

DISL Case Study -

Draw an ER diagram for a School Management System based on the following information.

- You have been asked to implement a database for a school management system (SMS). -
- This primarily consists of maintaining students' information like name, address, date of birth, roll number, department, and so on.
- Details about the school to be stored includes school's name, location. Although it is unlikely that there would be two schools at the same place with same name, but our SMS would like to accomodate this possibility.
- Faculty members works in the school. They teaches the students. A faculty member normally teaches multiple students at a time. Also, he can teach multiple courses to the students.

Steps to draw ER Diagram-

1. Identify Entity Sets and Their Attributes
2. Draw Entities
3. Identify Relationships
4. Draw Relationships
5. Identify Mapping Cardinalities and represent them

Step 2: Draw Entities

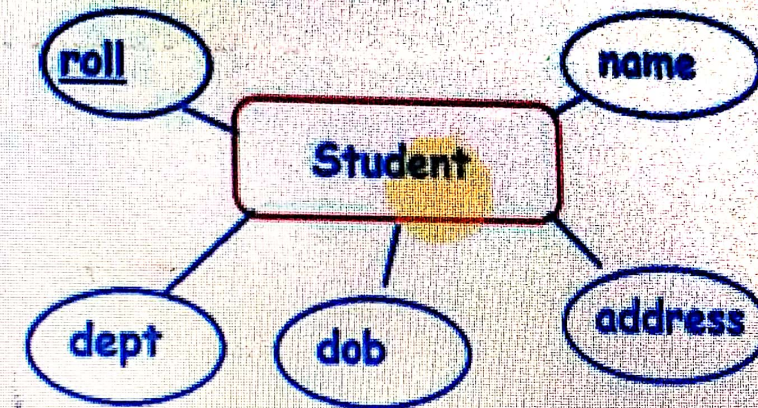
5. Identify Mapping Cardinalities and represent them

Step 1: Entities

- | | | |
|-----------|---------|--|
| Entity 1. | Student | - name, address, dob, <u>roll</u> , dept |
| Entity 2. | School | - name, location, <u>sid</u> |
| Entity 3. | Faculty | - name, address, doj, <u>f_id</u> |
| Entity 4. | Course | - <u>id</u> , title, credits |

Attributes

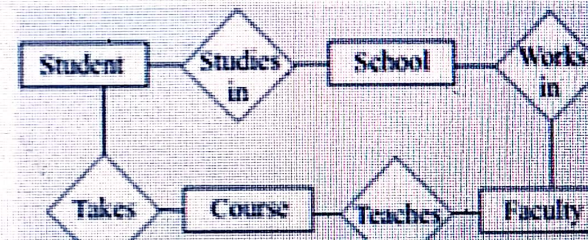
Step 2: Draw Entities



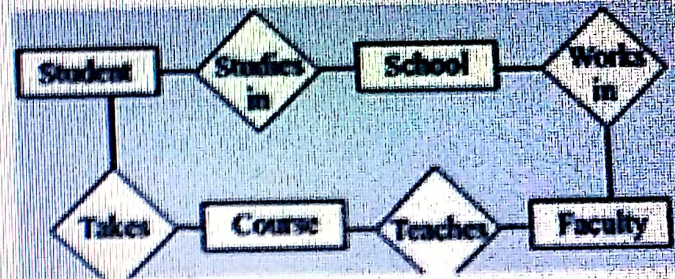
Step 3: Identify Relationships

- Student & School : Student Studies in School
- Faculty & School : Faculty Works in School
- Faculty & Course : Faculty teaches Courses
- Student & Course : Student takes Courses

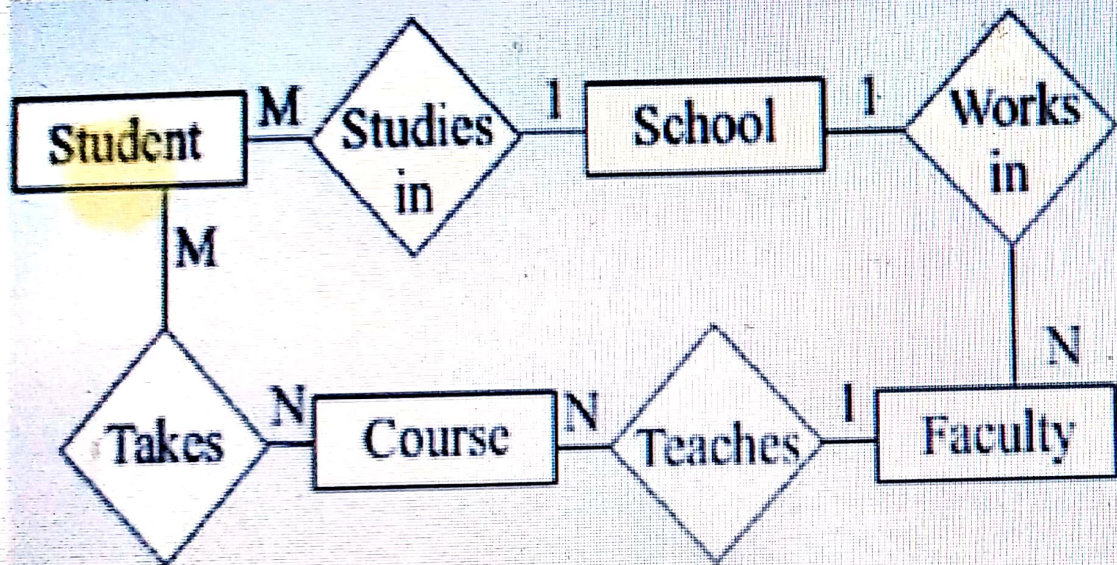
Step 4: Draw Relationships



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1. Student & School : Student Studies in School
 2. Faculty & School : Faculty Works in School
 3. Faculty & Course : Faculty teaches Courses
 4. Student & Course : Student takes Courses



Step 5: Identify Mapping Cardinalities and Represent



Final E-R Model