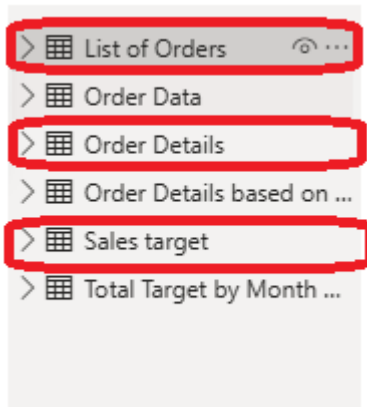


Power BI Assignment 1 – Data Transformation & Data Modeling

Import Data:

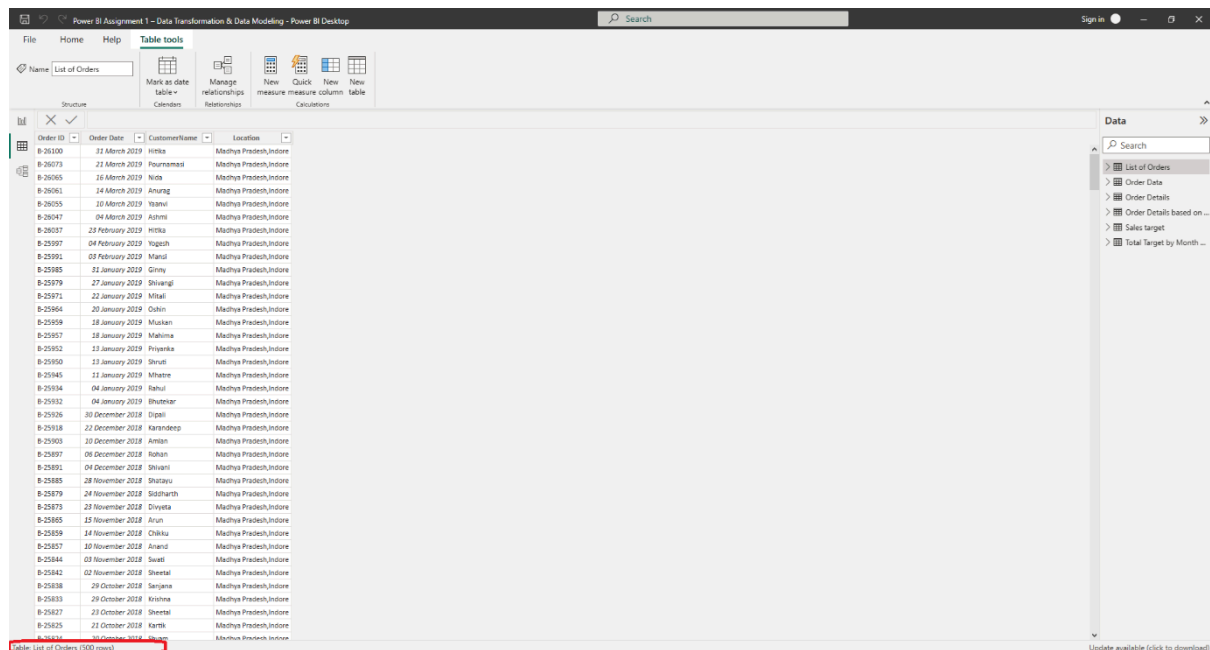


Restrict the "List of Orders" table to only the first 500 rows.

