Query Optimization Exercise 3

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1 Exercise 1

Selections:
*Select * from day d where d.weather = 'sunny'*

Assuming that we're in the Ecuador the and the two possible options would be sunny or cloudy. We'll get far more than the 50% of the sunny tuples.

Joins:
*Select * from car c, Ferrari f where c.color = f.color*

Most of the Ferrari are red therefore we're going to get a super high-selectivity.

2 Exercise 2

*Select * from* $interior_color cross join exterior_color, car car, company comp where car.$

This execution plan will generate all possible combinations of interior and exterior colors for all car models from all companies. Since we want to generate a result that contains all possible combinations of different values it makes sense to use a cross product. If instead of using a bushy tree we would use a left tree in the worst case scenario the cost function would be the same, but in that case it could not be parallelled.

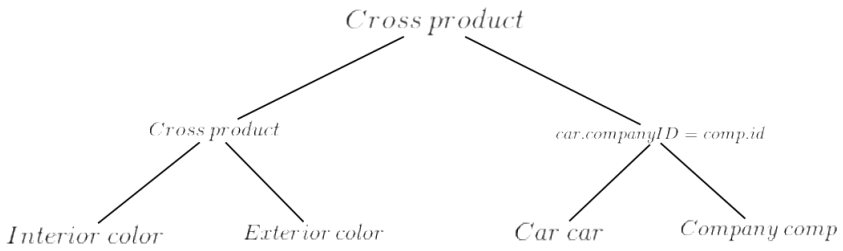

Figure 1: The optimal bushy tree with a cross product