Vaishnavi · A · Patil
B59

No. : 1
Date :

Assignment – 2

Title :- Conversion of E-R diagram in Relational Schemas

Problem statement :- Convert the following E-R diagrams into relational schemas.

Primary objective :- The primary objective for converting ER diagrams into relational schemas is to represent the data model in a way that can be implemented in relationships.

Secondary Objective :- The secondary objective for converting ER diagrams into relational schemas is to minimize data redundancy, & represent relationship using keys · etc.

Theory :-

Entity sets and relationship sets can be expressed uniformly as relation schemas that represent the contents of database. A database which conforms to an E-R diagram can be represented by collection of schemas for each entity set and relationship sets these

unique schema that is assigned the name of corresponding sets. Each schema has number of coloumns which have unique nam

- Entity types become table
In given ER diagram lecture, student, subject course forms individual table.

- All single valued attribute become a coloumn for table.
In student entity student_name & student_Id form coloumn of student table similarly course_name & course_id form coloumn of couese table.

- A key attribute of entity type represented by seprate table.
In the student hobby, course_Id, student_id, lecture_id are key attribute.

- Multivated attribute is represented by seprate table
In student table hobby, multivated attribute is not possible to represent multiple values in single coloumn of student table. so we create composite attributes. It can have address, street.

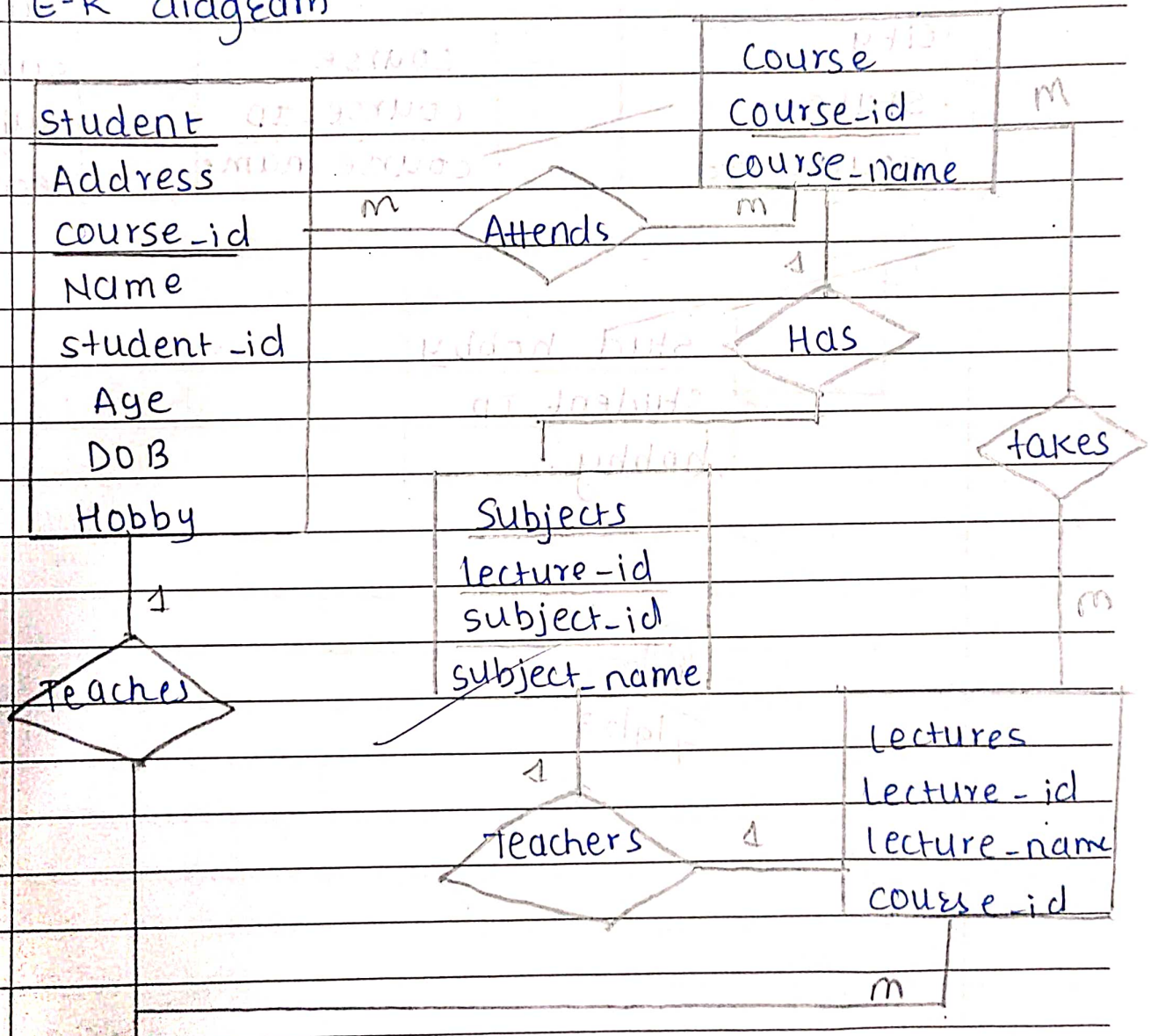
No. : 2
Date :

B 59

No. : 3
Date :

- Derived attributes are not considered in table. In student table, age is not derived attribute. It can be calculated by any pt of time by calculating the difference between current data and date of birth.

