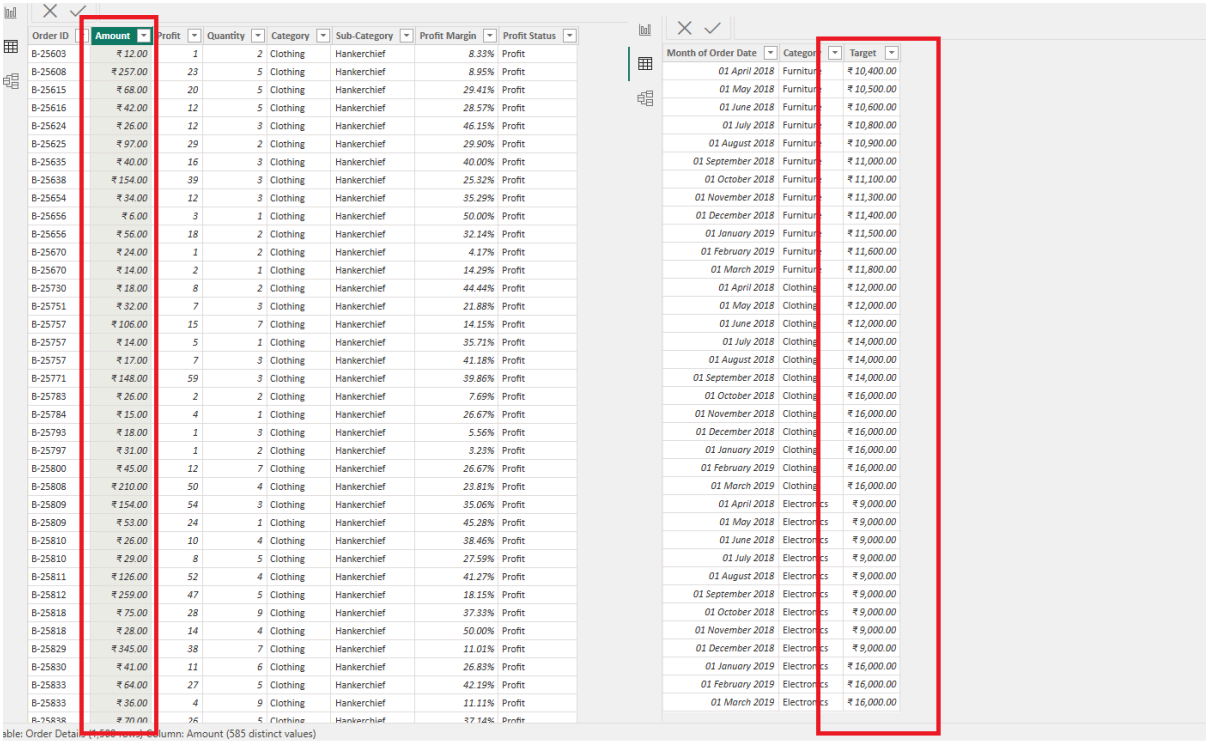
Ensure the “Order Date” column in the “List of Orders” table is set to data type 'Date'.