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	Hankerschief	8.33%	Profit
B-25608	₹ 257.00	23	5	Clothing	Hankerschief	8.95%	Profit
B-25615	₹ 68.00	20	5	Clothing	Hankerschief	29.41%	Profit
B-25616	₹ 42.00	12	5	Clothing	Hankerschief	28.57%	Profit
B-25624	₹ 26.00	12	3	Clothing	Hankerschief	46.15%	Profit
B-25625	₹ 97.00	29	2	Clothing	Hankerschief	29.90%	Profit
B-25635	₹ 40.00	16	3	Clothing	Hankerschief	40.00%	Profit
B-25638	₹ 154.00	39	3	Clothing	Hankerschief	25.32%	Profit
B-25654	₹ 34.00	12	3	Clothing	Hankerschief	35.29%	Profit
B-25656	₹ 6.00	3	1	Clothing	Hankerschief	50.00%	Profit
B-25656	₹ 56.00	18	2	Clothing	Hankerschief	32.14%	Profit
B-25670	₹ 24.00	1	2	Clothing	Hankerschief	4.17%	Profit
B-25670	₹ 14.00	2	1	Clothing	Hankerschief	14.29%	Profit
B-25730	₹ 18.00	8	2	Clothing	Hankerschief	44.44%	Profit
B-25751	₹ 32.00	7	3	Clothing	Hankerschief	21.88%	Profit
B-25757	₹ 106.00	15	7	Clothing	Hankerschief	14.15%	Profit
B-25757	₹ 14.00	5	1	Clothing	Hankerschief	35.71%	Profit
B-25757	₹ 17.00	7	3	Clothing	Hankerschief	41.18%	Profit
B-25771	₹ 148.00	59	3	Clothing	Hankerschief	39.86%	Profit
B-25783	₹ 26.00	2	2	Clothing	Hankerschief	7.69%	Profit
B-25784	₹ 15.00	4	1	Clothing	Hankerschief	26.67%	Profit
B-25793	₹ 18.00	1	3	Clothing	Hankerschief	5.56%	Profit
B-25797	₹ 31.00	1	2	Clothing	Hankerschief	3.23%	Profit
B-25800	₹ 45.00	12	7	Clothing	Hankerschief	26.67%	Profit
B-25808	₹ 210.00	50	4	Clothing	Hankerschief	23.81%	Profit
B-25809	₹ 154.00	54	3	Clothing	Hankerschief	35.06%	Profit
B-25809	₹ 53.00	24	1	Clothing	Hankerschief	45.28%	Profit
B-25810	₹ 26.00	10	4	Clothing	Hankerschief	38.46%	Profit
B-25810	₹ 29.00	8	5	Clothing	Hankerschief	27.59%	Profit
B-25811	₹ 126.00	52	4	Clothing	Hankerschief	41.27%	Profit
B-25812	₹ 259.00	47	5	Clothing	Hankerschief	18.15%	Profit
B-25818	₹ 75.00	28	9	Clothing	Hankerschief	37.33%	Profit
B-25818	₹ 28.00	14	4	Clothing	Hankerschief	50.00%	Profit
B-25829	₹ 345.00	38	7	Clothing	Hankerschief	11.01%	Profit
B-25830	₹ 41.00	11	6	Clothing	Hankerschief	26.83%	Profit
B-25833	₹ 64.00	27	5	Clothing	Hankerschief	42.19%	Profit
B-25833	₹ 36.00	4	9	Clothing	Hankerschief	11.11%	Profit
B-25838	₹ 39.00	36	5	Clothing	Hankerschief	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 2019	Clothing	₹ 12,000.00
01 May 2019	Clothing	₹ 12,000.00
01 June 2019	Clothing	₹ 12,000.00
01 July 2019	Clothing	₹ 14,000.00
01 August 2019	Clothing	₹ 14,000.00
01 September 2019	Clothing	₹ 14,000.00
01 October 2019	Clothing	₹ 16,000.00
01 November 2019	Clothing	₹ 16,000.00
01 December 2019	Clothing	₹ 16,000.00
01 January 2020	Clothing	₹ 16,000.00
01 February 2020	Clothing	₹ 16,000.00
01 March 2020	Clothing	₹ 16,000.00
01 April 2020	Electronics	₹ 9,000.00
01 May 2020	Electronics	₹ 9,000.00
01 June 2020	Electronics	₹ 9,000.00
01 July 2020	Electronics	₹ 9,000.00
01 August 2020	Electronics	₹ 9,000.00
01 September 2020	Electronics	₹ 9,000.00
01 October 2020	Electronics	₹ 9,000.00
01 November 2020	Electronics	₹ 9,000.00
01 December 2020	Electronics	₹ 9,000.00
01 January 2021	Electronics	₹ 16,000.00
01 February 2021	Electronics	₹ 16,000.00
01 March 2021	Electronics	₹ 16,000.00

Table: Order Details (1500 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".

