Week 1 Graded Quiz

Quiz, 15 questions

1 point

1.

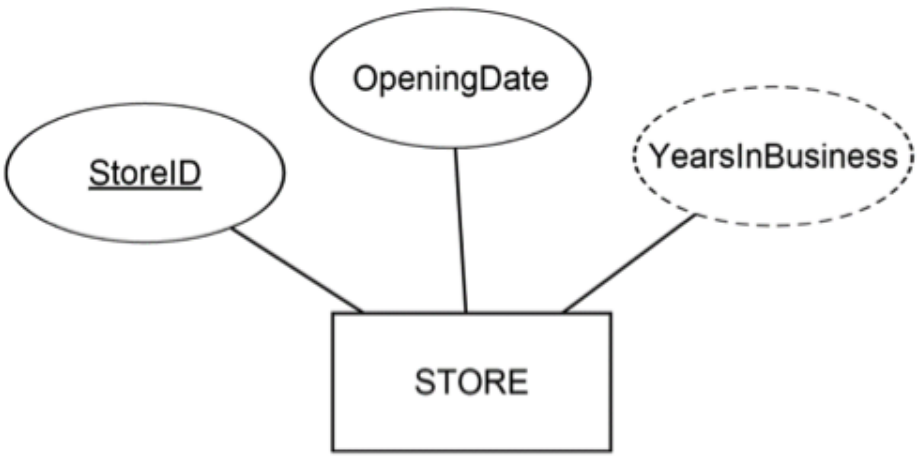
Relational databases are based on which mathematical theory or field?

- Probability theory
- Information theory
- Set theory
- Matrix algebra

---

1 point

2.



YearsInBusiness in the ER diagram above is a:

- Derived attribute
- Candidate key
-

Unique attribute

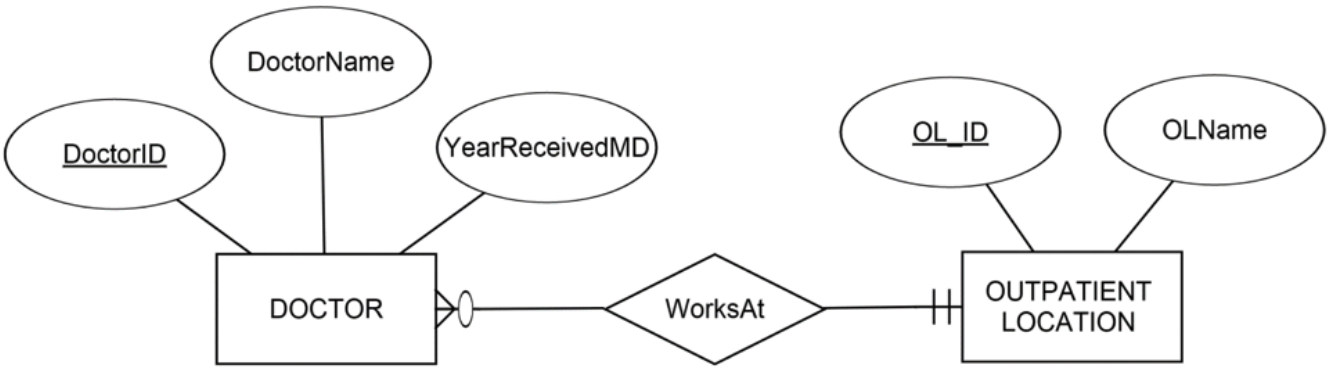
Composite attribute

Week 1 Graded Quiz

Quiz, 15 questions

1 point

3.



Which of the following is true about cardinality constraints on the relationship between Doctor and Outpatient Location depicted in this ER diagram?

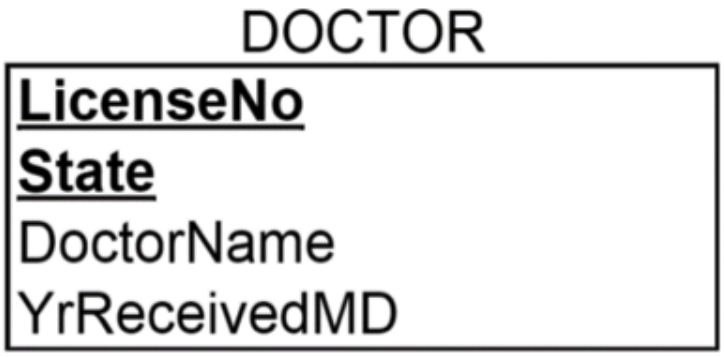
- A doctor is required to work at one outpatient location, but can work at no more than 1 outpatient location.
- An outpatient location must have at least 1 doctor working at it, but can have many doctors working at it.
- An outpatient location must have 1 doctor working at it, but can have no more than 1 doctor working at it.
- A doctor can work at many outpatient locations, but does not have to work at any.

