

Task 3 (3 marks)

An objective of this task is to interpret a query processing plan created by a query optimizer and to draw a syntax tree of a query processing plan

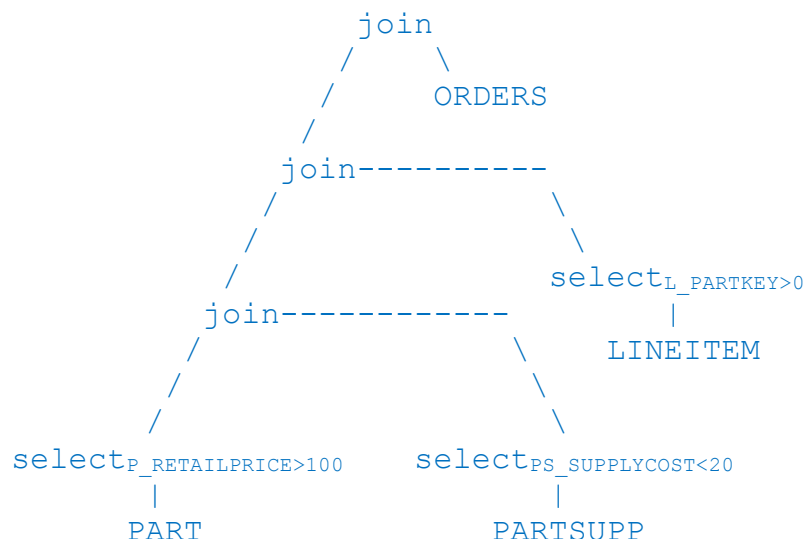
Consider the following fragment of query processing plan.

Id	Operation	Name	Rows	Bytes	TempSpc	Cost (%CPU)	Time
0	SELECT STATEMENT		134K	63M		33989 (1)	00:00:02
* 1	HASH JOIN		134K	63M	51M	33989 (1)	00:00:02
* 2	HASH JOIN		135K	50M	1232K	26145 (1)	00:00:02
* 3	HASH JOIN		4565	1172K		2258 (1)	00:00:01
* 4	TABLE ACCESS FULL	PARTSUPP	4565	633K		1857 (1)	00:00:01
* 5	TABLE ACCESS FULL	PART	60000	7089K		401 (1)	00:00:01
* 6	TABLE ACCESS FULL	LINEITEM	1800K	214M		12160 (1)	00:00:01
7	TABLE ACCESS FULL	ORDERS	450K	46M		2697 (1)	00:00:01

Predicate Information (identified by operation id):

- 1 - access("L_ORDERKEY"="O_ORDERKEY")
- 2 - access("LINEITEM"."L_PARTKEY"="P_PARTKEY")
- 3 - access("PART"."P_PARTKEY"="PS_PARTKEY")
- 4 - filter("PARTSUPP"."PS_SUPPLYCOST"<20)
- 5 - filter("PART"."P_RETAILPRICE">100)
- 6 - filter("LINEITEM"."L_PARTKEY">=0)

Find and draw a syntax tree of the query processing plan listed above. To draw a syntax tree, use the relational algebra operations explained during the lecture classes. Assume that the operations HASH JOIN used in a query processing plan is the same as the operations of join in the relational algebra. Please remember, that you must create a syntax tree with the relational algebra operations explained to you during the lecture classes and NOT with the implementations of such operations by Oracle database system. Save a drawing of a syntax tree in a file solution3.pdf.



Deliverables

A file solution3.pdf with a drawing of syntax tree of the given query processing plan. A syntax tree must use the relational algebra operations explained to you during the lecture classes. You are allowed to use any line drawing tool to draw a syntax tree. A scanned/photographed copy of a neat hand drawing is also acceptable.