Order ID	Amount	Profit	Quantity	Category	Sub-Category	Profit Margin	Profit Status
B-25603	₹ 12.00	1	2	Clothing	Hankerschief	8.33%	Profit
B-25608	₹ 257.00	23	5	Clothing	Hankerschief	8.95%	Profit
B-25615	₹ 68.00	20	5	Clothing	Hankerschief	29.41%	Profit
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B-25654	₹ 34.00	12	3	Clothing	Hankerschief	35.29%	Profit
B-25656	₹ 6.00	3	1	Clothing	Hankerschief	50.00%	Profit
B-25656	₹ 56.00	18	2	Clothing	Hankerschief	32.14%	Profit
B-25670	₹ 24.00	1	2	Clothing	Hankerschief	4.17%	Profit
B-25670	₹ 14.00	2	1	Clothing	Hankerschief	14.29%	Profit
B-25730	₹ 18.00	8	2	Clothing	Hankerschief	44.44%	Profit
B-25751	₹ 32.00	7	3	Clothing	Hankerschief	21.88%	Profit
B-25757	₹ 106.00	15	7	Clothing	Hankerschief	14.15%	Profit
B-25757	₹ 14.00	5	1	Clothing	Hankerschief	35.71%	Profit
B-25757	₹ 17.00	7	3	Clothing	Hankerschief	41.18%	Profit
B-25771	₹ 148.00	59	3	Clothing	Hankerschief	39.86%	Profit
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B-25784	₹ 15.00	4	1	Clothing	Hankerschief	26.67%	Profit
B-25793	₹ 18.00	1	3	Clothing	Hankerschief	5.56%	Profit
B-25797	₹ 31.00	1	2	Clothing	Hankerschief	3.23%	Profit
B-25800	₹ 45.00	12	7	Clothing	Hankerschief	26.67%	Profit
B-25808	₹ 210.00	50	4	Clothing	Hankerschief	23.81%	Profit
B-25809	₹ 154.00	54	3	Clothing	Hankerschief	35.06%	Profit
B-25809	₹ 53.00	24	1	Clothing	Hankerschief	45.28%	Profit
B-25810	₹ 26.00	10	4	Clothing	Hankerschief	38.46%	Profit
B-25810	₹ 29.00	8	5	Clothing	Hankerschief	27.59%	Profit
B-25811	₹ 126.00	52	4	Clothing	Hankerschief	41.27%	Profit
B-25812	₹ 259.00	47	5	Clothing	Hankerschief	18.15%	Profit
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B-25833	₹ 64.00	27	5	Clothing	Hankerschief	42.19%	Profit
B-25833	₹ 36.00	4	9	Clothing	Hankerschief	11.11%	Profit
B-25838	₹ 39.00	36	5	Clothing	Hankerschief	37.14%	Profit

Table: Order Details (1500 rows) Column: Profit Margin (1,155 distinct values)

Search

List of Orders

Order Data

Order Details

Amount

Category

Order ID

Profit

Profit Margin

Profit Status

Quantity

Sub-Category

Order Details based on ...

Sales target

Category

Month of Order Date

Target

Total Target by Month ...

Update available (click to download)

