

```

>>>
>>> -- For the order clerks (O_CLERK) Clerk#000000522, Clerk#000000154,
find the
>>> -- total number of ordered parts per customer (O_CUSTKEY), per
supplier
>>> -- (L_SUPPKEY), per customer and supplier (O_CUSTKEY, L_SUPPKEY),
and the total
>>> -- number of ordered parts.
>>> SELECT O_CUSTKEY, L_SUPPKEY, COUNT(*)
FROM LINEITEM JOIN ORDERS
ON LINEITEM.L_ORDERKEY = ORDERS.O_ORDERKEY
WHERE O_CLERK IN ('Clerk#000000522', 'Clerk#000000154')
GROUP BY O_CUSTKEY, L_SUPPKEY WITH CUBE;
WARNING: Hive-on-MR is deprecated in Hive 2 and may not be available in
the future versions. Consider using a different execution engine (i.e.
spark, tez) or using Hive 1.X releases.
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/usr/share/apache-hive-2.1.1-
bin/lib/log4j-slf4j-impl-
2.4.1.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/usr/share/hadoop-
2.7.3/share/hadoop/common/lib/slf4j-log4j12-
1.7.10.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an
explanation.
SLF4J: Actual binding is of type
[org.apache.logging.slf4j.Log4jLoggerFactory]
2021-11-20 22:27:59 Starting to launch local task to process map join;
maximum memory = 477626368
2021-11-20 22:28:00 Dump the side-table for tag: 1 with group count: 2
into file: file:/tmp/hive/hdfs/c8a05483-0abf-4c99-b228-
6f0d5cfd9b1a/hive_2021-11-20_22-27-52_880_2496562817506610956-2/-local-
10005/HashTable-Stage-2/MapJoin-mapfile01--.hashtable
2021-11-20 22:28:00 Uploaded 1 File to: file:/tmp/hive/hdfs/c8a05483-
0abf-4c99-b228-6f0d5cfd9b1a/hive_2021-11-20_22-27-
52_880_2496562817506610956-2/-local-10005/HashTable-Stage-2/MapJoin-
mapfile01--.hashtable (310 bytes)
2021-11-20 22:28:00 End of local task; Time Taken: 1.508 sec.
+-----+-----+-----+
| o_custkey | l_suppkey | c2 |
+-----+-----+-----+
| NULL      | NULL      | 4   |
| 7         | NULL      | 4   |
| NULL      | 1         | 4   |
| 7         | 1         | 4   |
+-----+-----+-----+
4 rows selected (34.23 seconds)
>>>
>>> -- For the parts with the keys (L_PARTKEY) 7, 8, 9 find the largest
discount applied
>>> -- (L_DISCOUNT) per part key (L_PARTKEY) and per part key and
supplier key
>>> -- (L_PARTKEY, L_SUPPKEY) and the largest discount applied at all.
>>>
>>> SELECT L_PARTKEY, L_SUPPKEY, MAX(L_DISCOUNT)
FROM LINEITEM
WHERE L_PARTKEY IN (7, 8, 9)
GROUP BY L_PARTKEY, L_SUPPKEY WITH ROLLUP;

```

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l_partkey	l_suppkey	c2
NULL	NULL	0.10
7	NULL	0.10
7	1	0.10
8	NULL	0.10
8	1	0.10
9	NULL	0.10
9	1	0.10

7 rows selected (24.58 seconds)

>>>

```
>>> -- Find the smallest price (L_EXTENDEDPRICE) per order year
(O_ORDERDATE), and
>>> -- order clerk (O_CLERK).
```

>>>

```
>>> SELECT O_CLERK, substr(O_ORDERDATE,1,4), MIN(L_EXTENDEDPRICE)
FROM ORDERS JOIN LINEITEM
ON LINEITEM.L_ORDERKEY = ORDERS.O_ORDERKEY
GROUP BY O_CLERK, substr(O_ORDERDATE,1,4)
GROUPING SETS ( (O_CLERK), (substr(O_ORDERDATE,1,4)) );
```

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SLF4J: Class path contains multiple SLF4J bindings.

