

ER MODEL

1. Draw an entity relationship diagram for the given scenario

- Suppose that you are designing a schema to record information about reality shows on TV. Your database needs to record the following information:
- _ For each reality show, its name, genre, basic_info and participants name. Any reality show has at least two or more participants.
- _ For each producer, the company name, company country. A show is produced by exactly one producer. And one producer produces exactly one show.
- _ For each television, its name, start year, head office. A television may broadcasts multiple shows. Each show is broadcasted by exactly one television.
- _ For each user, his/her username, password, and age. A user may rate multiple shows, and a show may be rated by multiple users. Each rating has a score of 0 to 10.
- Draw an entity relationship diagram for this database.

- 2. Consider a university database for the scheduling of classrooms for -final exams. This database could be modelled as the single entity set exam, with attributes Exam id, course-name, section number, room-number, and time. Alternatively, one or more additional entity sets could be defined, along with relationship sets to replace some of the attributes of the exam entity set, as
 - course with attributes name, department, and c-number
 - section with attributes s-number and enrolment, and dependent as a weak entity set on course
 - room with attributes r-number, capacity, and building
 - Show an E-R diagram illustrating the use of all three additional entity sets listed.

3. E R Model Question

A car rental company maintains a database for all vehicles in its current fleet. For all vehicles it includes the vehicle id number, License number, manufacturer model, date of purchase and color.

A special data are included for certain types of vehicles.

Trucks: cargo capacity

Sports car: horsepower, renter age requirement.

Van: number of passengers

Off road vehicles: ground clearance, drive train

Apply an ER model for car rental company database

4. Cardinality ratios often dictate the detailed design of a database. The cardinality ratio depends on the real-world meaning of the entity types involved and is defined by the specific application. For the binary relationships below, suggest cardinality ratios based on common-sense meaning of the entity types. Clearly state any assumptions you made.

	Entity 1	Cardinality Ratio	Entity 2
1.	Student		SocialSecurityCard
2.	Student		Teacher
3.	ClassRoom		Wall
4.	Country		CurrentPresident
5.	Course		TextBook
6.	Item (that can be found in an order)		Order
7.	Student		Class
8.	Class		Instructor
9.	Instructor		Office
10.	E-bay Auction item		E-bay bid