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

Order ID	Order Date	CustomerName	Location	Order Details.Amount	Order Details.Profit	Order Details.Quantity	Order Details.Category	Order Details.Sub-Category	Order Details.Profit Margin	Order Details.Profit Status
B-25537	23 April 2018	Hitesh	Madhya Pradesh,India	₹ 55	-39	4	Clothing	Stole	-0.709030903090909	Loss
B-25537	23 April 2018	Hitesh	Madhya Pradesh,India	₹ 117	34	3	Clothing	Shirt	0.296583186583187	Profit
B-25645	02 May 2018	Yamni	Madhya Pradesh,India	₹ 66	0	4	Clothing	T-shirt	0	Break-Even
B-25651	07 May 2018	Anurag	Madhya Pradesh,India	₹ 44	-18	3	Clothing	Stole	-0.409090909090909	Loss
B-25651	07 May 2018	Anurag	Madhya Pradesh,India	₹ 7	0	1	Clothing	Leggings	0	Break-Even
B-25651	07 May 2018	Anurag	Madhya Pradesh,India	₹ 11	-4	2	Clothing	Skirt	-0.363636363636364	Loss
B-25651	07 May 2018	Anurag	Madhya Pradesh,India	₹ 16	-10	2	Clothing	T-shirt	-0.625	Loss
B-25651	07 May 2018	Anurag	Madhya Pradesh,India	₹ 49	3	1	Clothing	Shirt	0.061216480391061	Profit
B-25651	07 May 2018	Anurag	Madhya Pradesh,India	₹ 23	4	1	Clothing	Saree	0.173913043762961	Profit
B-25651	07 May 2018	Anurag	Madhya Pradesh,India	₹ 457	-41	4	Clothing	Saree	-0.089715586105028	Loss
B-25655	11 May 2018	Nisha	Madhya Pradesh,India	₹ 44	-26	3	Clothing	Hankierchief	-0.590909090909091	Loss
B-25655	11 May 2018	Nisha	Madhya Pradesh,India	₹ 7	-4	3	Clothing	Hankierchief	-0.571428571428571	Loss
B-25655	11 May 2018	Nisha	Madhya Pradesh,India	₹ 96	-11	9	Clothing	Saree	-0.0762026202620263	Loss
B-25655	11 May 2018	Nisha	Madhya Pradesh,India	₹ 57	-62	2	Clothing	Trousers	-0.630273217731959	Loss
B-25655	11 May 2018	Nisha	Madhya Pradesh,India	₹ 110	-68	4	Clothing	Saree	-0.618181818181818	Loss
B-25655	11 May 2018	Nisha	Madhya Pradesh,India	₹ 9	-6	2	Clothing	Skirt	-0.666666666666667	Loss
B-25655	11 May 2018	Nisha	Madhya Pradesh,India	₹ 6	-3	1	Clothing	Hankierchief	-0.5	Loss
B-25655	11 May 2018	Nisha	Madhya Pradesh,India	₹ 74	23	8	Clothing	Skirt	0.310810810810811	Profit
B-25680	04 June 2018	Ravish	Madhya Pradesh,India	₹ 79	-35	9	Clothing	Saree	-0.342485714285714	Loss
B-25681	04 June 2018	Bhawna	Madhya Pradesh,India	₹ 513	204	7	Clothing	Trousers	0.398957951766767	Profit
B-25681	04 June 2018	Bhawna	Madhya Pradesh,India	₹ 44	-3	1	Clothing	Saree	-0.0681818181818182	Loss
B-25685	10 June 2018	Sheetal	Madhya Pradesh,India	₹ 45	-2	4	Clothing	Skirt	-0.0444444444444444	Loss
B-25688	11 June 2018	Sheetal	Madhya Pradesh,India	₹ 352	-345	5	Clothing	Saree	-0.980113636363636	Loss
B-25690	15 June 2018	Surjan	Madhya Pradesh,India	₹ 51	10	3	Clothing	Skirt	0.192307692307692	Profit
B-25701	26 June 2018	Madhilene	Madhya Pradesh,India	₹ 10	-8	2	Clothing	Skirt	-0.8	Loss
B-25701	26 June 2018	Madhilene	Madhya Pradesh,India	₹ 13	-29	3	Clothing	Skirt	-0.876767676767679	Loss
B-25701	26 June 2018	Madhilene	Madhya Pradesh,India	₹ 13	-12	5	Clothing	Hankierchief	-0.363636363636364	Loss
B-25703	28 June 2018	Ekta	Madhya Pradesh,India	₹ 17	-3	2	Clothing	Stole	-0.176470588235294	Loss
B-25703	28 June 2018	Ekta	Madhya Pradesh,India	₹ 12	-5	5	Clothing	Hankierchief	-0.15625	Loss
B-25703	28 June 2018	Ekta	Madhya Pradesh,India	₹ 131	-130	9	Clothing	Hankierchief	-0.825108251082511	Loss
B-25703	28 June 2018	Ekta	Madhya Pradesh,India	₹ 12	-13	2	Clothing	Skirt	-0.681818181818182	Loss
B-25703	28 June 2018	Ekta	Madhya Pradesh,India	₹ 97	-45	4	Clothing	Saree	-0.463917525771296	Loss
B-25703	28 June 2018	Ekta	Madhya Pradesh,India	₹ 47	-27	4	Clothing	Saree	-0.574880882368889	Loss
B-25703	28 June 2018	Ekta	Madhya Pradesh,India	₹ 186	-141	9	Clothing	Skirt	-0.758064516230022	Loss
B-25708	01 July 2018	Kishwar	Madhya Pradesh,India	₹ 81	-51	7	Clothing	Stole	-0.62962962962963	Loss
B-25708	01 July 2018	Kishwar	Madhya Pradesh,India	₹ 12	-8	2	Clothing	Stole	-0.666666666666667	Loss
B-25708	01 July 2018	Kishwar	Madhya Pradesh,India	₹ 13	-12	7	Clothing	Saree	-0.363636363636364	Loss
B-25767	26 August 2018	Arundham	Madhya Pradesh,India	₹ 77	4	1	Clothing	Skirt	0.148748148748148	Profit

