Date: 29-08-25

Task 1:

Aim

Title: Conceptual design using ER model - college slot booking and management system

Tools required: https://drawio

Step involved in creating ER Diagram

Step 1: problem Understanding and requirement analysis

* Analyse real world application: college slot booking and magement system.
* understanding domain: student, Dept 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), deppt-name

→ course: course_id (PK), course_name, credits-offered prerequisites, course-hyp

→ SLOT: Slot-id (PK), slot-time, Instructor, date, venue.

Output: Entity Relationship diagram that clearly shows:

→ All identical entities with attributes
→ All relationships with appropriate cardinalities
→ Foreign keys and primary keys marked appropriately

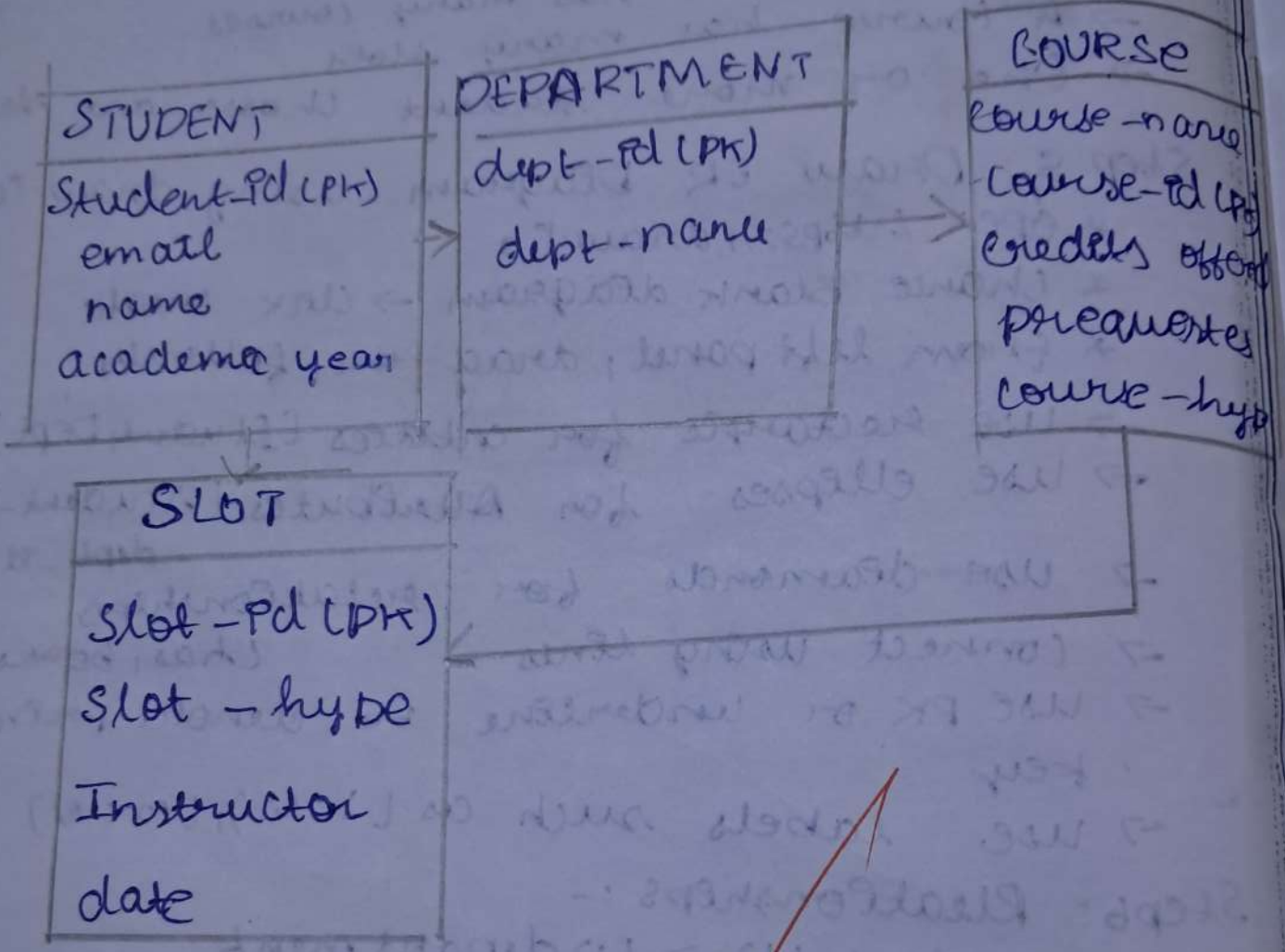
Step 4:
→ A student has one dept
→ One department has many courses
→ A course has many slots
→ One or more student chooses one slot

Step 5: Draw ER Diagram using draw.io
* Open https://draw.io
* Choose Blank diagram → click create
* From left panel, drag the following:
→ Use rectangle for entities (Student, Dept)
→ Use ellipses for Attributes (student_id, dept_id)
→ Use diamonds for relationships (has, books)
→ Connect using lines.
→ Use PK or underline to denote primary key
→ Use labels such as (1:N), (M:N)

Step 6: Relationships :-
→ Student (1) → (1) department
→ Department (1) → has → (M) courses
→ Course (1) – has → (M) slots
→ Student (M) – BOOKS → (1) Slot

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

Input: College slot Management System scenario user requirements (student slot booking, faculty availability, Room scheduling, Time table management)
Database design rules (Entity – Attribute Relationship, identification, normalisation considerations
Result: This task helped us to understand the importance of conceptual design in database system using draw.io. We able to book real time slot into an ER diagram


STUDENT
Student-Id (PK)
email
name
academic year
DEPARTMENT
dept-Id (PK)
dept-name
COURSE
course-name
course-Id (PK)
credits offered
prequisites
course-hyb
SLOT
Slot-Id (PK)
Slot-hyde
Instructor
date

Task 1.2

Aim: Steps for converting the ER diagrams for table

* Entity type b
* All single-valued attribute becomes column for table
* A key attribute of entity type represented by primary key
* The multivalued attribute is represented by separate table.
* Derived attribute represented by separate value.
* Composite attribute represented by compon
* Derived attributed are not considered in table

using the values you convert ER diagram and assign mapping between tables.

VEL TECH	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	—
TOTAL (20)	16
IGN WITH DATE	23/9/25

Result: Hence, the relationship model of college slot booking and management system using ER model was completed