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Explain the impact of normalization on performance (speed of locating data).

Prior to normalization, data exists in a very large table. As data gets normalized, all the redundant information is removed and data is placed in other tables. Each table will then contain a unique entry for each data. A normalized database will have more indexes. As there is no redundancy, the index table will have fewer rows, which effectively increase the speed of database operations.

Redesign the your relations so the above requirement is achieved. In your own words (really your own not your friends) explain the impact of your new design.

Since there is no redundancy, normalized databases need less storage space and maintenance. However, when large queries are used to access data, many joins will be introduced. These joins will decrease performance. The loss of performance from joins, however, is less than the gain which was a result of normalization.