1 point

4.

Week 1 Graded Quiz

Quiz, 15 questions



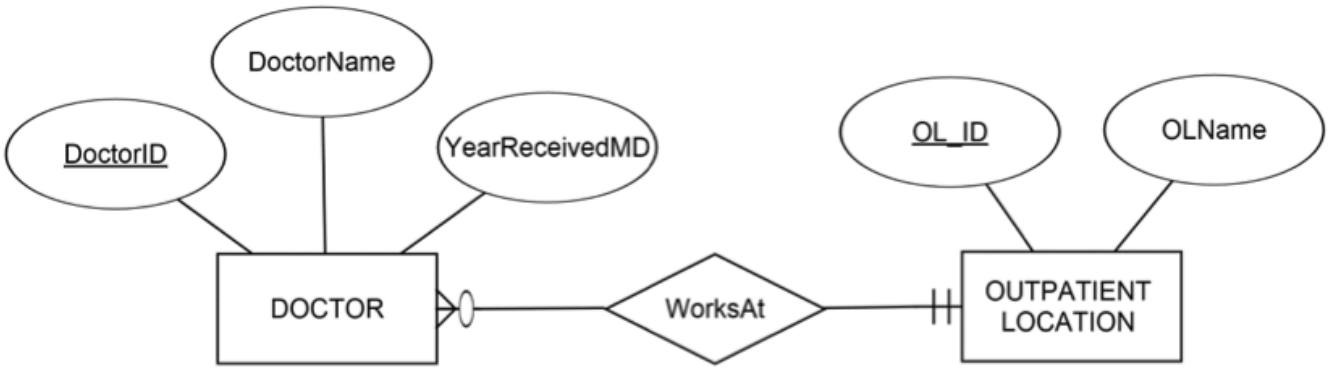
Which columns would be necessary for identifying unique doctors in the doctor table of the database built from the relational schema excerpt above?

- You would have to use both LicenseNo and State
- You could use either LicenseNo or State
- LicenseNo
- State

---

1 point

5.



In the ER diagram above, Doctor_ID and OL_ID are called:

- Unique attributes
- Foreign keys

- Composite attributes or keys
- Primary keys

1 point

6.
Which type of information is most likely to be stored in a relational database as opposed to another type of database?

- Tweets
- Metadata (file name, file location, when the file was created, etc.) about pictures
- Pictures
- Texts

1 point

7.

What can you infer about the data being collected based on the relational schema above?

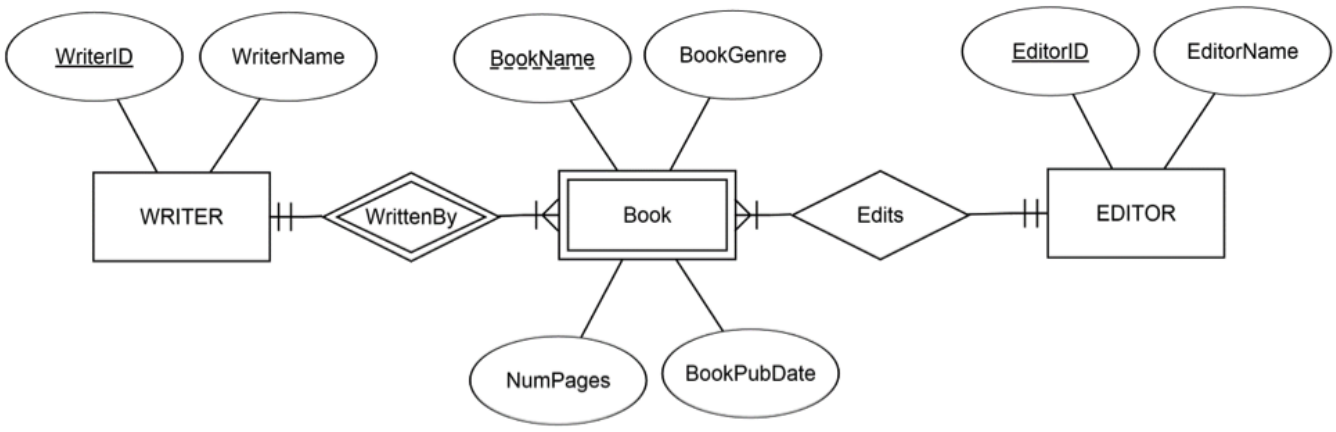
- A doctor can only work at one outpatient location, but an outpatient location can have many doctors working at it
- The data collected in OL_ID of the WorksAt table, on its own, is sufficient to determine at which outpatient location(s) each doctor works
- The data collected in OL_ID of the OutpatientLocation table, on its own, is sufficient to determine at which outpatient location(s) each doctor works
- A doctor can work at many outpatient locations, and an outpatient location can have many doctors working at it

