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MIS 632
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Team HANA Assignment

1. How many distinct orders were made?

Code:

```
SELECT COUNT("SalesOrderID") AS "Number of Distinct Order"
FROM "GBI_892"."GBI_892::AWdata.OrderHeader";
```

Output:

	12 Number of Distinct Order
1	31465

2. What is the \$\$ total of all orders?

Code:

```
SELECT SUM("TotalDue") AS "Total Dollars"
FROM "GBI_892"."GBI_892::AWdata.OrderHeader";
```

Output:

	12 Total Dollars
1	140707584.8246

*Note: "Total Dollar" here is measured by the total due of all orders, which include total revenue as well as tax and freight.

3. What were the top 10 best-selling products, by \$\$ amount?

Code:

```
SELECT TOP 10
    "Name",
    SUM("LineTotal") AS "Total Dollar Amount"
FROM "GBI_892"."GBI_892::AWdata.Products"
    INNER JOIN "GBI_892"."GBI_892::AWdata.OrderDetail"
    ON "GBI_892"."GBI_892::AWdata.Products"."ProductID" = "GBI_892"."GBI_892::AWdata.OrderDetail"."ProductID"
GROUP BY "Name"
ORDER BY "Total Dollar Amount" DESC;
```

Output:

	<small>RB</small> Name	<small>12</small> Total Dollar Amount
1	Mountain-200 Black_ 38	4400592.80042
2	Mountain-200 Black_ 42	4009494.76185
3	Mountain-200 Silver_ 38	3693678.02527
4	Mountain-200 Silver_ 42	3438478.86044
5	Mountain-200 Silver_ 46	3434256.94192
6	Mountain-200 Black_ 46	3309673.21692
7	Road-250 Black_ 44	2516857.31491
8	Road-250 Black_ 48	2347655.95345
9	Road-250 Black_ 52	2012447.775
10	Road-150 Red_ 56	1847818.628

4. What were the top 10 best-selling products by number of orders?

Code:

```
SELECT TOP 10
    "Name" AS "Product",
    COUNT("SalesOrderID") AS "Number of Orders"
FROM "GBI_892"."GBI_892::AWdata.Products"
    INNER JOIN "GBI_892"."GBI_892::AWdata.OrderDetail"
    ON "GBI_892"."GBI_892::AWdata.Products"."ProductID" = "GBI_892"."GBI_892::AWdata.OrderDetail"."ProductID"
GROUP BY "Name"
ORDER BY "Number of Orders" DESC;
```

Output:

	<small>RB</small> Product	<small>12</small> Number of Orders
1	Water Bottle - 30 oz.	4688
2	AWC Logo Cap	3382
3	Patch Kit/8 Patches	3354
4	Mountain Tire Tube	3095
5	Sport-100 Helmet_ Blue	3090
6	Sport-100 Helmet_ Red	3083
7	Sport-100 Helmet_ Black	3007
8	Road Tire Tube	2376
9	Fender Set - Mountain	2121
10	Mountain Bottle Cage	2025

5. Who were the top 10 best customers, by \$\$ amount?

Code:

```
SELECT TOP 10
    "CustomerID",
    SUM("TotalDue") AS "Total Dollar Spent"
FROM "GBI_892"."GBI_892::AwdData.OrderHeader"
GROUP BY "CustomerID"
ORDER BY "Total Dollar Spent" DESC;
```

Output:

	12 CustomerID	12 Total Dollar Spent
1	678	1179857.4657
2	697	1179475.8399
3	170	1134747.4413
4	328	1084439.0265
5	514	1074154.3035
6	155	1045197.0498
7	72	1005539.7181
8	227	984324.0473
9	433	983871.933
10	166	979881.3491

*Note: "Total Dollar Spent" here includes the total revenue the customers have contributed, as well as tax and freight.

6. Who were the top 10 customers (by \$\$ amount) of products with the word "Mountain" in their name?

Code:

```
SELECT TOP 10
    "CustomerID",
    SUM("LineTotal") AS "Total Dollars Spent on Products with Word 'Mountain'"
FROM "GBI_892"."GBI_892::AWdata.OrderHeader"
    INNER JOIN "GBI_892"."GBI_892::AWdata.OrderDetail"
    ON "GBI_892"."GBI_892::AWdata.OrderHeader"."SalesOrderID" = "GBI_892"."GBI_892::AWdata.OrderDetail"."SalesOrderID"
    INNER JOIN "GBI_892"."GBI_892::AWdata.Products"
    ON "GBI_892"."GBI_892::AWdata.OrderDetail"."ProductID" = "GBI_892"."GBI_892::AWdata.Products"."ProductID"
WHERE "Name" LIKE '%Mountain%'
GROUP BY "CustomerID"
ORDER BY "Total Dollars Spent on Products with Word 'Mountain'" DESC;
```

Output:

	12 CustomerID	12 Total Dollars Spent on Products with Word 'Mountain'
1	697	873475.04305
2	678	790185.73299
3	146	714740.43527
4	506	692649.74072
5	546	655888.99834
6	309	600500.37993
7	608	576393.14979
8	496	556162.81531
9	650	545423.05855
10	502	539249.98938

*Note: These customers are the top 10 purchasers of products with the word “mountain”. The total dollars spent here only includes the revenue generated from the products with the word “mountain”.