SLF4J: Found binding in [jar:file:/usr/share/apache-hive-2.1.1-bin/lib/log4j-slf4j-impl-

2.4.1.jar!/org/slf4j/impl/StaticLoggerBinder.class]

SLF4J: Found binding in [jar:file:/usr/share/hadoop-2.7.3/share/hadoop/common/lib/slf4j-log4j12-

1.7.10.jar!/org/slf4j/impl/StaticLoggerBinder.class]

SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.

SLF4J: Actual binding is of type

[org.apache.logging.slf4j.Log4jLoggerFactory]

2021-11-20 22:28:55 Starting to launch local task to process map join;
maximum memory = 477626368

2021-11-20 22:28:56 Dump the side-table for tag: 0 with group count:
150 into file: file:/tmp/hive/hdfs/c8a05483-0abf-4c99-b228-

6f0d5cfd5b1a/hive_2021-11-20_22-28-51_744_2279711249266368636-2/-local-
10005/HashTable-Stage-2/MapJoin-mapfile10--.hashtable

2021-11-20 22:28:57 Uploaded 1 File to: file:/tmp/hive/hdfs/c8a05483-
0abf-4c99-b228-6f0d5cfd5b1a/hive_2021-11-20_22-28-

51_744_2279711249266368636-2/-local-10005/HashTable-Stage-2/MapJoin-
mapfile10--.hashtable (6407 bytes)

2021-11-20 22:28:57 End of local task; Time Taken: 1.409 sec.

o_clerk	c1	c2
NULL	1992	914.01
NULL	1993	901.00
NULL	1994	911.01
NULL	1995	901.00
NULL	1996	913.01

NULL	1997	914.01	
NULL	1998	909.00	
Clerk#000000004	NULL	19932.00	
Clerk#000000025	NULL	7232.00	
Clerk#000000036	NULL	11856.13	
Clerk#000000041	NULL	14544.00	
Clerk#000000048	NULL	909.00	
Clerk#000000049	NULL	9180.10	
Clerk#000000058	NULL	33818.37	
Clerk#000000062	NULL	1838.02	
Clerk#000000086	NULL	1818.00	
Clerk#000000088	NULL	8181.00	
Clerk#000000090	NULL	5520.12	
Clerk#000000094	NULL	5412.00	
Clerk#000000103	NULL	5472.06	
Clerk#000000105	NULL	20108.22	
Clerk#000000109	NULL	17252.00	
Clerk#000000124	NULL	27270.00	
Clerk#000000145	NULL	42958.47	
Clerk#000000154	NULL	12698.00	
Clerk#000000155	NULL	7216.00	
Clerk#000000158	NULL	2712.00	
Clerk#000000167	NULL	7288.08	
Clerk#000000177	NULL	2742.03	
Clerk#000000179	NULL	7224.00	
Clerk#000000193	NULL	7328.08	
Clerk#000000196	NULL	16254.00	
Clerk#000000204	NULL	28520.62	
Clerk#000000206	NULL	10010.11	
Clerk#000000209	NULL	20723.00	
Clerk#000000216	NULL	5454.00	
Clerk#000000223	NULL	5502.06	
Clerk#000000230	NULL	9999.00	
Clerk#000000239	NULL	12740.14	
Clerk#000000256	NULL	12782.14	
Clerk#000000259	NULL	6391.07	
Clerk#000000271	NULL	2721.00	
Clerk#000000281	NULL	21137.23	
Clerk#000000289	NULL	18921.00	
Clerk#000000292	NULL	2712.00	
Clerk#000000293	NULL	1816.00	
Clerk#000000294	NULL	20064.22	
Clerk#000000295	NULL	913.01	
Clerk#000000301	NULL	23712.26	
Clerk#000000305	NULL	9933.00	
Clerk#000000310	NULL	18140.00	
Clerk#000000314	NULL	17461.19	
Clerk#000000322	NULL	918.01	
Clerk#000000330	NULL	2712.00	
Clerk#000000331	NULL	13725.15	
Clerk#000000342	NULL	19998.00	
Clerk#000000352	NULL	919.01	
Clerk#000000356	NULL	36280.00	
Clerk#000000358	NULL	38304.42	
Clerk#000000359	NULL	8145.00	
Clerk#000000376	NULL	13515.00	
Clerk#000000378	NULL	1838.02	
Clerk#000000379	NULL	4600.10	