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

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



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



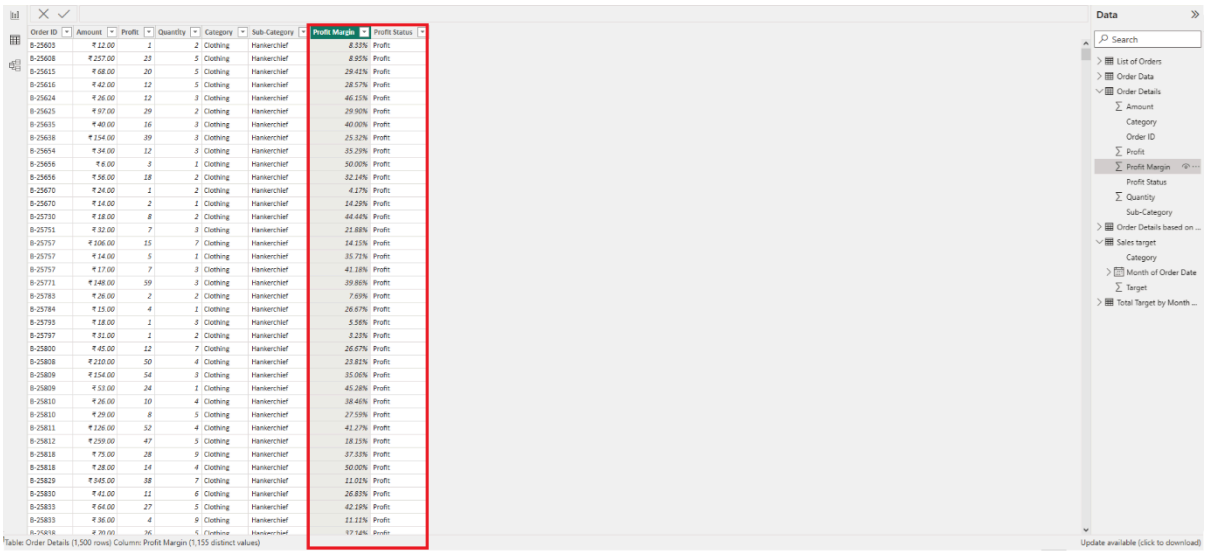
Order ID	Amount	Profit	Quantity	Category	Sub-Category	Profit Margin	Profit Status
B-25603	₹12.00	1	2	Clothing	Hankerchief	8.33%	Profit
B-25608	₹257.00	23	5	Clothing	Hankerchief	8.95%	Profit
B-25615	₹68.00	20	5	Clothing	Hankerchief	29.41%	Profit
B-25616	₹42.00	12	5	Clothing	Hankerchief	28.57%	Profit
B-25624	₹26.00	12	3	Clothing	Hankerchief	46.15%	Profit
B-25625	₹97.00	29	2	Clothing	Hankerchief	29.90%	Profit
B-25635	₹40.00	16	3	Clothing	Hankerchief	40.00%	Profit
B-25638	₹154.00	39	3	Clothing	Hankerchief	25.32%	Profit
B-25654	₹34.00	12	3	Clothing	Hankerchief	35.29%	Profit
B-25656	₹6.00	3	1	Clothing	Hankerchief	50.00%	Profit
B-25656	₹56.00	18	2	Clothing	Hankerchief	32.14%	Profit
B-25670	₹24.00	1	2	Clothing	Hankerchief	4.17%	Profit
B-25670	₹14.00	2	1	Clothing	Hankerchief	14.29%	Profit
B-25730	₹18.00	8	2	Clothing	Hankerchief	44.44%	Profit
B-25751	₹32.00	7	3	Clothing	Hankerchief	21.88%	Profit
B-25757	₹106.00	15	7	Clothing	Hankerchief	14.15%	Profit
B-25757	₹14.00	5	1	Clothing	Hankerchief	35.71%	Profit
B-25757	₹17.00	7	3	Clothing	Hankerchief	41.18%	Profit
B-25771	₹148.00	59	3	Clothing	Hankerchief	39.86%	Profit
B-25783	₹26.00	2	2	Clothing	Hankerchief	7.69%	Profit
B-25784	₹15.00	4	1	Clothing	Hankerchief	26.67%	Profit
B-25793	₹18.00	1	3	Clothing	Hankerchief	5.56%	Profit
B-25797	₹31.00	1	2	Clothing	Hankerchief	3.23%	Profit
B-25800	₹45.00	12	7	Clothing	Hankerchief	26.67%	Profit
B-25808	₹210.00	50	4	Clothing	Hankerchief	23.81%	Profit
B-25809	₹154.00	54	3	Clothing	Hankerchief	35.06%	Profit
B-25809	₹53.00	24	1	Clothing	Hankerchief	45.28%	Profit
B-25810	₹26.00	10	4	Clothing	Hankerchief	38.46%	Profit
B-25810	₹29.00	8	5	Clothing	Hankerchief	27.59%	Profit
B-25811	₹126.00	52	4	Clothing	Hankerchief	41.27%	Profit
B-25812	₹259.00	47	5	Clothing	Hankerchief	18.15%	Profit
B-25818	₹75.00	28	9	Clothing	Hankerchief	37.33%	Profit
B-25818	₹28.00	14	4	Clothing	Hankerchief	50.00%	Profit
B-25829	₹345.00	38	7	Clothing	Hankerchief	11.01%	Profit
B-25830	₹41.00	11	6	Clothing	Hankerchief	26.83%	Profit
B-25833	₹64.00	27	5	Clothing	Hankerchief	42.19%	Profit
B-25833	₹36.00	4	9	Clothing	Hankerchief	11.11%	Profit
B-25838	₹70.00	26	5	Clothing	Hankerchief	37.14%	Profit

