

# COLLEGE SLOT BOOKING AND MANAGEMENT

## DATABASE

Aim: To design ER Diagram for college slot management system  
 Title: College Slot Booking and management Database

Tools required: <https://draw.io>

Steps involved in creating ER Diagram

Step 1: Problem understanding and requirement analysis

- ★ Analyze real world application: college slot booking and management
- ★ Understanding domain: STUDENT, DEPARTMENT, COURSE, SLOT

Step 2: IDENTIFY MAJOR ENTITIES

★ STUDENT

★ DEPARTMENT

★ COURSE

★ SLOT

Step 3: Entity Attributes

Student: student\_id (PK), name, email, academic year

Department: dept\_id (PK), dept name

Course: course\_id (PK), course\_name, credits\_offered  
 prerequisites, course\_type

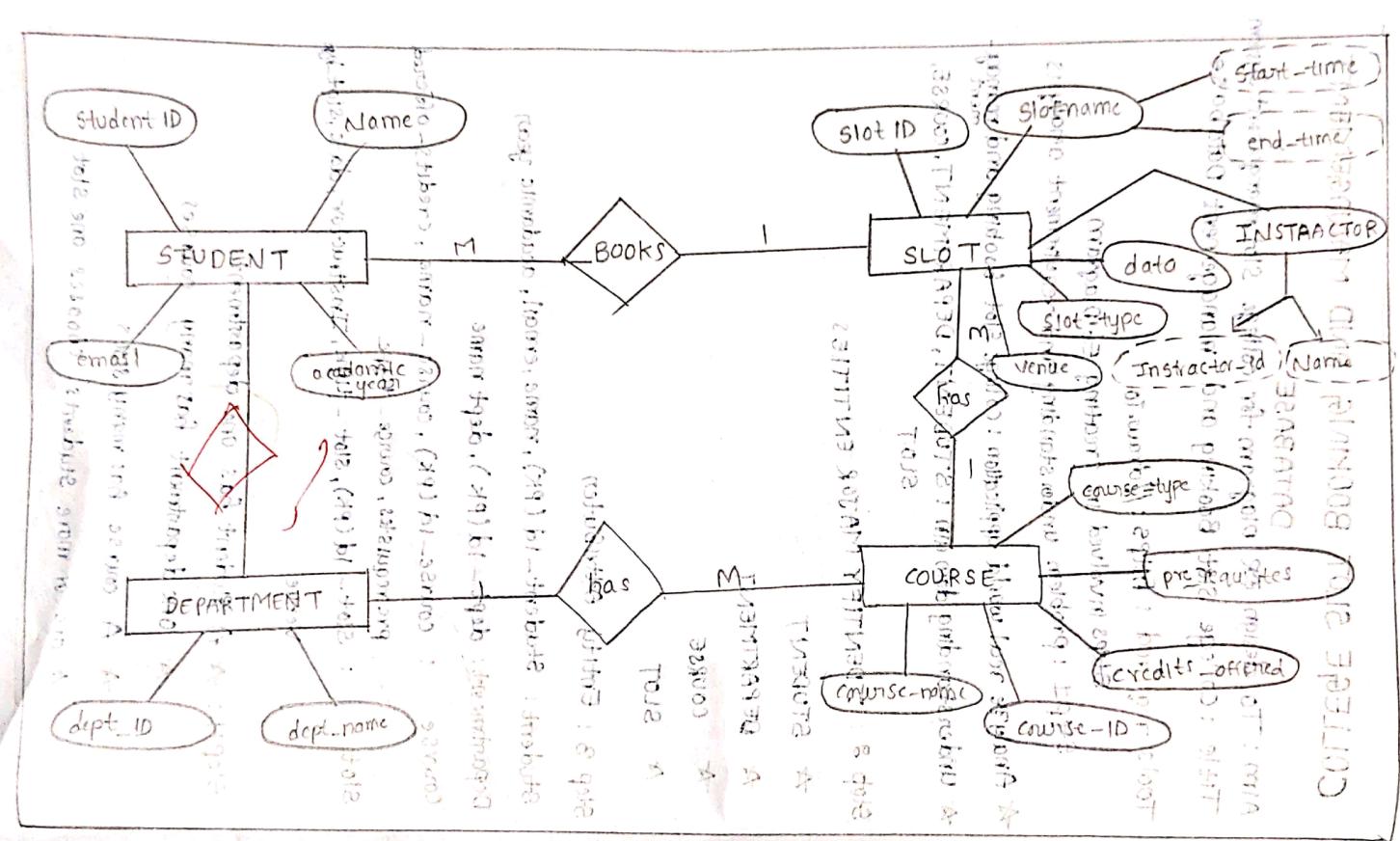
Slot: slot\_id (PK), slot\_time, Instructor, date, slot\_type  
 Venue

Step 4: ★ A Student has one department

★ one department has many courses

★ A course has many slots

★ one or more students chooses one slot



### STEP : 5 :-

- ★ Draw ER Diagram using draw.io
- ★ open <https://draw.io>,
- ★ choose Blank Diagram → click create
- ★ From left panel, drag the following
  - Use rectangles for Entities (STUDENT - DEPARTMENT)
  - Use ellipses for Attributes (student-id, dept-id)
  - Use diamonds for Relationships (has, books)
  - Connect using lines: Solids lines for relationship connectors
  - Use PK or underline to down primary key
  - use double ellipse for multivalued attributes (if any)
  - use labels such as (1:N), (M:N), etc, to show cardinalities

### STEP 6 : Relationships :-

- STUDENT(1) → (1) Department
- DEPARTMENT(1) → has → (M) courses
- COURSE(1) → has → (M) slots
- STUDENT(M) → Books → (1) slot

Input: College Slot Booking System manages student registering for courses, taught by faculty in scheduled slots and classrooms, scenario user requirements.

