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III. Indexes

For the workload given in Part I, several queries have been showing poor performance (i.e., increasing response times). Your task is to improve the performance of this workload as much as possible by recommending two indexes that should be defined on the tables. What two indexes would you recommend? For each index, state:

The attribute(s) the index is defined on.

Properties of the index (e.g., type of index, clustered/unclustered, etc.)

Which queries (q1 - q12) you think this index will help, and why.

The two attributes I would recommend indexes on are PersonID from the Person table and MovieID from Movie table because they are used multiple times in almost all the queries. The type of index I would use would be Hash and would change the tables and implement clustered indexes to consume fewer resources and improve query performance.

The queries it would affect are:

Q1a, 1b, 2, 3a, 3b, 4b, 6, 8, 10, 11a, 11b

Because they all include references to PersonID and MovieID. They would all have increased performance because of the clustered indexes implemented.