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Course : PMCA503L – Database Systems

Question : Consider a university database for the scheduling of classrooms for final exams

Answer :

Entities & its Attributes :

① Course :
- name (the name of the course)
- department (the department to which it belongs)
- c_no (unique course identification number)

⑪ Section :
- s_no (the section number)
- enrollment (capacity of each section)

⑪⑪ Instructor :
- in_id (unique instructor id)
- name (name of the instructor)
- department (the department which they teaches)
- contact_info (their contact information)

⑯ Room :
- r_no (the room number)
- capacity (the total capacity of the room)
- building (the name of the building)

⊘ Exam:

- exam_id (the exam id)
- c_id (the course id)
- section_id (the section id)
- room_no (the room number)
- date_time (the starting time of exam)
- duration (how long the exam is)

In this scenario, it utilizes five main entities: Course, Section, Instructor, Room, and Exam. Each Course is associated with sections that have specified enrollment capacities. Instructors are linked to courses to handle the teaching assignments. Rooms are uniquely identified and their availability managed. Exams are scheduled with precise details, such as CourseID, Section ID, Room number, date, time and duration, ensuring no overlaps.

Users can interact through an intuitive interface, facilitating scheduling while maintaing data integrity. Reports can be generated and access is controlled for data security.
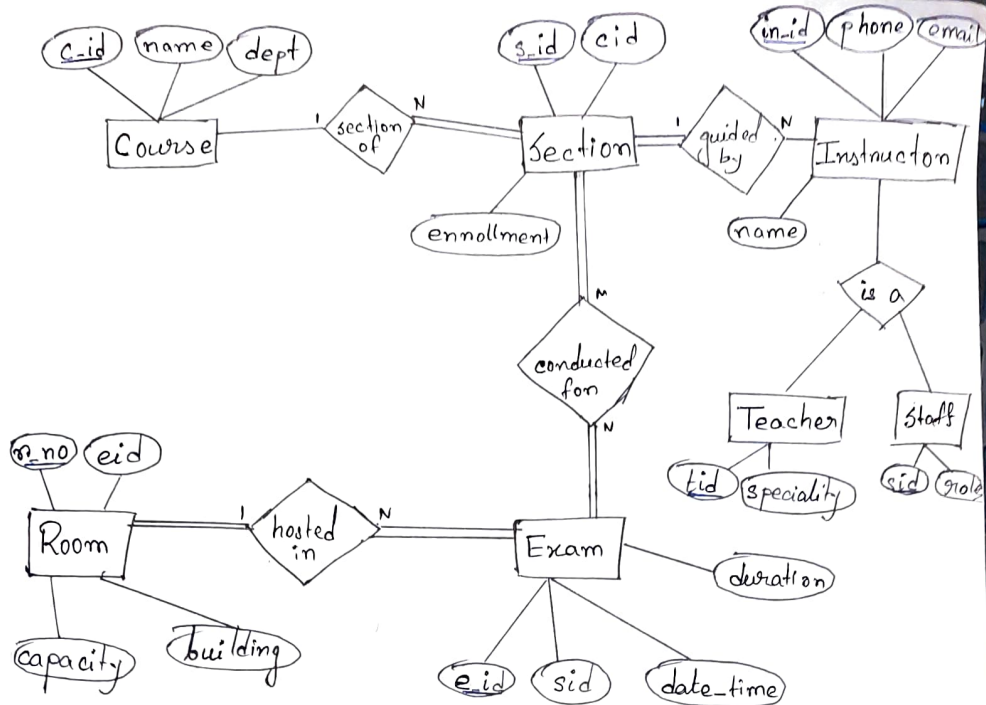
Relationship Schema:

Course

cid	name	dept

Section

s_id	c-id	enrollment	e-id

Exam

e-id	sid	date-time	duration	r_no

Room

r-no	eid	capacity	building

Instructor

in-id	phone	email	name	c-id

Teacher

tid	speciality	in-id

Staff

sid	role	in-id