TASK 1.1: Date:-29/7/25

COLLEGE SLOT BOOKING AND MANAGEMENT DATABASE.

Title:-

Conephual Design using ER Model- collge Slot booking and managemut system.

Tools Required:-

https://draw.io.

Steps involved in creating ER Diagram

Step1:-

* problum Undurstanding & Requirement analysis.
* Analyse real world application: collge slot booking and managemut system.
* Undurstanding domain: STUDENT, DEPARTMENT, COURSE, SLOT.

Step2:-

* Idunt'ify Major entities.
* STUDENT
* DEPARTMENT
* COURSE
* SLOT.

Step3:-

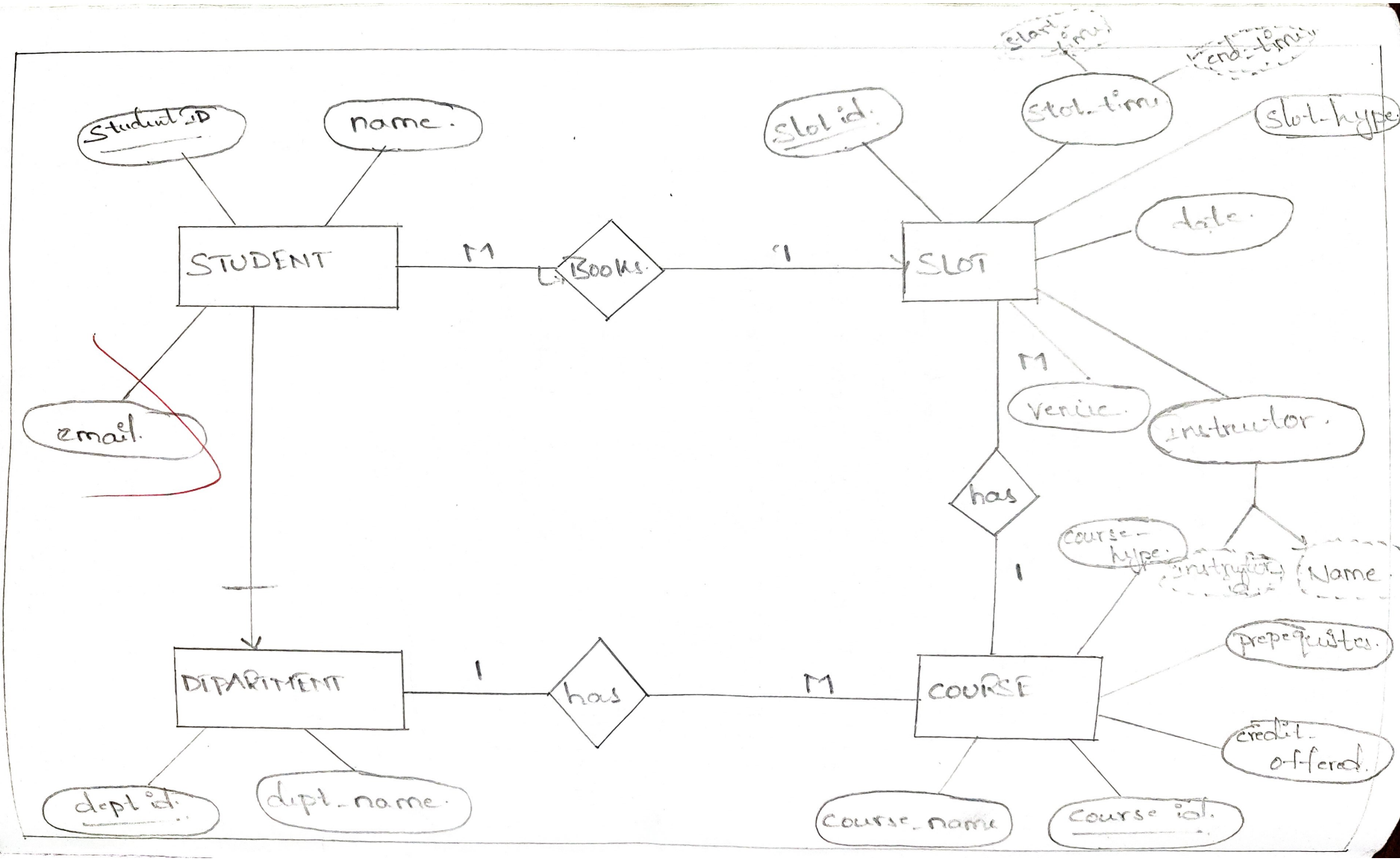
* Entity Attributes.

→ STUDENT: Studunt_id(PK); name, email, acadmicyear

→ DEPARTMENT: dept_id(PK); dept-name.

→ COURSE: course_id(PK), course_name, credits_ offered, Prerequistes, course_hype.

→ SLOT: slot_id(PK) Slot_time, Instructor, date, slot_hype, venue.


Student_ID
name
STUDENT
M
Books
1
Slot_id
Slot_time
start_time
end_time
Slot_type
SLOT
date
M
Venue
Instructor
email
has
1
Course_type
Instructor_id
Name
prerequisites
DEPARTMENT
1
has
M
COURSE
credit_offered
dept_id
dept_name
Course_name
Course_id

Step 4:-

- A Student has one department.
- one department has many courses.
- A course has many slots.
- one or more student chooses one slot.

