Requirement: Please read the below question and provide a detailed answer to it. Submit your answer in the pdf format.

The above design has two identifying relationships for Result. When we change the design to the model below, what else do we need to do to ensure the business rules can still be maintained? Please elaborate.

Answer:

Point 1: As we can see in the original design the entity set "result" has 3 primary keys, which means business wants the table result to be unique on all three attributes ,which implies that there cannot be a patient with same testid for same date. To maintain this business rule with the new design we should make sure that the combination of original key attributes should be unique. To keep the data integrity, unique indexes can be created on the original combination.

Point 2: From the original design we can see the entity set "result" has foreign keys which suggests business wants to keep their "result" entity in check with other 2 tables. For this we need to setup referential integrity for the original key attributes, that means the values in the related parent entities should be good valid values

Point 3: As suggested in Point 2 when we make referential integrity for the entity set "result" we should make sure irrespective of the time, the original key attributes patient, testid which where FK before should be entered compulsorily in the new design.