Clerk#000000385	NULL	34618.38
Clerk#000000392	NULL	13650.15
Clerk#000000395	NULL	20999.23
Clerk#000000404	NULL	9110.10
Clerk#000000405	NULL	914.01
Clerk#000000409	NULL	4570.05
Clerk#000000419	NULL	10968.12
Clerk#000000435	NULL	1840.04
Clerk#000000440	NULL	2703.00
Clerk#000000446	NULL	14656.16
Clerk#000000448	NULL	911.01
Clerk#000000449	NULL	8208.09
Clerk#000000456	NULL	35607.39
Clerk#000000466	NULL	4545.00
Clerk#000000468	NULL	1828.02
Clerk#000000470	NULL	4580.05
Clerk#000000483	NULL	1840.04
Clerk#000000488	NULL	16470.18
Clerk#000000489	NULL	27420.30
Clerk#000000498	NULL	1824.02
Clerk#000000499	NULL	28086.00
Clerk#000000504	NULL	25480.28
Clerk#000000511	NULL	6377.07
Clerk#000000520	NULL	901.00
Clerk#000000522	NULL	18140.00
Clerk#000000532	NULL	28272.31
Clerk#000000537	NULL	3668.04
Clerk#000000545	NULL	9100.10
Clerk#000000547	NULL	3612.00
Clerk#000000551	NULL	29931.00
Clerk#000000562	NULL	2703.00
Clerk#000000573	NULL	11960.26
Clerk#000000577	NULL	12656.00
Clerk#000000596	NULL	13605.00
Clerk#000000597	NULL	3652.04
Clerk#000000600	NULL	6419.07
Clerk#000000601	NULL	2760.06
+-----+-----+-----+		
o_clerk	c1	c2
+-----+-----+-----+		
Clerk#000000604	NULL	40392.44
Clerk#000000616	NULL	1810.00
Clerk#000000625	NULL	3676.04
Clerk#000000628	NULL	2754.03
Clerk#000000629	NULL	10109.11
Clerk#000000632	NULL	18921.00
Clerk#000000642	NULL	3624.00
Clerk#000000643	NULL	901.00
Clerk#000000648	NULL	14512.00
Clerk#000000659	NULL	23894.26
Clerk#000000661	NULL	19089.00
Clerk#000000674	NULL	24678.27
Clerk#000000680	NULL	6405.07
Clerk#000000700	NULL	9110.10
Clerk#000000711	NULL	10848.00
Clerk#000000731	NULL	24786.27
Clerk#000000735	NULL	1826.02
Clerk#000000738	NULL	9999.00

Clerk#000000743	NULL	28272.31
Clerk#000000756	NULL	1824.02
Clerk#000000768	NULL	914.01
Clerk#000000796	NULL	10098.11
Clerk#000000803	NULL	2709.00
Clerk#000000804	NULL	11856.13
Clerk#000000814	NULL	1812.00
Clerk#000000834	NULL	19998.00
Clerk#000000841	NULL	2703.00
Clerk#000000844	NULL	4595.05
Clerk#000000859	NULL	917.01
Clerk#000000862	NULL	4585.05
Clerk#000000880	NULL	34618.38
Clerk#000000890	NULL	21888.24
Clerk#000000919	NULL	17423.19
Clerk#000000923	NULL	17366.19
Clerk#000000925	NULL	13665.15
Clerk#000000932	NULL	15419.00
Clerk#000000934	NULL	10087.11
Clerk#000000944	NULL	3620.00
Clerk#000000951	NULL	7256.00
Clerk#000000955	NULL	1806.00
Clerk#000000959	NULL	8235.09
Clerk#000000960	NULL	23894.26
Clerk#000000969	NULL	911.01
Clerk#000000973	NULL	4565.05
Clerk#000000976	NULL	2757.03
Clerk#000000985	NULL	916.01
Clerk#000000988	NULL	13515.00
Clerk#000000992	NULL	8145.00