Step 5:-

- Draw ER diagram using draw.io.
- Open https://draw.io
- Choose Blank Diagram → click create.
- From left panel, drap the following:
- Use rectangle for Entities (STUDENT, DEPARTMENT)
- Use ellipse for Attributes (student_id, dept_id)
- Use diamonds for Relationships (has, books)
- Connect using lines:
  Solid lines for relationship connectors.
- Use pk or underline to denote 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 in schedule slots and rooms. Scenario user requirements.

Output:-

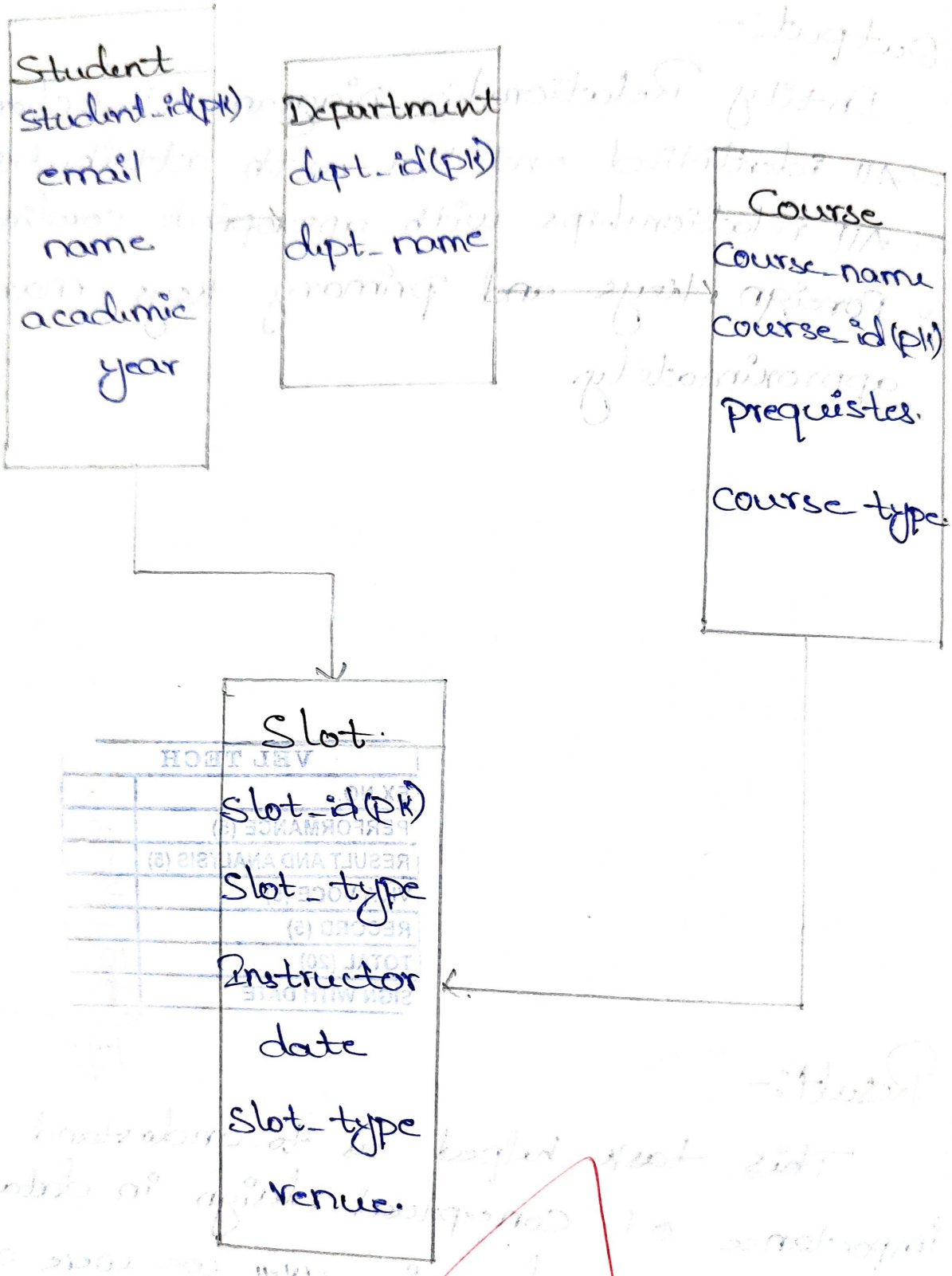
Entity Relationship Diagram that clarly shows

→ All identified entities with attributes.
→ All relationships with appropriate cordinalities.
→ Foreign keys and primary keys marked approximately.

VEL TECH	
EX.NO.	1a
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	—
TOTAL (20)	10
SIGN WITH DATE	19/8

Result:-

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 system' into ER diagram.


Student
student_id(pk)
email
name
academic year
Department
dept_id(pk)
dept_name
Course
Course_name
course_id(pk)
prequistes
course_type
Slot
slot_id(pk)
Slot_type
Instructor
date
Slot_type
venue

TASK 1.2:- 29/7/25

CONVERT ER DIAGRAM INTO RELATIONAL MODEL.

AIM:-

To Draw ER diagram for college slot management.

Steps for converting the ER Diagram to the table

* Entity type becomes a table.
* All single-valued attribute becomes a column for the table.
* A key attribute of the entity type represented by the primary key.
* The multivalued attribute is represented by a seperate table.
* Derived attributes are not considered in the table.

VEL TECH	
EX NO.	1b
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	0
RECORD (5)	-
TOTAL (20)	10
SIGN WITH DATE	19/8/25

Result:-

Hence, the relationship model of college slot booking & management using ER model was computed.