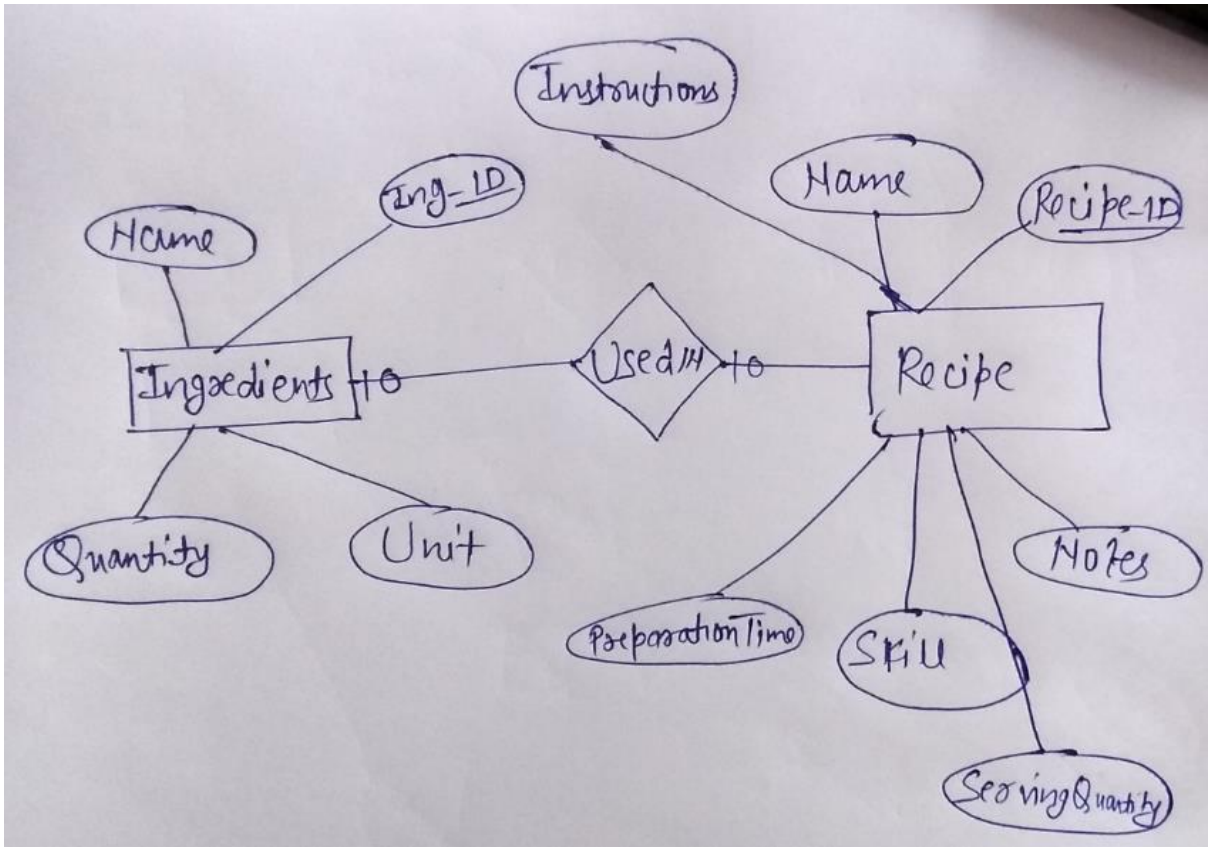
Tutorial

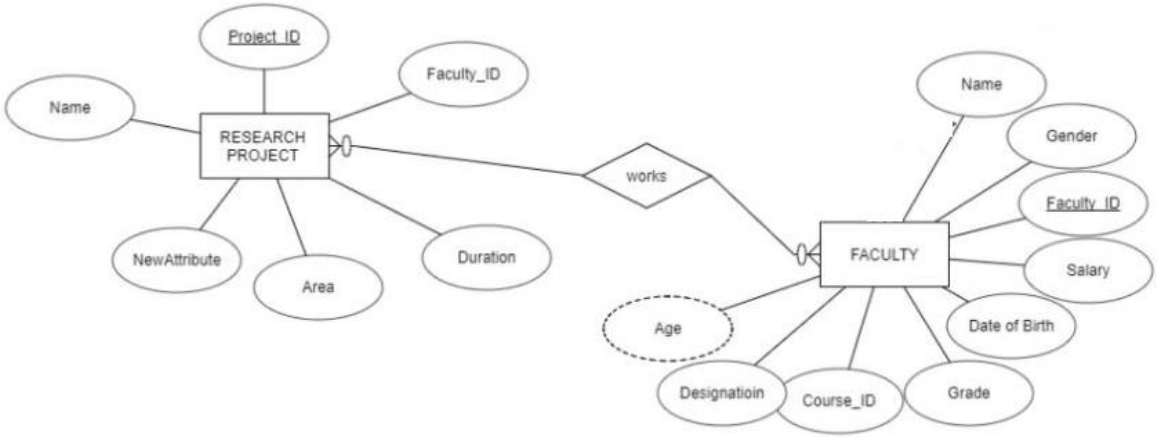
ER to Relational schema conversion

Convert the following questions into relational schemas based on the given scenario in the and the ER diagram of the question.

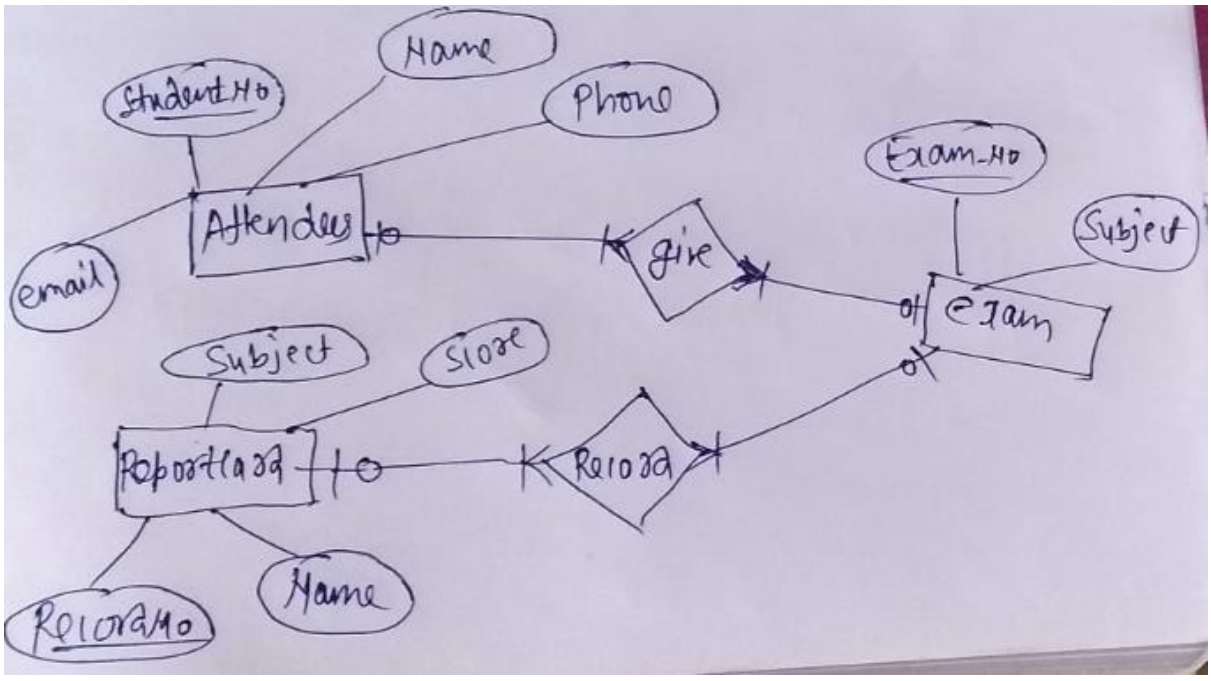
Q1. An ER diagram of Recipe Maker consists of binary relation between ingredients and recipe. It has two main entities Ingredients and Recipe. The attributes of ingredients are ingredient id, name of ingredients, available quantity of the ingredients, unit. The entity recipe has attributes recipe id, name of recipe, instructions used in recipe, serving quantity, preparation time used in recipe, skills used for recipe, notes taken during making of recipe and the serving quantity. Convert this ER diagram into relational schema.



