Query Optimization

Due 2008-01-29

1. Implement a program that measures the physical characteristics (in particular bandwidth and seek time) of a hard disk. Measure the values for your own hard disk. (5)

2. Given these values, determine the break even point where a scan becomes cheaper than an index lookup. (3)

3. We assume the query optimizer has underestimated the costs of a scan by a factor $\alpha$ ($\alpha > 1$) and overestimated the costs of an index lookup by a factor $\beta$ ($\beta < 1$). What is the maximum error caused by this misestimation? (2)