SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

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DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY

COURSE NAME : 23CST207 - DATABASE MANAGEMENT SYSTEMS

II YEAR / IV SEMESTER

Unit 2- Relational Model

Topic : Associated with Decomposition

Associated with Decomposition

- There are two properties associated with decomposition

1. Loss-less join or non loss decomposition

2. Dependency Preservation

- Loss-less join or non loss decomposition

    1. When all information found in the original database is preserved after decomposition , we call it as loss less (or) non less decomposition

Cont..

- Dependency Preservation

2. This is a property in which the constraints on the original table can be maintained by simply enforcing some constraints on each of the smaller relations

Loss-less join or non loss Decomposition

- The lossless join can be defined using following three conditions

1. Union   att(R1) ∪ att(R2) = R

2. Intersection   att(R1) ∩ att(R2) ≠ φ

3. Common attribute   att(R1) ∩ att(R2) -> att(R1)

                       att(R1) ∩ att(R2) -> att(R2)

Problem

- Consider the following relational R(a,b,c) and FDs

 a-> bc , is the decomposition of r into R1(a,b,c) , R2(a,d) .

Check if the decomposition is lossless join or not

Thank you