Q2. The ER diagram of the Ramya University Research Project system has faculty and research project as main entities. The entity ‘Faculty’ has attributes name, age, gender, address, phone Number, Semester , Course_ID, Grade , Salary , Faculty_ID and designation. The entity ‘Research Project’ has attributes Project_ID, Faculty_ID, Name, Duration. Convert the given below ER diagram into relational schemas.

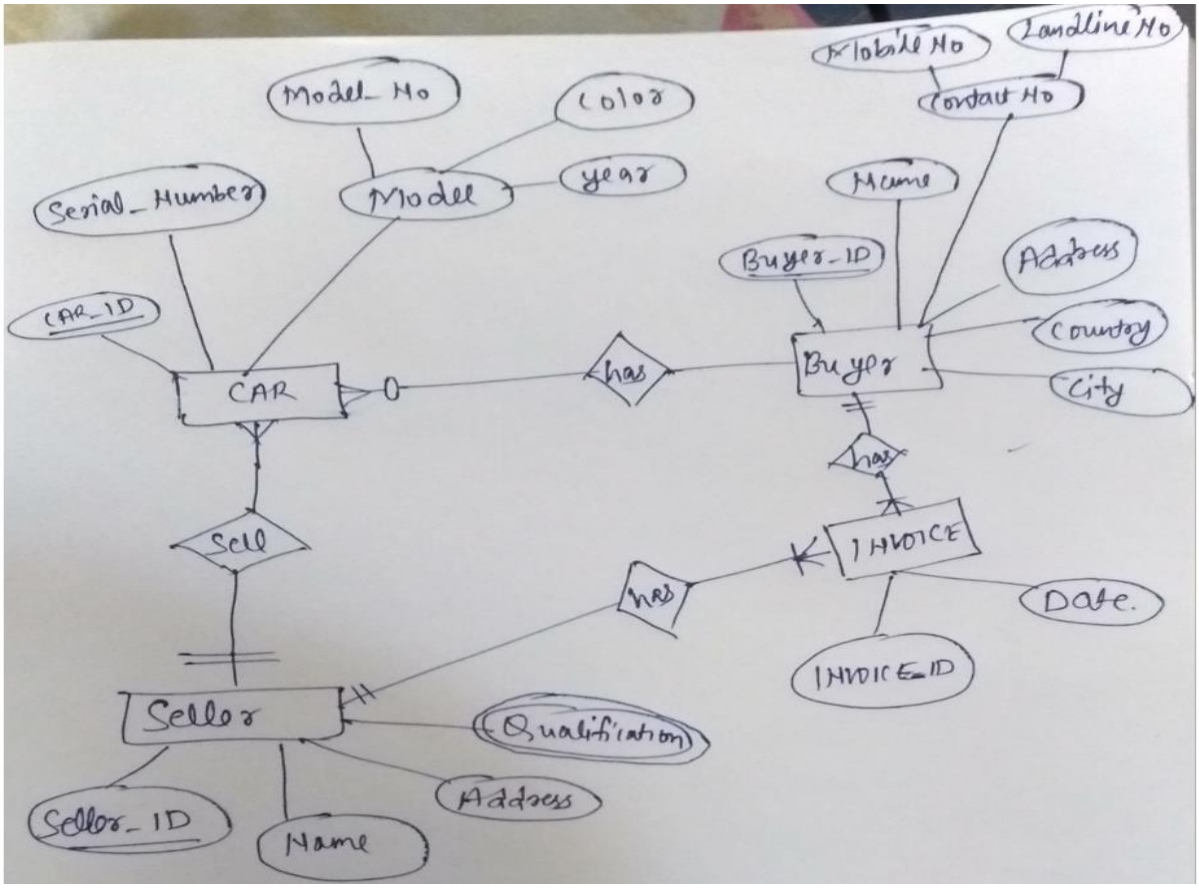


Q3. The Prince Public School wants to generate report card of the students who have given the exam. The ER diagram for Report Card Generation System consists of three main entities like Attendees, Exam and Report Card. The exam attendees have attributes student number, name of exam, mobile number and email id. The exam has attributes like Exam no and subject. The report card has attributes like Exam no and subject. Convert the given below ER diagram into relational schemas.