Month of Order Date	Category	Target
01 April 2018	Furniture	₹10,400.00
01 May 2018	Furniture	₹10,500.00
01 June 2018	Furniture	₹10,600.00
01 July 2018	Furniture	₹10,800.00
01 August 2018	Furniture	₹10,900.00
01 September 2018	Furniture	₹11,000.00
01 October 2018	Furniture	₹11,100.00
01 November 2018	Furniture	₹11,300.00
01 December 2018	Furniture	₹11,400.00
01 January 2019	Furniture	₹11,500.00
01 February 2019	Furniture	₹11,600.00
01 March 2019	Furniture	₹11,800.00
01 April 2018	Clothing	₹12,000.00
01 May 2018	Clothing	₹12,000.00
01 June 2018	Clothing	₹12,000.00
01 July 2018	Clothing	₹14,000.00
01 August 2018	Clothing	₹14,000.00
01 September 2018	Clothing	₹14,000.00
01 October 2018	Clothing	₹16,000.00
01 November 2018	Clothing	₹16,000.00
01 December 2018	Clothing	₹16,000.00
01 January 2019	Clothing	₹16,000.00
01 February 2019	Clothing	₹16,000.00
01 March 2019	Clothing	₹16,000.00
01 April 2018	Electronics	₹9,000.00
01 May 2018	Electronics	₹9,000.00
01 June 2018	Electronics	₹9,000.00
01 July 2018	Electronics	₹9,000.00
01 August 2018	Electronics	₹9,000.00
01 September 2018	Electronics	₹9,000.00
01 October 2018	Electronics	₹9,000.00
01 November 2018	Electronics	₹9,000.00
01 December 2018	Electronics	₹9,000.00
01 January 2019	Electronics	₹16,000.00
01 February 2019	Electronics	₹16,000.00
01 March 2019	Electronics	₹16,000.00

