

◆ Review your homework and quizzes. Review the “Review Questions” at the end of each chapter. **READ THE BOOK.**

Know and understand the advantages of using a DBMS over a text file/xml/file system/shoe box.

Features of a DBMS.

Know and understand the design steps,

▶ products of design steps

▶ purpose

▶ audience

What in the output of each design step?

Differences between Semantic/Relational models

Key Constraint vs Participation Constraint.

Be able to explain/use Entity/Relationship/Primary Key/Candidate Key/*Weak Entity*/Class Hierarchy/Role

Relate these to the Real World

Be able to determine when to use an Entity/Relationship/Descriptive Attribute

Key constraint/Participation constraint

▶ identify/draw/explain

▶ A student takes exactly one course.

You will need to draw a small ER diagram.

Given a small ER diagram, provide example data (a set of tables) that shows how the tables would be built and how the constraints would be implemented.

Be able to describe all the pieces of an ER diagram.

Given a small E-R diagram, be able to answer questions about what data it can store/queries it can answer.

▶ how would you change the ER diagram to satisfy these requests?

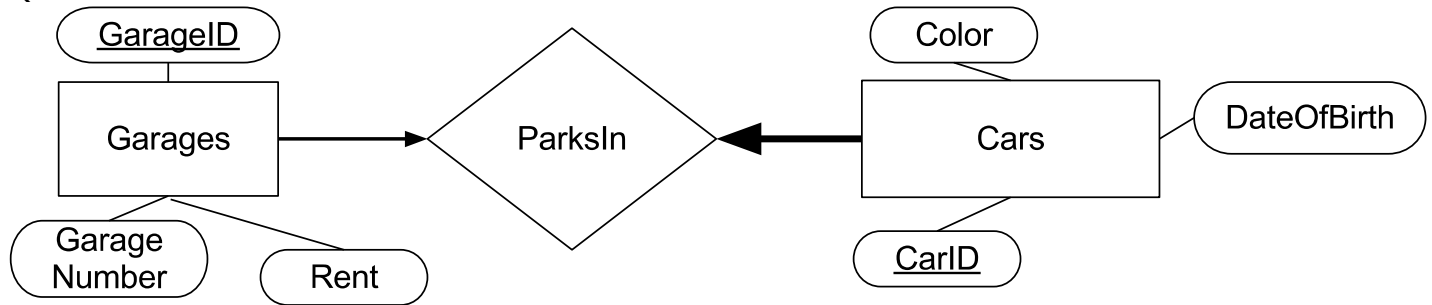
Given a set of CREATE TABLE statements, build some simple SQL queries to satisfy users' requests.

Select, join, sort, group by.

no views, subqueries

Work through all the queries in the SQL notes. Make sure you understand how to build all the queries.

Questions:



Build a small example database (draw the tables as below and fill the tables with data) that correctly implements the above ER diagram. The Garages Table is laid out for you. Note, the Garages/ParksIn arrow is NOT bold. The Cars/ParksIn arrow IS bold.

GarageID	GarageNumber	Rent

Build CREATE TABLE commands for each table above.

Write SQL queries to determine:

1. All the Garage Numbers.
2. All the Garage Numbers that contain a car.
3. The Garage Number of all the Red cars.
4. The average rent for Blue cars
5. How many cars of each color are in the database?

Should Color be an Entity or Attribute?

What type of relationship is ParksIn? Many to many, one to many, one to one?