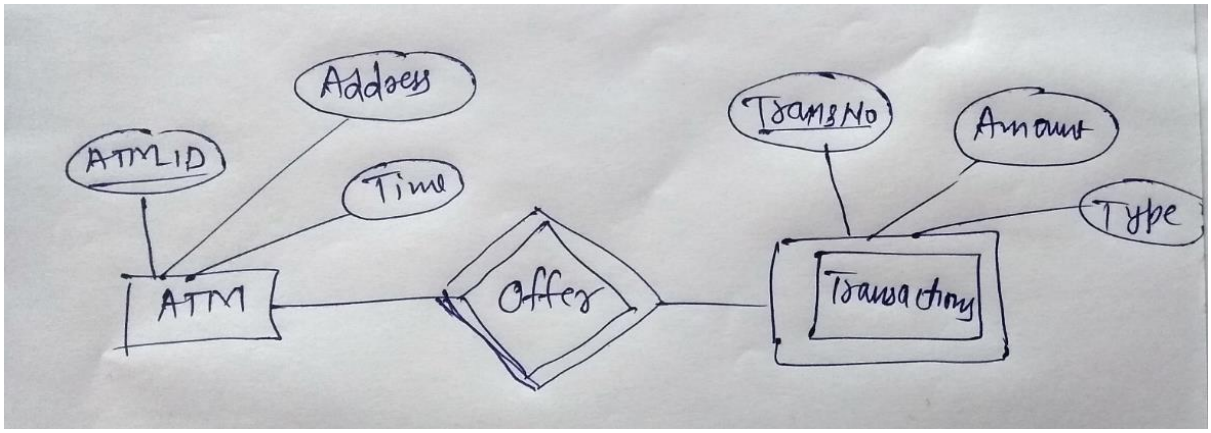


Q4. A person wants to sell his car having attributes car id, serial number of the car, model of the car. The model of the car is a composite attribute which is made up of three more attributes name model number, colour, and year of the car. The person who wants to sell his car can be identified by attributes id of the person, name, address and qualification of the person. The

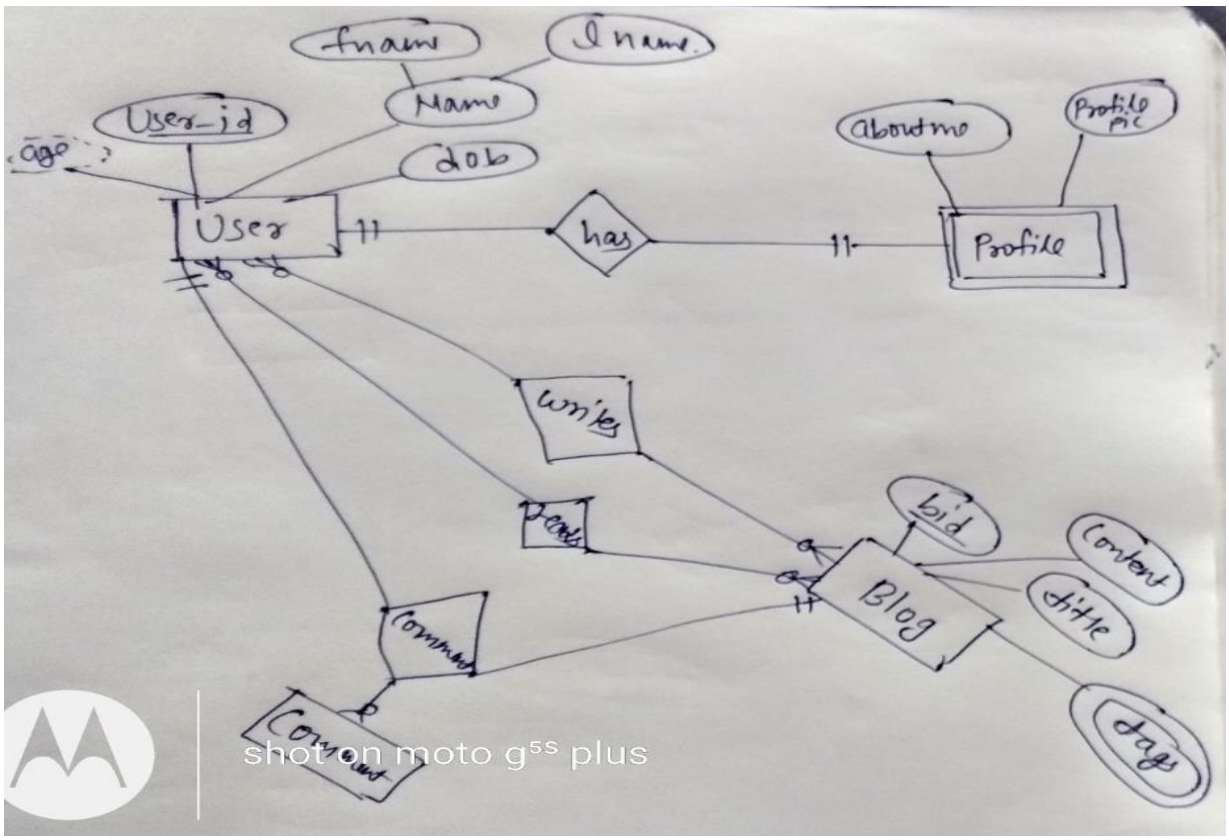
qualification attribute is multi valued attribute. The buyer of the car can be identified by various attributes such as id of the buyer, name, contact number, address, country and city. The contact number is a composite attribute made up of mobile number and landline number. There will be invoice of the car having attributes invoice_id and date. The relations and cardinality between the entities are shown below in ER diagram. Convert this ER diagram into relational schema.