7. What is the average order total?

Code:

```
SELECT AVG("TotalDue") AS "Average Order Total"
FROM "GBI_892"."GBI_892::AWdata.OrderHeader";
```

Output:

	12 Average Order Total
1	4471.876206089305577625933576990307

*Note: “Average Order Total” includes the average dollars per sale, as well as tax, and freight.

8. List the products and quantities purchased by the top 10 customers and their dollar value.

Code:

```
SELECT "Name",
       SUM("OrderQty") AS "Quantity",
       SUM("LineTotal") AS "Total Dollars Spent"
FROM   "GBI_892"."GBI_892::AWdata.OrderHeader"
       INNER JOIN "GBI_892"."GBI_892::AWdata.OrderDetail"
       ON "GBI_892"."GBI_892::AWdata.OrderHeader"."SalesOrderID" = "GBI_892"."GBI_892::AWdata.OrderDetail"."SalesOrderID"
       INNER JOIN "GBI_892"."GBI_892::AWdata.Products"
       ON "GBI_892"."GBI_892::AWdata.OrderDetail"."ProductID" = "GBI_892"."GBI_892::AWdata.Products"."ProductID"
WHERE  ("CustomerID" IN (SELECT "CustomerID"
                             FROM (
                                   SELECT TOP 10
                                   "CustomerID",
                                   SUM("TotalDue") AS "Total Dollar Spent"
                                   FROM "GBI_892"."GBI_892::AWdata.OrderHeader"
                                   GROUP BY "CustomerID"
                                   ORDER BY "Total Dollar Spent" DESC
                                 )))
GROUP BY "Name"
ORDER BY "Total Dollars Spent" DESC;
```

Output:

	Name	Quantity	Total Dollars Spent
1	Road-250 Black_ 44	273	374274.1005
2	Road-250 Black_ 48	240	332522.4825
3	Road-250 Black_ 52	200	278437.185
4	Road-350-W Yellow_ 40	222	216448.2559
5	Road-550-W Yellow_ 48	342	213666.0155
6	Road-250 Black_ 58	152	211367.2275
7	Road-350-W Yellow_ 48	198	198165.1649
8	Road-250 Red_ 48	125	183251.25
9	Road-250 Red_ 44	125	183251.25
10	Road-550-W Yellow_ 38	284	180630.9915
11	Road-250 Red_ 58	127	177387.21
12	Mountain-200 Black_ 38	123	157238.7802
13	Road-650 Black_ 52	353	153274.0609
14	Road-550-W Yellow_ 40	236	150377.7615
15	Road-350-W Yellow_ 42	149	150091.1051
16	Road-250 Red_ 52	101	148067.01
17	Road-650 Red_ 60	315	139220.2277
18	Road-150 Red_ 56	59	126670.758
19	Mountain-200 Silver_ 46	98	126431.7664
20	Road-650 Red_ 44	311	124822.7976
21	Mountain-200 Silver_ 38	94	123779.5539
22	Road-650 Black_ 58	273	122006.4724

