Group Assignment.

Given a relational database schema:
$R_1, R_2, \ldots R_k$ | There are enough number of join attributes so that all relations can be joined $R_1 \bowtie R_2 \bowtie R_3 \bowtie \ldots \bowtie R_{k-1} \bowtie R_k$ (Example)
At the minimum → is there.

① Given a set of queries Q as a batch. [1, >1, >10, 10^3 can be large]
② Now, this batch of queries Q has to be executed together

A. What are the different issues or considerations for a batch of queries Q to be executed together?

17:45

B. Come up with three sets of Queries

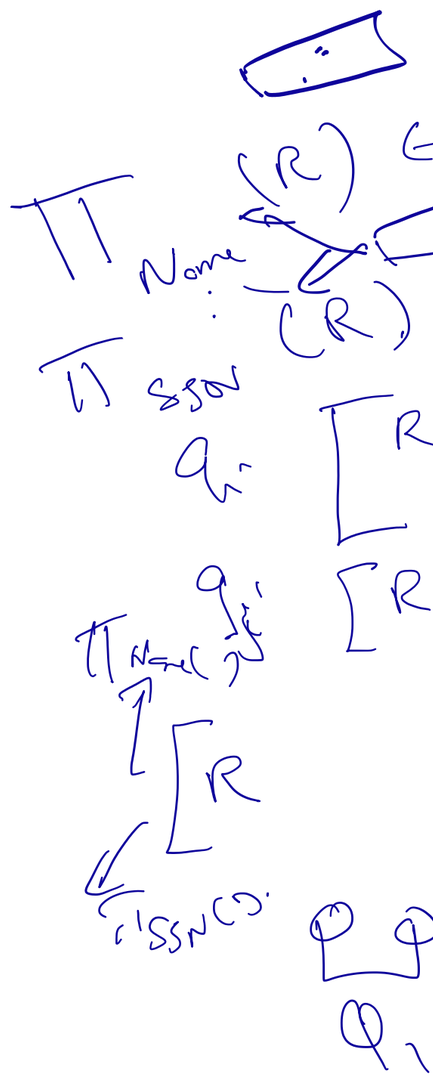
$Q_1 \Rightarrow$ 2 queries
$Q_2 \Rightarrow$ 5 queries
$Q_3 \Rightarrow$ 10 queries

On the company database

18:00 hrs

$q_i \cap q_j = \phi$

C. (i) q_i, q_j two queries in the same set of queries
relational operator ⟨Op⟩ in q_i, in q_j on
Same set of relations among (σ, Π)
binary $(\bowtie, *, \cup, \cap)$
⟨Op⟩ in q_i & ⟨Op⟩ in q_j are overlapping if
A row of R in q_i is processed by ⟨Op⟩ is the same row of R in q_j in ⟨Op⟩
Find such related operators



(ii) Reduce Number of times R is accessed to process all queries in the query set.

(6:20 PM)

D. Come up with a mechanism to select indices on relations for a batch of queries Q. That is, these indices must help at least one or more queries to execute faster.

index = [queries]

18:30

E. ⓐ What is the best case scenario where there is highest degree of share of query results (Q) for worst case
Sample queries ⓑ what is the worst case scenario (Q) for worst case
For no two queries q_i & q_j, the result is exactly the same.

F: 2-4 sentences on what you learnt from the group assignment & how do (C & D) relate to your answer in A.

19:00