Q5. Given below is an ER diagram for the transaction of money through an ATM machine. The two main entities of this system are ATM and Transaction. The entity ATM has various attributes like ATM_No, Address, Time. The entity transactions have the attributes Transaction_No, Amount, Type etc. Transform this given below ER diagram into relational schema.

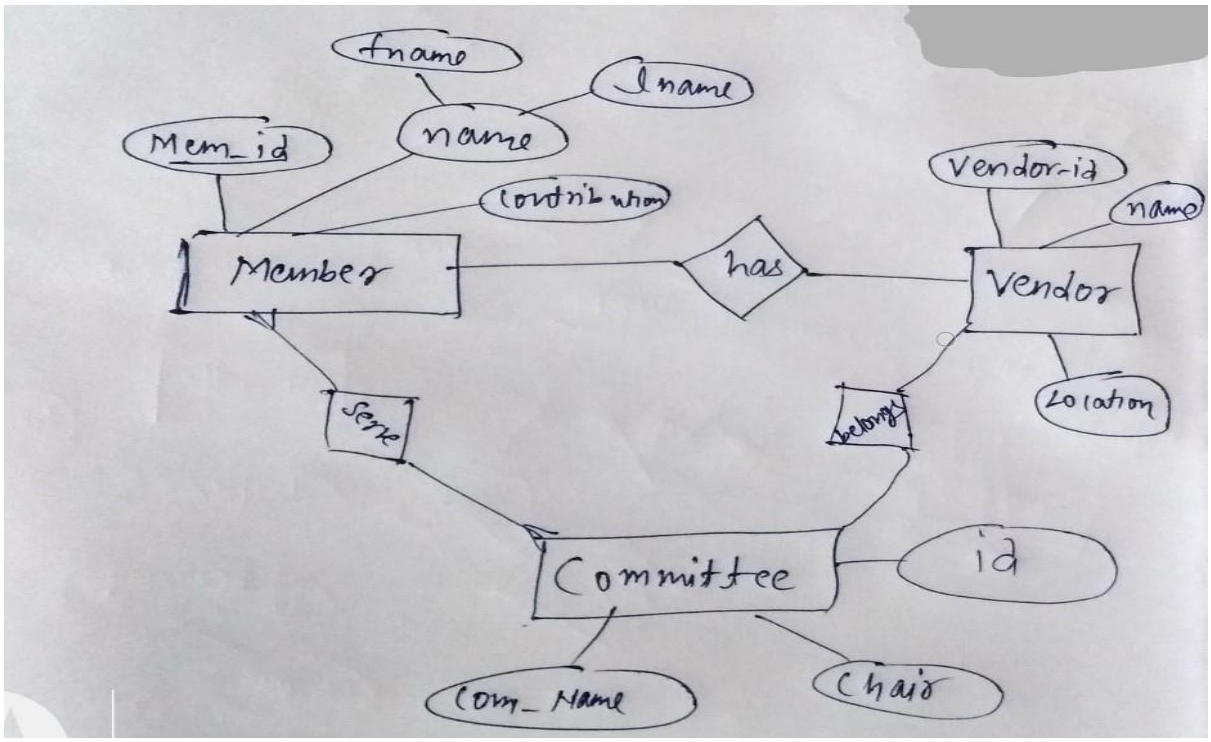


Q6. The ER diagram for the Blog System is shown below. The system has three entities user, profile and blog. The user can read, write and comments on the blog. The entity blog is having