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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 length(LHS) >= 2
  - **Step 4-1-1:** Get all possible subset combinations of LHS up to length(LHS) - 1 (i.e. if 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

Step 1: Find all closures of (R, FD), resulting in a new set of FDs
Step 2: Find minimal cover of new set of FDs