Week 1 Graded Quiz

Quiz, 15 questions

1 point

8.



Based on the diagram above, which attribute(s) can be used to identify unique books?

- BookName
- BookName and WriterID
- BookName and EditorID
- BookName and BookPubDate

---

1 point

9.

Which of the following statements are true about foreign keys? Check all that apply. (Note that you will need to select more than one correct response to answer this question correctly.)

- [ ] Foreign keys allow information in different tables to be linked to each other
- [ ] Foreign keys are columns with unique values for every row in the relation/table they are in
- [ ] Foreign keys refer to columns with unique values for every row in other relations/tables
- [ ] Foreign keys always have the same name as at least one primary key in another table

---

Week 1 Graded Quiz

Quiz, 15 questions

1 point

10.

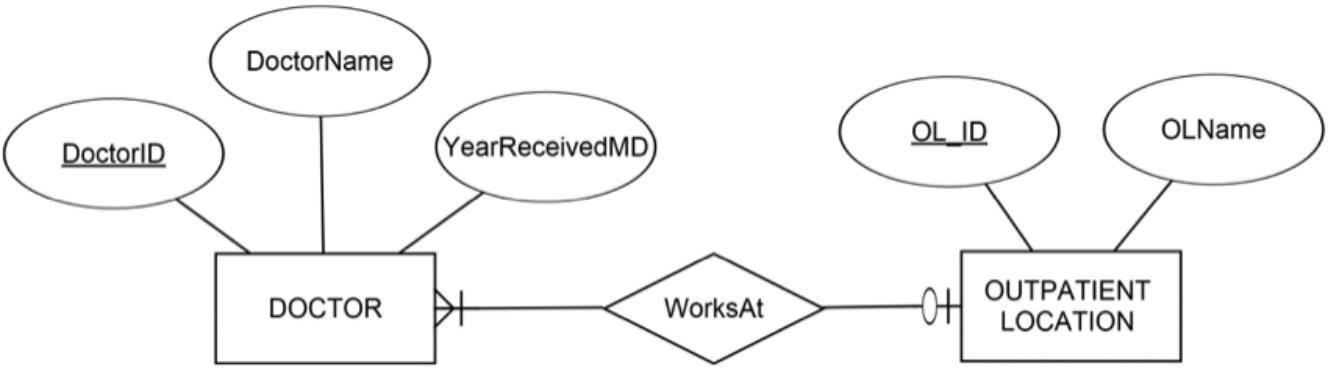
Given the relational schema presented above, how many tables would you need to use in order to determine the outpatient location(s) a doctor named "Karen Smith" works at?

- 1
- 2 or 3, depending on the strategy you use to combine the information
- 3
- 2

---

1 point

11.



Which of the following is true about cardinality constraints on the relationship between Doctor and Outpatient Location depicted in this ER diagram?

- Each outpatient location must have 1 doctor working at it, but can have no more than 1 doctor working at it.
- A doctor is required to work at one outpatient location, but can work at no more than 1 outpatient location.

- An outpatient location must have at least 1 doctor working at it, but can have many doctors working at it.
- A doctor can work at many outpatient locations, but does not have to work at any.

---

1 point

12.

Which of the following statements are true about **the technical terms** (as opposed to the common terms) for the concepts represented by relational schemas?