attributes like blog id, content of the blog, title and tags. The user is having attributes like user id, age, name, date of birth. The entity profile is a weak entity having attribute about me and profile pics. Transform the Blog system ER diagram into relational schemas.

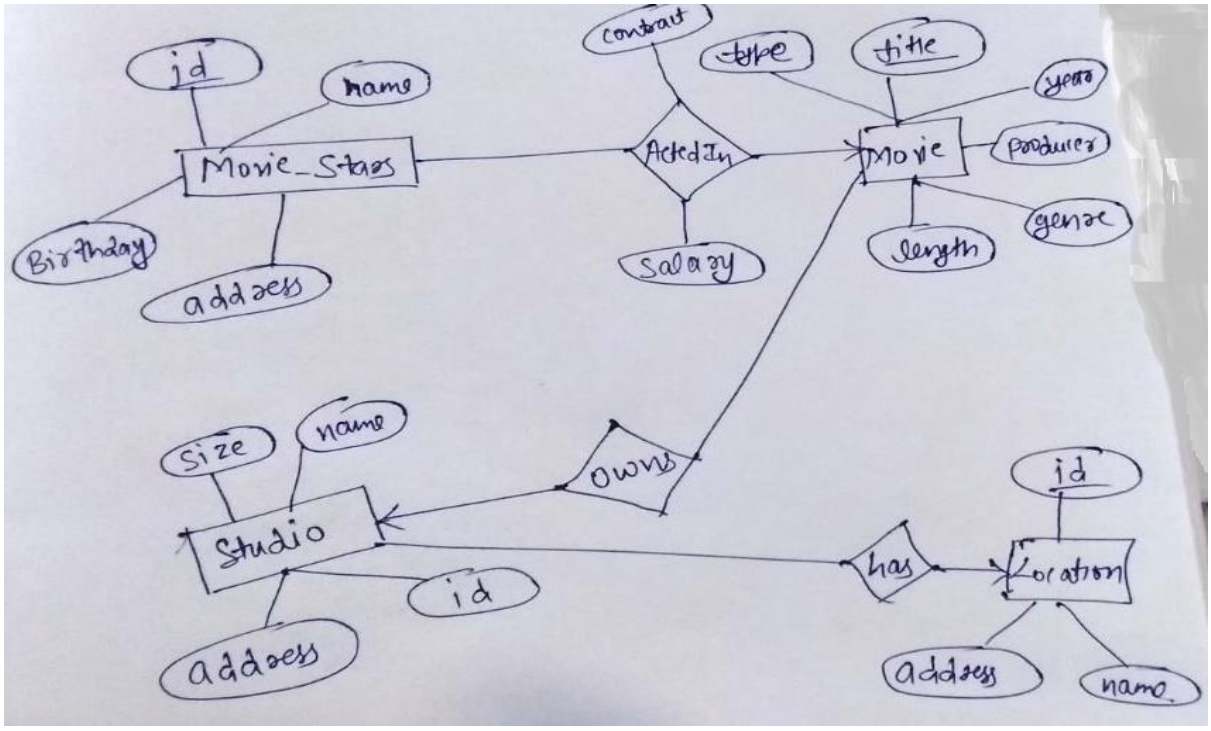


Q7. The Polymer Church need to keep track of its members. There are several committees within the church, and each person may serve on only one committee. The ER diagram is shown below and includes MEMBER, VENDOR, and COMMITTEE as an entity. Each entity needs