- ◆ 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.

Order ID	Order Date	CustomerName	Location	Order Details.Amount	Order Details.Profit	Order Details.Quantity	Order Details.Category	Order Details.Sub-Category	Order Details.Profit Margin	Order Details.Profit Status
B-26100	21 March 2019	Hitesh	Madhya Pradesh,India	₹ 54	10	2	Clothing	T-shirt	0.204717617058624	Profit
B-26100	21 March 2019	Hitesh	Madhya Pradesh,India	₹ 828	230	2	Furniture	Chair	0.277777777777778	Profit
B-26100	21 March 2019	Hitesh	Madhya Pradesh,India	₹ 72	16	2	Clothing	Skirt	0.222222222222222	Profit
B-26094	27 March 2019	Deepak	Madhya Pradesh,Bhopal	₹ 152	50	6	Clothing	Stole	0.328647598471053	Profit
B-26076	21 March 2019	Ashani	Madhya Pradesh,Bhopal	₹ 113	46	5	Clothing	Skirt	0.343646050542135	Profit
B-26076	21 March 2019	Ashani	Madhya Pradesh,Bhopal	₹ 91	22	2	Clothing	Stole	0.241758241758242	Profit
B-26073	21 March 2019	Pounamasi	Madhya Pradesh,India	₹ 1,514	242	4	Electronics	Printers	0.490074102774111	Profit
B-26073	21 March 2019	Pounamasi	Madhya Pradesh,India	₹ 122	11	4	Clothing	Hankierchief	0.090130944262295	Profit
B-26073	21 March 2019	Pounamasi	Madhya Pradesh,India	₹ 290	110	9	Clothing	Stole	0.379310548627686	Profit
B-26073	21 March 2019	Pounamasi	Madhya Pradesh,India	₹ 57	17	3	Clothing	Hankierchief	0.459459459459459	Profit
B-26073	21 March 2019	Pounamasi	Madhya Pradesh,India	₹ 20	9	3	Clothing	Saree	0.310944627986457	Profit
B-26076	21 March 2019	Ashani	Madhya Pradesh,Bhopal	₹ 450	190	4	Furniture	Bookcases	0.422222222222222	Profit
B-26076	21 March 2019	Ashani	Madhya Pradesh,Bhopal	₹ 19	4	2	Clothing	Saree	0.210526315789474	Profit
B-26076	21 March 2019	Ashani	Madhya Pradesh,Bhopal	₹ 60	13	2	Clothing	T-shirt	0.216666666666667	Profit
B-26067	16 March 2019	Tulika	Madhya Pradesh,Bhopal	₹ 67	2	4	Clothing	T-shirt	0.029850746268667	Profit
B-26067	16 March 2019	Tulika	Madhya Pradesh,Bhopal	₹ 1,117	-14	7	Electronics	Printers	-0.013111046613896	Loss
B-26067	16 March 2019	Tulika	Madhya Pradesh,Bhopal	₹ 1,110	119	6	Clothing	Saree	0.177676767676768	Profit
B-26067	16 March 2019	Tulika	Madhya Pradesh,Bhopal	₹ 13	2	4	Clothing	Hankierchief	0.017758495560318	Profit
B-26067	16 March 2019	Tulika	Madhya Pradesh,Bhopal	₹ 618	27	4	Furniture	Bookcases	0.0438893203883495	Profit
B-26065	16 March 2019	Nisha	Madhya Pradesh,India	₹ 146	19	5	Clothing	Stole	0.1301869860187	Profit
B-26061	14 March 2019	Anurag	Madhya Pradesh,India	₹ 206	12	1	Electronics	Printers	0.058232427184466	Profit
B-26061	14 March 2019	Anurag	Madhya Pradesh,India	₹ 965	-68	3	Electronics	Printers	-0.070465221451233	Loss
B-26061	14 March 2019	Anurag	Madhya Pradesh,India	₹ 508	203	2	Electronics	Accessories	0.399626296212368	Profit
B-26061	14 March 2019	Anurag	Madhya Pradesh,India	₹ 27	8	2	Clothing	T-shirt	0.296296296296296	Profit
B-26061	14 March 2019	Anurag	Madhya Pradesh,India	₹ 109	52	2	Clothing	Stole	0.477064202183485	Profit
B-26061	14 March 2019	Anurag	Madhya Pradesh,India	₹ 642	180	5	Clothing	Saree	0.280373811775701	Profit
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 94	27	2	Clothing	T-shirt	0.287234042553192	Profit
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 1,218	-430	8	Furniture	Bookcases	-0.344627596820697	Loss
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 250	12	2	Electronics	Printers	-0.048	Loss
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 5,729	64	24	Furniture	Chair	0.011712340722639	Profit
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 57	7	2	Clothing	Skirt	0.12280701754386	Profit
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 42	12	1	Clothing	Saree	0.25581953468872	Profit
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 211	4	14	Clothing	Skirt	0.0187763427203047	Profit
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 672	114	9	Electronics	Phones	0.169656709232365	Profit
B-26055	10 March 2019	Yamni	Madhya Pradesh,India	₹ 227	48	5	Clothing	Stole	0.211433744460192	Profit
B-26049	05 March 2019	Lisha	Madhya Pradesh,Bhopal	₹ 100	28	2	Clothing	Hankierchief	0.28	Profit
B-26047	04 March 2019	Adami	Madhya Pradesh,India	₹ 55	12	5	Clothing	Skirt	0.218181818181818	Profit
B-26071	01 November 2018	Hitesh	Madhya Pradesh,India	₹ 171	18	7	Clothing	Stole	0.101760491871871	Profit