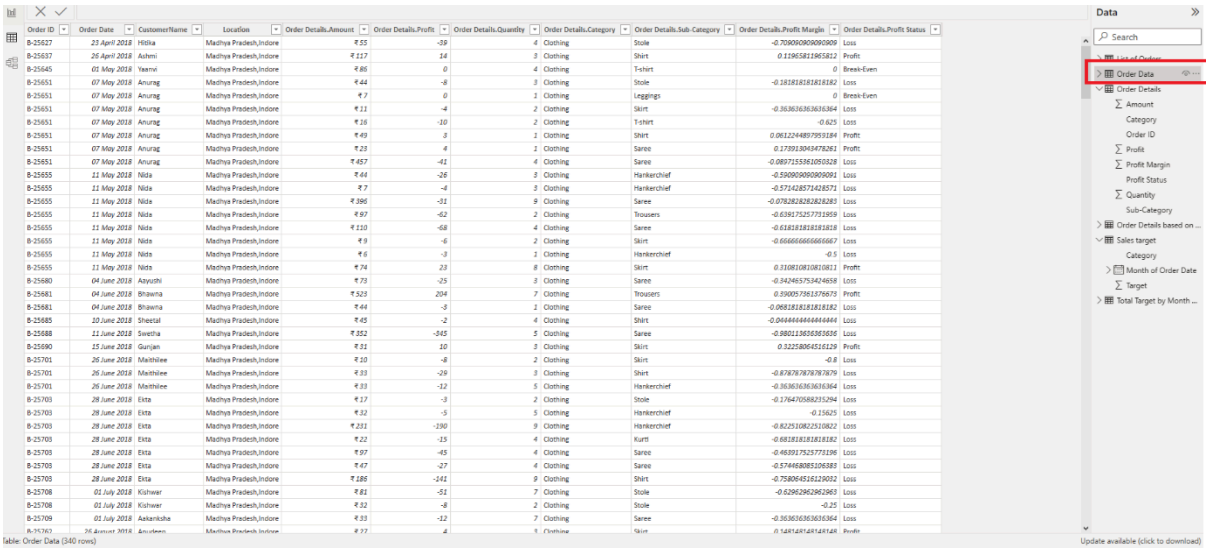
Table: Order Details (1,500 rows) Column: Amount (585 distinct values)

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

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 label should be "Loss"; if the profit equals 0, the label should be "Break-Even"; and if the profit is greater than 0, the label should be "Profit".

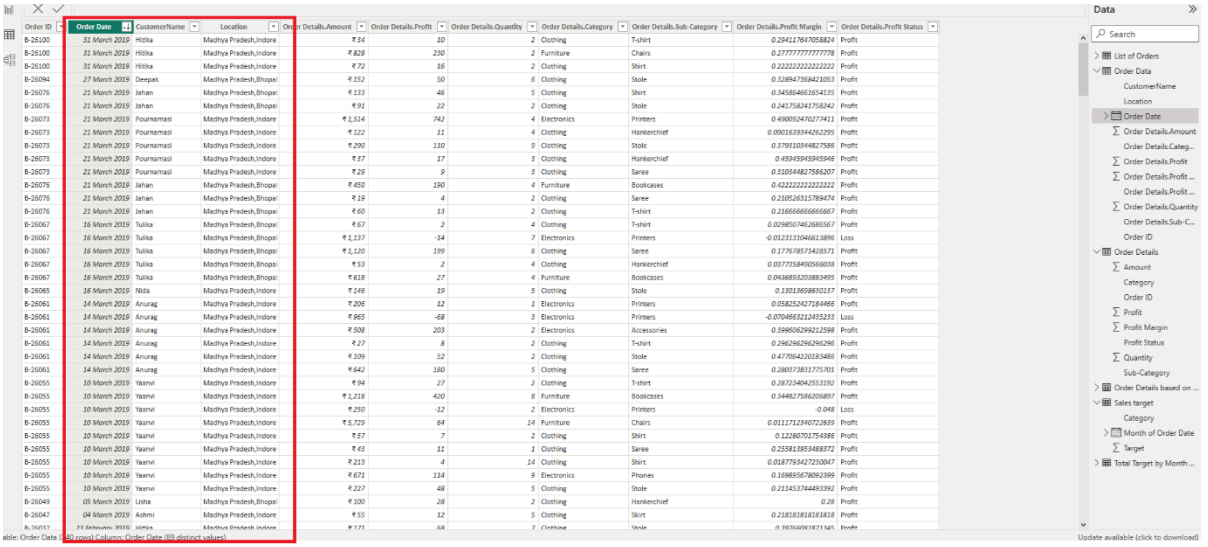


Merge the "List of Orders" and "Order Details" tables into a new single table named "Orders Data" based on the "Order ID" relationship.