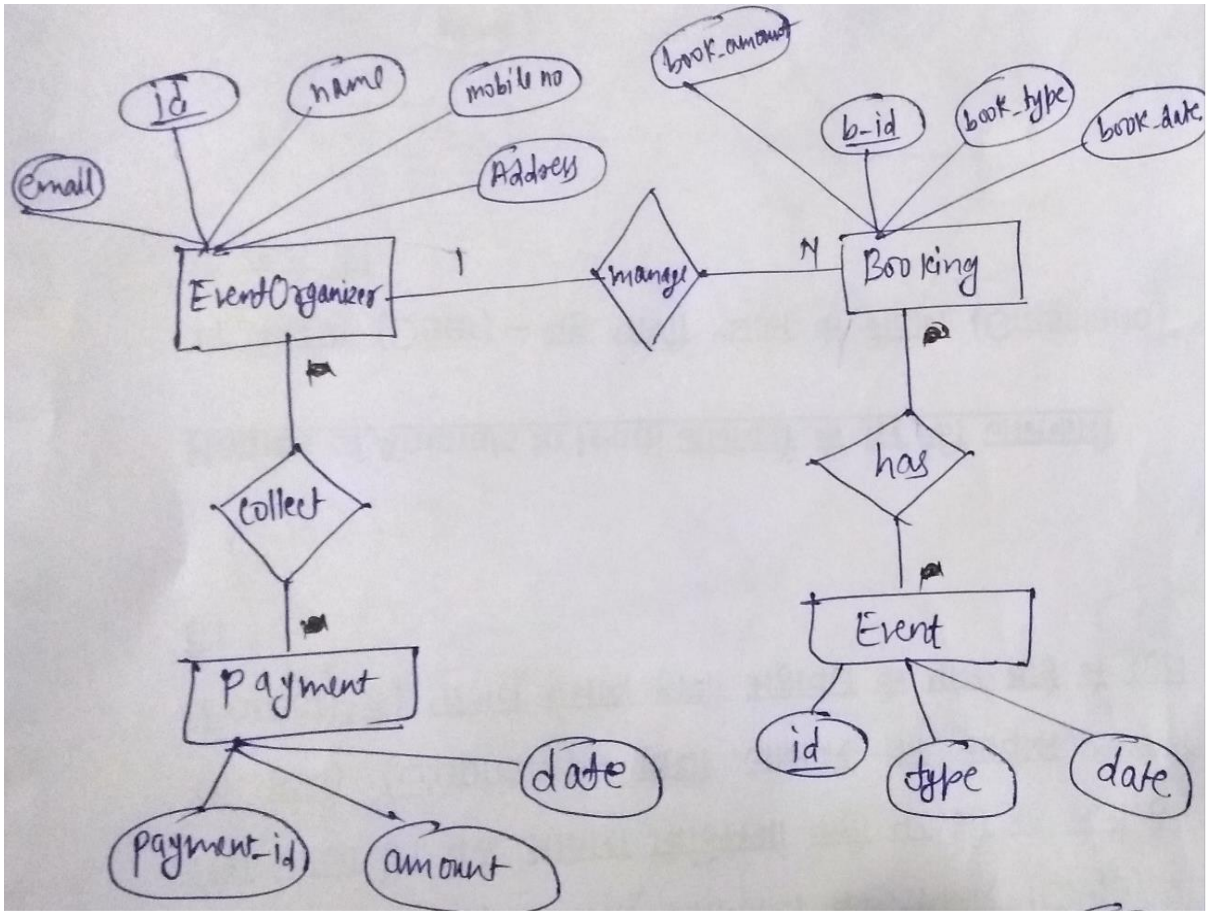
a number of attributes that are described in the ER diagram below. Convert this ER diagram into relational schemas.