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

Order ID	Sub-Category	Order Id Count	Total Amount
B-25601	Shoe	1	86
B-25610	Shoe	1	107
B-25616	Shoe	1	116
B-25627	Shoe	1	55
B-25649	Shoe	1	27
B-25650	Shoe	1	28
B-25651	Shoe	1	44
B-25654	Shoe	1	105
B-25656	Shoe	1	30
B-25670	Shoe	1	74
B-25672	Shoe	1	27
B-25683	Shoe	1	148
B-25687	Shoe	1	17
B-25697	Shoe	1	67
B-25699	Shoe	1	49
B-25700	Shoe	1	44
B-25703	Shoe	1	27
B-25706	Shoe	1	31
B-25707	Shoe	1	8
B-25719	Shoe	1	29
B-25722	Shoe	1	48
B-25725	Shoe	1	26
B-25730	Shoe	1	96
B-25732	Shoe	1	16
B-25740	Shoe	1	40
B-25743	Shoe	1	74
B-25745	Shoe	1	44
B-25750	Shoe	1	22
B-25752	Shoe	1	76
B-25753	Shoe	1	77
B-25754	Shoe	1	93
B-25758	Shoe	1	8
B-25765	Shoe	1	119
B-25775	Shoe	1	50
B-25781	Shoe	1	45
B-25783	Shoe	1	25
B-25786	Shoe	1	44
B-25788	Shoe	1	17

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

Month of Order Date	Total Target Amount
01 April 2018	31400
01 May 2018	31500
01 June 2018	31600
01 July 2018	31800
01 August 2018	31900
01 September 2018	34000
01 October 2018	36100
01 November 2018	36200
01 December 2018	36400
01 January 2019	43500
01 February 2019	43600
01 March 2019	43800

- 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.

