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Question 2B

Step 1: Make all FDs singleton on RHS

Step 2: Remove all trivial FDs (retain non-trivial FDs)

Step 3: Initialize an empty list with variable name *extraneous_free_fd*

Step 4: For each non-trivial FD (Remove extraneous attributes using the following steps)

Step 4-1: If $\text{length}(\text{LHS}) \geq 2$

Step 4-1-1: Get all possible subset combinations of LHS up to $\text{length}(\text{LHS}) - 1$

(i.e. if $\text{LHS} = \{A, B, C\}$, then set of possible subset combinations = $\{\{A\}, \{B\}, \{C\}, \{A,B\}, \{A,C\}, \{B,C\}\}$)

Step 4-1-2: For each subset combination

Step 4-1-2-1: Compute closure C of subset combination

Step 4-1-2-2: If closure C contains all LHS computed in Step 3-1, append subset combination to *extraneous_free_fd[i]*

Step 4-1-3: If *extraneous_free_fd[i]* is empty, means all attributes of LHS are non-extraneous. Copy non-trivial FD to *extraneous_free_fd*

Step 4-2: Else, copy non-trivial FD to *extraneous_free_fd*

Step 5: Get cartesian product of *extraneous_free_fd* to get all possible permutation sets of FD

Step 6: Initialize an empty list with variable name *redundant_free_fd*

Step 7: For each permutation (Remove redundant FD using the following steps)

Step 7-1: For each FD in this permutation list

Step 7-1-1: Remove FD F from list

Step 7-1-2: Compute closure C of F (LHS of F)

Step 7-1-3: If RHS of F is not in closure C, means F is not a redundant FD. Add F to *redundant_free_fd*

Question 2C

I tried so hard and got so far...