23	Road-650 Red_ 62	269	120949.4469
24	Road-550-W Yellow_ 42	182	116090.7675
25	Mountain-200 Silver_ 42	90	116015.84
26	Road-650 Red_ 48	240	107658.1251
27	Mountain-200 Black_ 46	80	105733.467
28	Mountain-200 Black_ 42	80	102930.3001
29	Road-650 Black_ 44	209	94718.92489
30	Road-650 Black_ 60	200	90867.86707
31	ML Road Frame-W - Yellow_ 44	266	89835.79234
32	Road-550-W Yellow_ 44	139	88334.6295
33	Road-150 Red_ 62	41	88025.442
34	HL Road Frame - Red_ 62	106	85974.9054
35	HL Road Frame - Red_ 44	105	85138.7477
36	Road-450 Red_ 52	97	84855.018
37	Road-350-W Yellow_ 44	83	84709.302
38	Road-450 Red_ 58	95	83105.43
39	Road-650 Red_ 52	182	82985.753
40	Mountain-100 Black_ 48	40	72140.41125
41	Road-150 Red_ 52	32	68702.784
42	HL Road Frame - Black_ 44	83	68087.3462
43	Road-750 Black_ 48	202	62752.61588
44	Road-150 Red_ 48	29	62261.898
45	Road-450 Red_ 44	70	61235.58
46	Mountain-100 Silver_ 44	34	58947.32662
47	Road-450 Red_ 60	66	57736.404
48	Mountain-100 Silver_ 42	34	57459.831
49	Mountain-100 Black_ 42	29	55771.70975
50	ML Road Frame-W - Yellow_ 38	164	55384.0779
51	ML Road Frame-W - Yellow_ 48	162	54864.9537
52	Road-150 Red_ 44	25	53674.05
53	LL Road Frame - Black_ 52	282	53415.40532
54	Road-650 Red_ 58	114	51543.112
55	HL Mountain Frame - Black_ 42	65	49165.9403
56	HL Mountain Frame - Silver_ 38	63	48446.3734
57	Mountain-100 Silver_ 38	30	47812.35937
58	Mountain-100 Black_ 44	29	46912.361
59	Road-750 Black_ 52	141	45256.56189
60	Mountain-100 Black_ 38	28	44887.367
61	Road-650 Black_ 62	96	43237.8253

62	Road-650 Black_ 48	86	38841.8959
63	Mountain-100 Silver_ 48	24	38547.38662
64	Road-750 Black_ 58	118	38231.292
65	LL Road Frame - Red_ 44	191	37561.06057
66	LL Road Frame - Black_ 58	192	36246.8972
67	LL Road Frame - Red_ 60	179	35205.769
68	Mountain-300 Black_ 38	53	33968.27747
69	Mountain-300 Black_ 48	48	30660.0521
70	Mountain-300 Black_ 40	48	30660.0521
71	HL Mountain Frame - Silver_ 46	38	29278.0992
72	LL Road Frame - Red_ 62	136	26700.96992
73	HL Mountain Frame - Black_ 38	34	25369.8595
74	LL Road Frame - Red_ 48	124	24592.5354
75	Road-450 Red_ 48	28	24494.232
76	Road-750 Black_ 44	70	22679.58
77	Mountain-400-W Silver_ 40	46	20678.65866
78	HL Road Frame - Black_ 48	25	20535.5184
79	Mountain-300 Black_ 44	30	19439.82
80	HL Road Front Wheel	93	18417.348
81	ML Road Frame - Red_ 48	42	14989.716
82	HL Road Frame - Red_ 48	17	13976.6456
83	ML Road Front Wheel	88	13114.728
84	ML Road Frame-W - Yellow_ 40	36	12134.5314
85	HL Mountain Frame - Silver_ 42	14	10770.2765
86	Mountain-400-W Silver_ 38	23	10618.962
87	LL Road Frame - Black_ 44	54	10297.503
88	Mountain-400-W Silver_ 46	19	8772.186
89	Mountain-500 Black_ 42	27	8747.838
90	HL Mountain Rear Wheel	44	8514.39607
91	HL Road Handlebars	120	8311.7494
92	HL Mountain Frame - Silver_ 48	10	8187
93	Long-Sleeve Logo Jersey_ L	283	8067.47118
94	Mountain-500 Silver_ 48	33	7932.4596
95	Mountain-400-W Silver_ 42	17	7848.798
96	Mountain-500 Silver_ 40	31	7796.862
97	Mountain-500 Silver_ 44	30	7457.868
98	LL Road Rear Wheel	110	7429.29
99	ML Mountain Frame-W - Silver_ 40	34	7427.436
100	ML Mountain Frame - Black_ 48	35	7323.96