+-----+-----+-----+---+
148 rows selected (26.305 seconds)

>>>

>>> -- For each part list its key (PS_PARTKEY), all its available
quantities (PS_AVAILQTY),
>>> -- the smallest available quantity, and the average available
quantity. Consider only the
>>> -- parts with the keys 5 and 15.
>>>

```
>>> SELECT PS_PARTKEY, PS_AVAILQTY, MIN(PS_AVAILQTY) OVER (PARTITION BY
PS_PARTKEY),
AVG(PS_AVAILQTY) OVER (PARTITION BY PS_PARTKEY)
FROM PARTSUPP
WHERE PS_PARTKEY IN (5,15);
```

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the future versions. Consider using a different execution engine (i.e.
spark, tez) or using Hive 1.X releases.

ps_partkey	ps_availqty	c2	c3
5	6925	1329	5410.5000
5	1329	1329	5410.5000
5	9653	1329	5410.5000
5	3735	1329	5410.5000
15	5255	3316	4738.5000
15	3316	3316	4738.5000
15	3336	3316	4738.5000
15	7047	3316	4738.5000

```

+-----+-----+-----+-----+
8 rows selected (24.654 seconds)
>>>
>>> -- For each part list its key (PS_PARTKEY) and all its available
quantities
>>> -- (PS_AVAILQTY) sorted in descending order and a rank (position
number in an
>>> -- ascending order) of each quantity. Consider only the parts with
the keys 10 and 20. Use
>>> -- an analytic function ROW_NUMBER().
>>>

```

```

>>> SELECT PS_PARTKEY, PS_AVAILQTY, ROW_NUMBER() OVER (PARTITION BY
PS_PARTKEY
ORDER BY PS_AVAILQTY DESC)
FROM PARTSUPP
WHERE PS_PARTKEY IN (10,20);
WARNING: Hive-on-MR is deprecated in Hive 2 and may not be available in
the future versions. Consider using a different execution engine (i.e.
spark, tez) or using Hive 1.X releases.

```

```

+-----+-----+-----+
| ps_partkey | ps_availqty | c2 |
+-----+-----+-----+
| 10         | 5691        | 1  |
| 10         | 3335        | 2  |
| 10         | 2952        | 3  |
| 10         | 841         | 4  |
| 20         | 5905        | 1  |
| 20         | 4271        | 2  |
| 20         | 2927        | 3  |
| 20         | 2723        | 4  |
+-----+-----+-----+

```

```

8 rows selected (24.306 seconds)
>>>
>>> -- For each part list its key (PS_PARTKEY), its available quantity,
and an average available
>>> -- quantity (PS_AVAILQTY) of the current quantity and all previous
quantities in the
>>> -- ascending order of available quantities. Consider only the parts
with the keys 15 and
>>> -- 25. Use ROWS UNBOUNDED PRECEDING sub-clause within PARTITION BY
>>> -- clause.
>>>

```

```

>>> SELECT PS_PARTKEY, PS_AVAILQTY, AVG(PS_AVAILQTY) OVER (PARTITION BY
PS_PARTKEY
ORDER BY PS_AVAILQTY
ROWS UNBOUNDED PRECEDING)
FROM PARTSUPP
WHERE PS_PARTKEY IN (15,25);
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the future versions. Consider using a different execution engine (i.e.
spark, tez) or using Hive 1.X releases.

```

```

+-----+-----+-----+
| ps_partkey | ps_availqty | c2 |
+-----+-----+-----+
| 15         | 3316        | 3316.0000 |
| 15         | 3336        | 3326.0000 |
| 15         | 5255        | 3969.0000 |
| 15         | 7047        | 4738.5000 |

```

```
+-----+-----+-----+---+
4 rows selected (24.314 seconds)
>>>
>>> ! record
```