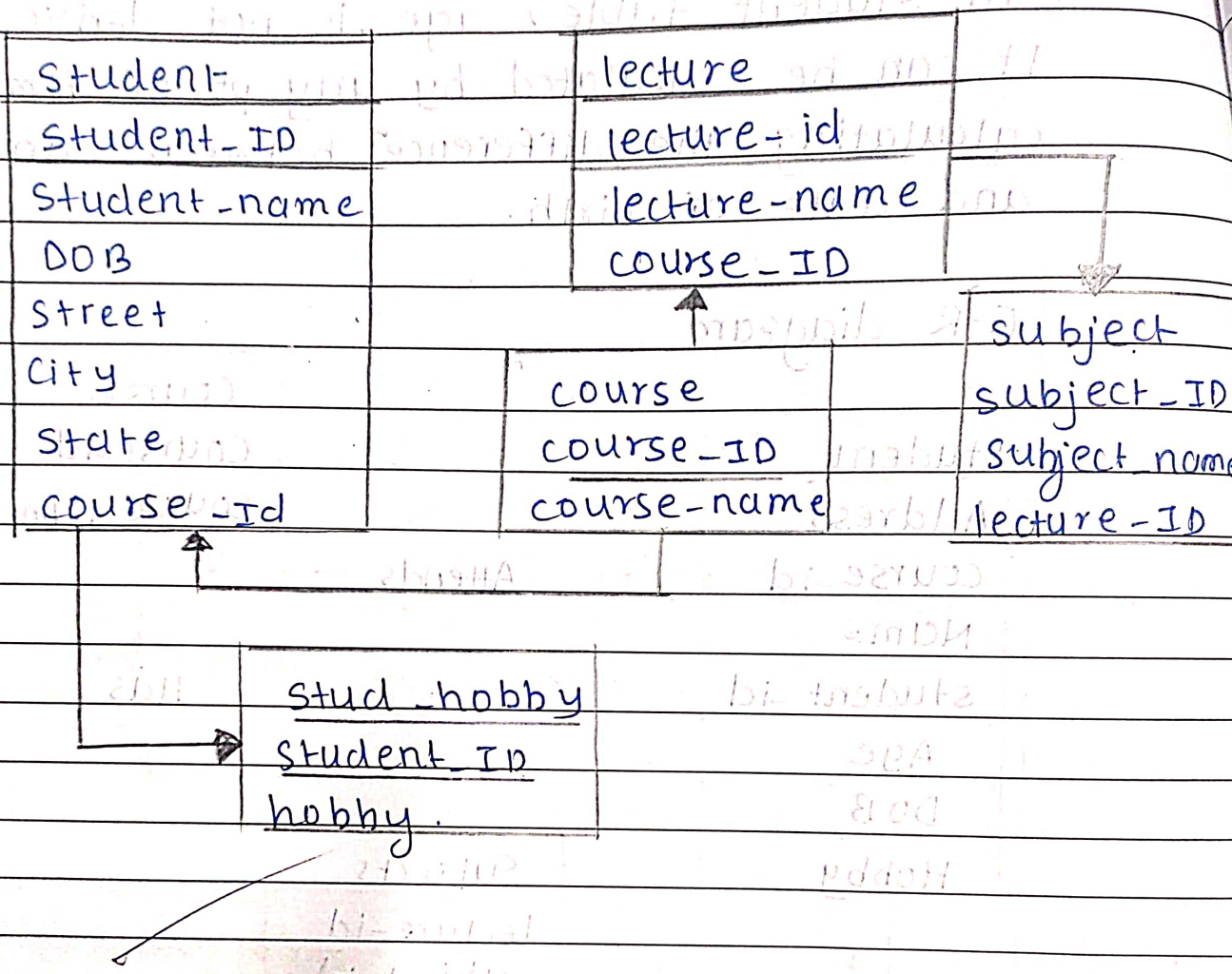
E-R diagram



No. :
Date :

B59

Relational schema



7/9/23

No. :
Date :

B5g

* Rules

1 A many-to many relationship sets is represented as a schema with attributes for the primary keys of two participating entity sets and any descriptive attributes of relation set.

2 A strong entity set reduces the schema with same attributes.

3 Weak entity set becomes table that include a coloumn for primary key of identifying strong entity set.

7/9/23.