ER diagram for college slot booking system

COLLEGE

(19) b1 - 1916

(19) b1 - Institute

(19) b1 - 21603

institute

Institute

institute

institute

college

T012

(19) b1 - T012

9/10 - T012

Performance

Sheet

Signature

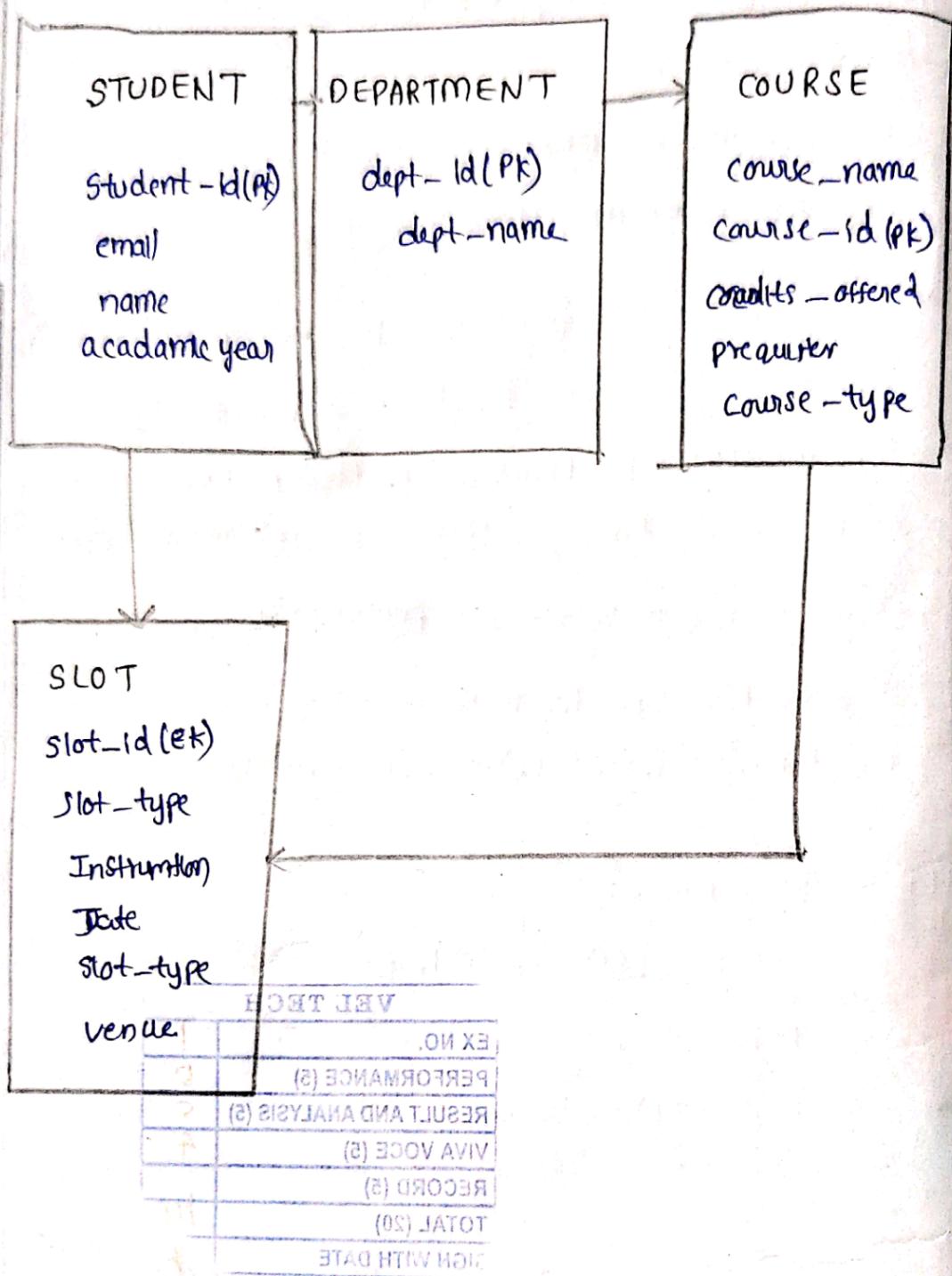
**VEL TECH**

EX NO.	191603V
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	4
RECORD (5)	
TOTAL (20)	14
SIGN WITH DATE	12/8

Result :-

12/8

This task helped us to understand the importance of conceptual design in database systems. Using draw.io, we were able to visually model a real-time, college slot book and management in to ER Diagram.



## 1.2. TO DRAW ER DIAGRAM FOR COLLEGE SLOT BOOKING

Aim : To convert ER Diagram to relational table

Steps for converting the ER Diagram to table.

- Entity type becomes a table
- All single-valued attribute becomes a column for the table
- Key attribute of the entity types represented by record key.
- The multivalued attribute is represented by components
- Derived attributes are not considered in the table.

Using these rules, you can convert ER diagrams to tables and columns and assign mapping between tables.

VEL TECH	
EX NO.	15
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	4
RECORD (5)	
TOTAL (20)	14
SIGN WITH DATE	80
	12/8

Result!

Hence, the relationship moral of college slot booking of management system using ER model was committed.