- The technical term for items in a relational schema that become rows in a real database is “tuples.”
- The technical term for items in a relational schema that become columns in a real database is “fields”
- The technical term for items in a relational schema that become tables in a real database is “entities”

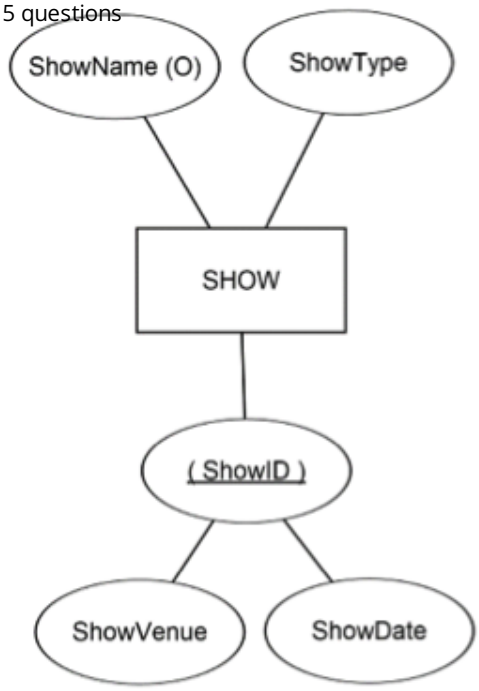
---

1 point

13.

Week 1 Graded Quiz

Quiz, 15 questions



Based on the diagram above, which of the following is true?

- ShowType and ShowVenue are needed together to provide a unique identifier for each show
- ShowType and ShowName are needed together to provide a unique identifier for each show
- ShowDate and ShowVenue are needed together to provide a unique identifier for each show
- ShowID and ShowVenue are needed together to provide a unique identifier for each show

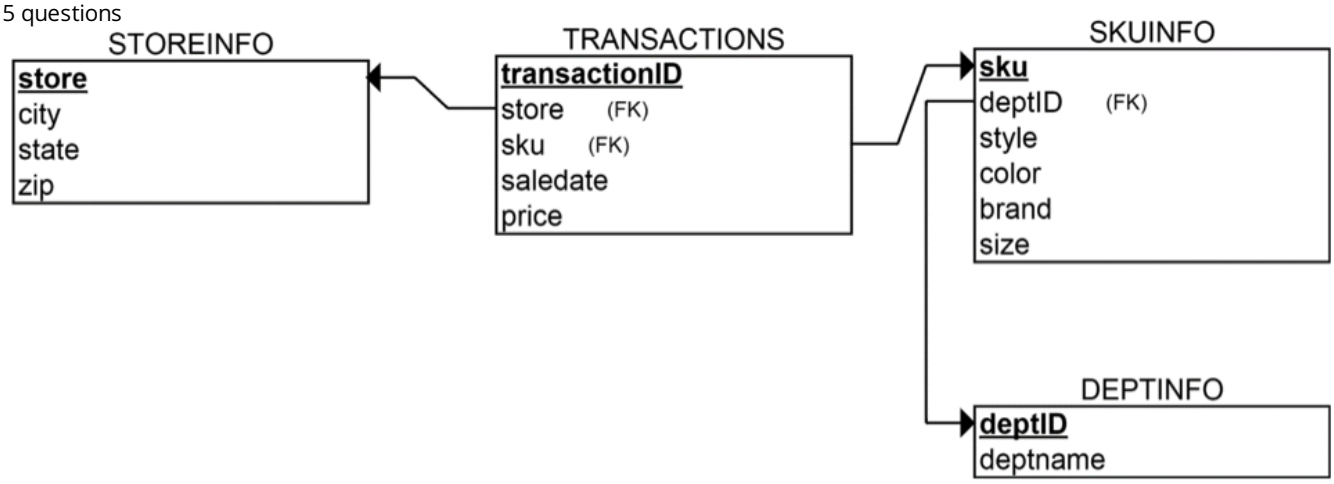
---

1 point

14.

Week 1 Graded Quiz

Quiz, 15 questions



If this relational schema represented a database that was already implemented, what columns would you use to combine the information in the transactions table with the information in the departinfo table?

- “deptname” to connect the transactions table to the deptinfo table
- “store” to connect the transactions table to the storeinfo table, and then “deptname” to connect the storeinfo table to the deptinfo table
- sku” to connect the transactions table to the skuinfo table, and then “deptID” to connect the skuinfo table to the deptinfo table
- “sku” to connect the transactions table to the skuinfo table, and then “deptname” to connect the skuinfo table to the deptinfo table

---

1 point

15.

For relational databases to work most efficiently, which of the following requirements of set theory should be followed? Check all that apply. (Note that you will need to select more than one correct response to answer this question correctly.)

- [ ] Each row in a table should represent a unique instance of the information in that table
- [ ] Each column in a table should represent a unique category of information
- [ ] Single tables should represent the smallest logical parts of a data set
- [ ] There should be no NULL values allowed in the database

Week 1 Graded Quiz

Quiz, 15 questions

Upgrade to submit