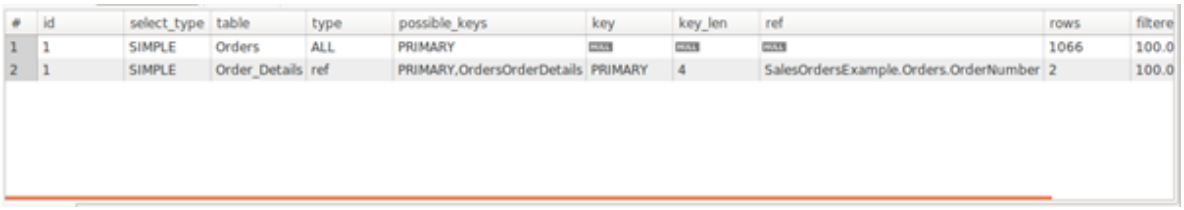
Subtask 10.2.2

```
Analyze table Orders;
Analyze table Order_Details;
EXPLAIN EXTENDED
SELECT * FROM Orders NATURAL JOIN Order_Details WHERE QuotedPrice > 1000 AND
OrderDate BETWEEN '2012-10-01' AND '2012-10-31';
```



#	id	select_type	table	type	possible_keys	key	key_len	ref	rows	filtere
1	1	SIMPLE	Orders	ALL	PRIMARY	NULL	NULL	NULL	1066	100.0
2	1	SIMPLE	Order_Details	ref	PRIMARY,OrdersOrderDetails	PRIMARY	4	SalesOrdersExample.Orders.OrderNumber	2	100.0

Did anything change?

The number of in the rows column is different. The rows column is the number of rows the DBMS believes it has to examine. This is an estimate based on statistics, not actual values.

Find out what ANALYZE does and document your answer.

DBMSs decide their access strategies by statistics about the data stored. Analyze uses the following to recalculate the stats:

· Number of tuples in relation - Databases store tuples in blocks. Blocks are storage containers for database tuples.

· Blocking factor - How many tuples are stored in a single block. If a table has 45 rows and the blocking factor is 15, the entire table can fit into three blocks.

· Number of distinct values - How many different values an attribute has.

· Selectivity of attribute (column) - Directly connected to the number of distinct values - the more different values an attribute has, the more selective it is.

The blocking factor does not change over time, it has to be specified when the table is created. All other factors, however, will change over time. The DBMS will not update these statistics automatically. Having outdated statistics might lead to a wrong choice of access strategy.