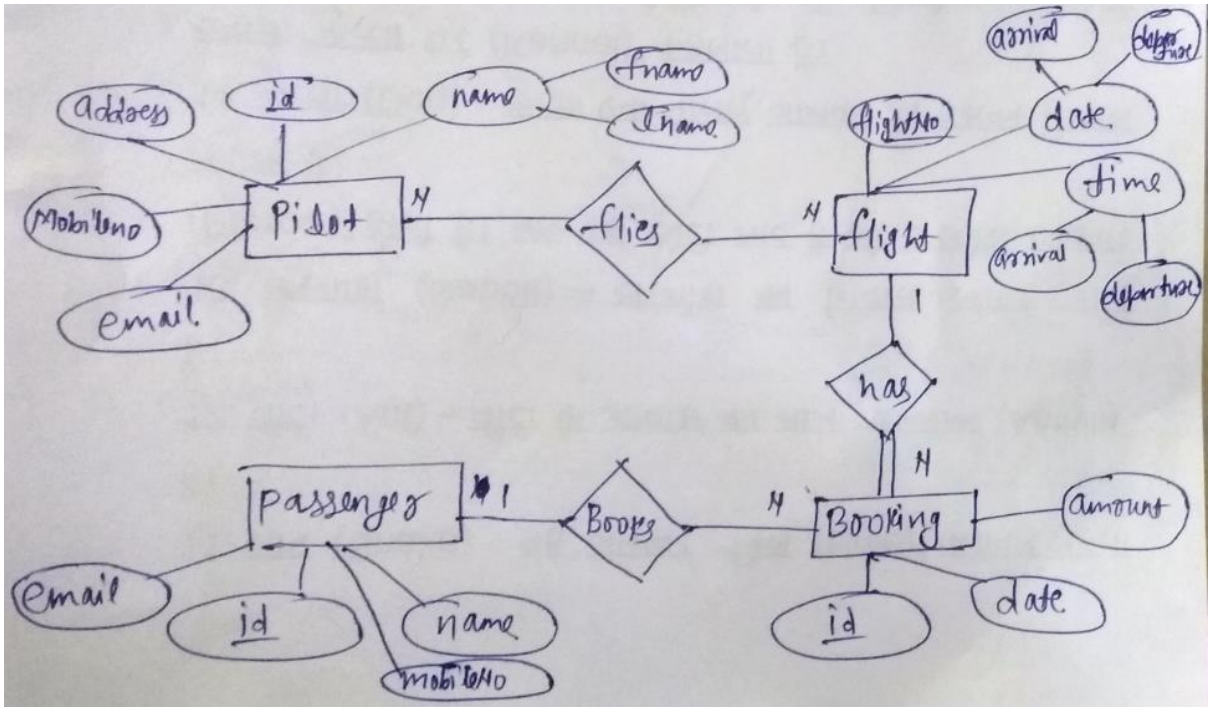
Q8. Transform the following ER diagram into relational schemas using the rule of mapping of ER diagram into relational schemas. This ER diagram contains the entity Movie_Stars who does acting in various movies. The stars are having attributes like id, birthday, address, and name. The entity movie has attributes like movie title, year, length, producer and type. The shooting of the movie happens in a studio at specific location. Studio ha s attributes id, size, address and name. Location has attributes id, address, and name.



Q9. The ER diagram for the Event Organization System has entity EventOrganizer with attributes id, email, name, address, mobile number and address. The event organizer takes care of payment of the event and collects it. Event organizer manages the booking of various events. There will be one booking of a particular event on particular time. The attributes of all the events are shown below in the ER diagram. Consider the given entities, attributes of the entity and the relationship between the entities and covert the given ER diagram into relational schemas.



Q10. The ER diagram of the Flight System is shown below. It has entity pilot, flight, booking and passenger. The entity ‘Pilot’ has attributes id, address, mobile number, email, and name. The entity ‘Flight’ has attributes flightNo, date, and time. The entity ‘Booking’ has attribute id, date and amount. The entity ‘Passenger’ has attribute id, email, name, mobile number. Convert the following ER diagram into the relational schemas.


arrival
departure
address
id
name
fname
lname
flightNo
date
Pilot
N
flies
N
flight
time
MobileNo
arrival
email
departure
1
has
N
passenger
1
Books
N
Booking
amount
email
id
name
id
date
mobileNo