101	HL Mountain Frame - Black_ 48	9	7287.84
102	Mountain-500 Black_ 40	21	6803.874
103	ML Mountain Rear Wheel	47	6326.65098
104	Women's Tights_ L	141	6175.78644
105	Mountain-500 Silver_ 42	26	6101.892
106	ML Mountain Frame - Black_ 38	28	5859.168
107	Mountain-500 Black_ 48	18	5831.892
108	ML Road Frame - Red_ 52	16	5710.368
109	Men's Bib-Shorts_ M	105	5557.7824
110	Women's Tights_ S	125	5536.57168
111	Mountain-500 Black_ 52	17	5507.898
112	ML Mountain Frame-W - Silver_ 42	24	5242.896
113	Sport-100 Helmet_ Blue	260	5201.36484
114	HL Road Pedal	107	5199.558
115	Mountain-500 Silver_ 52	20	5152.7088
116	ML Mountain Frame - Black_ 44	24	5022.144
117	Sport-100 Helmet_ Black	249	4978.02055
118	Long-Sleeve Logo Jersey_ M	169	4911.89922
119	HL Crankset	20	4859.88
120	Women's Mountain Shorts_ L	125	4654.44697
121	LL Mountain Frame - Silver_ 40	29	4594.47
122	Mountain-500 Black_ 44	14	4535.916
123	Long-Sleeve Logo Jersey_ XL	156	4502.00482
124	Sport-100 Helmet_ Red	218	4381.11663
125	Hitch Rack - 4-Bike	57	4012.992
126	LL Road Frame - Red_ 52	20	4009.8524
127	Classic Vest_ S	110	3959.6568
128	Women's Mountain Shorts_ S	109	3951.28545
129	LL Mountain Frame - Silver_ 42	24	3802.32
130	ML Road Pedal	101	3762.654
131	Men's Bib-Shorts_ S	68	3671.592
132	HL Road Rear Wheel	17	3642.012
133	LL Mountain Frame - Black_ 48	24	3596.976
134	LL Mountain Frame - Black_ 44	24	3596.976
135	LL Road Frame - Black_ 60	18	3458.038
136	Short-Sleeve Classic Jersey_ XL	109	3343.10398
137	LL Road Pedal	136	3303.984
138	Men's Sports Shorts_ M	86	3074.63147
139	HL Mountain Front Wheel	17	3062.193

140	ML Mountain Frame-W - Silver_ 46	14	3058.356
141	HL Fork	22	3029.268
142	Men's Bib-Shorts_ L	56	3023.664
143	LL Mountain Frame - Silver_ 44	19	3010.17
144	LL Mountain Frame - Black_ 42	20	2997.48
145	LL Mountain Frame - Silver_ 52	18	2851.74
146	Classic Vest_ M	68	2564.7142
147	ML Mountain Handlebars	69	2441.898
148	Full-Finger Gloves_ L	125	2335.81893
149	ML Road Rear Wheel	14	2313.234
150	ML Headset	36	2173.90799
151	HL Mountain Pedal	42	2012.79587
152	Men's Sports Shorts_ S	50	1778.84747
153	Men's Sports Shorts_ L	49	1763.706
154	Half-Finger Gloves_ M	123	1758.66592
155	Hydration Pack - 70 oz.	53	1748.682
156	LL Crankset	16	1684.704
157	Front Derailleur	31	1661.23882
158	AWC Logo Cap	326	1660.20503
159	HL Mountain Frame - Black_ 44	2	1619.52
160	HL Mountain Handlebars	23	1587.5638
161	Full-Finger Gloves_ M	70	1514.65749
162	Short-Sleeve Classic Jersey_ L	46	1466.23882
163	Front Brakes	22	1405.8
164	ML Mountain Front Wheel	11	1379.565
165	Women's Tights_ M	30	1349.82
166	LL Mountain Handlebars	51	1285.29693
167	Short-Sleeve Classic Jersey_ S	37	1198.578
168	Half-Finger Gloves_ S	82	1172.59982
169	HL Road Seat/Saddle	36	1137.024
170	Cable Lock	73	1095
171	Racing Socks_ L	202	1050.84288
172	ML Mountain Frame - Black_ 40	5	1046.28
173	HL Bottom Bracket	14	1020.516
174	LL Road Handlebars	38	964.4925
175	HL Headset	12	898.056
176	LL Mountain Front Wheel	24	874.728
177	Rear Derailleur	12	874.512
178	Minipump	72	863.568

179	ML Mountain Seat/Saddle	35	807.09811
180	LL Fork	9	800.388
181	HL Mountain Seat/Saddle	24	758.016
182	Women's Mountain Shorts_ M	18	755.892
183	Half-Finger Gloves_ L	50	712.6611
184	LL Mountain Rear Wheel	12	631.764
185	Racing Socks_ M	116	622.29499
186	ML Mountain Pedal	13	484.302
187	LL Mountain Frame - Silver_ 48	3	475.29
188	LL Bottom Bracket	14	453.516
189	Rear Brakes	7	447.3
190	LL Mountain Pedal	17	412.998
191	LL Mountain Seat/Saddle	20	325.44
192	Full-Finger Gloves_ S	14	319.116
193	ML Crankset	2	307.788
194	Bike Wash - Dissolver	61	287.45292
195	Mountain Bike Socks_ M	39	222.3
196	Water Bottle - 30 oz.	68	201.5421
197	Chain	15	182.16
198	LL Headset	5	102.6
199	Patch Kit/8 Patches	18	24.732
200	Mountain Bike Socks_ L	3	17.1