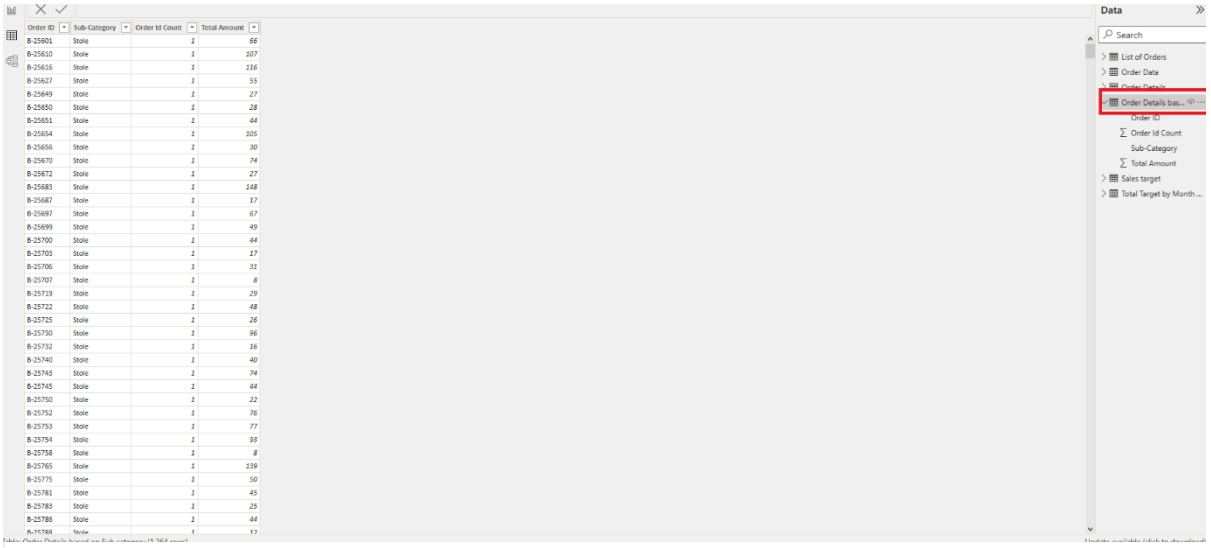


◆ Sort the orders by Order Date in descending order to analyze recent trends.

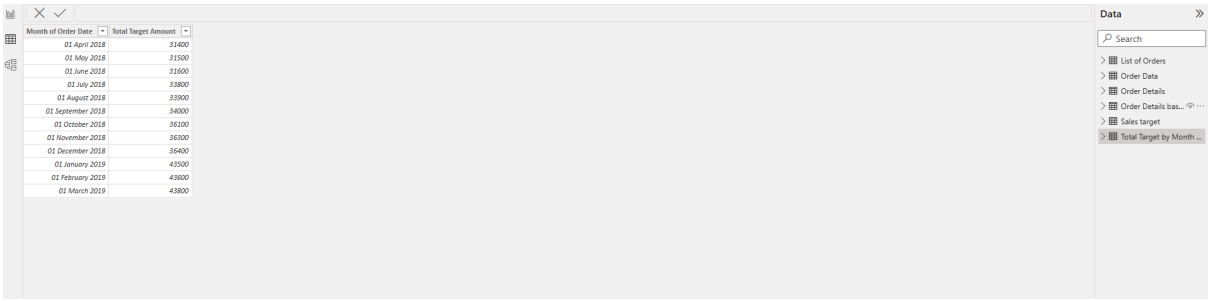
◆ Filter the orders to focus only on a specific state (e.g., Tamil Nadu) for regional analysis.



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



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



● Establish a relationship between the “List of Orders” and “Order Details” tables using the ‘Order ID’ column.

● Build a relationship between the “Order Details” and “Sales Target” tables based on the ‘Category’ column. Click "Manage relationships" and ensure this relationship is active.