File 5 of 5
Grand Quiz Cs403 – DBMS
Solved by John

Confirmed Correct = 30  (as per my understanding)
Not sure = 0

*References of repeated question not attached.
In your opinion, why relational database is widely acceptable?

Select the correct option

- Due to its complexity
- Due to its approach
- Due to its dependencies
- Due to its strength

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Question # 3 of 30  (Start time: 12:12:32 AM, 10 July 2020)

A software package designed to store and manage databases

Select the correct option

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Database</td>
</tr>
<tr>
<td></td>
<td>DBMS</td>
</tr>
<tr>
<td></td>
<td>Data model</td>
</tr>
<tr>
<td></td>
<td>Data</td>
</tr>
</tbody>
</table>

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Each cell of a table contains atomic/single value.

A cell is the intersection of a row and a column, attribute in a particular row. The property means that is considered as a single value. In real life we
Question # 5 of 30  (Start time: 12:15:56 AM, 10 July 2020)

Which of the following is NOT a component of a DFD?

Select the correct option:

- Dataflow
- Datastore
- External entities
- Relationship between external entities

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Natural Join:
This is the most common and general form of join. If we simply say join, it means the natural join. It is same as equi-join but the difference is that in natural join, the common attribute appears only once. Now, it does not matter which common attribute should be part of the output relation as the values in both are same. For Example if we take the natural join of faculty and course the output would be as under: -
Unary Operations:
These are those operations, which involve only one relation or table. These are Select and Project.
In cross reference matrix attributes are mention on _____ and reports are mention on _____

Select the correct option

- Y axis, X axis
- Y axis, Z axis
- X axis, Y axis
- X axis, Z axis

Cross Reference Matrix

This is a tool available in the data dictionary and helps us in finding entities of the database and their associations. CRM is developed at the designing stage of the database; we can say that at the time of creation of the user views of reports for certain users we identify the material required by the users. In the cross reference matrix, on the Y axis we specify the accessible components of the database such as transitions, reports, or database objects and on the x axis we specify the attributes that will be accessed in the corresponding accessed object.
Relational Calculus

Relational Calculus is a nonprocedural formal relational data manipulation language in which the user simply specifies what data should be retrieved, but not how to retrieve it. It is an alternative standard for relational data manipulation languages. The relational calculus is not related to the familiar differential and integral calculus in mathematics, but takes its name from a branch of symbolic logic called the predicate calculus. It has two following forms:

- Tuple Oriented Relational Calculus
- Domain Oriented Relational Calculus
Entity-Relationship Data Model

It is a semantic data model that is used for the graphical representation of the conceptual database design. We have discussed in the previous lecture that semantic data models provide more constructs that is why a database design in a semantic data model can contain/represent more details. With a semantic data model, it becomes easier to design the database, at the first place, and secondly it is easier to understand later. We also know that conceptual database is our first comprehensive design. It is independent of any particular implementation of the database, that is, the conceptual database design expressed in E-R data model can be implemented using any DBMS. For that we will have to transform the conceptual database design from E-R data model to the data model of the
The database deals with large amount of data. This property is called

Select the correct option

- Database design
- Scalability
- Concurrency
- Robustness

- Efficiency and Scalability: How does the database cope with large amounts of data?
Question # 13 of 30 (Start time: 12:29:29 AM, 10 July 2020)

Which of the following is NOT an entity?

Select the correct option

- Employee
- Grand Quiz
- Hobby
- Student
- Playground

Employee is a table other 3 are its attributes.
An attribute of one entity is associated with another attribute of the same entity is called

Select the correct option

| Recursive relationship | Grand Quiz  
|------------------------|----------------|
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| Binary relationship    |                |
| One to many relationship|                |
| Many to many relationship|               |

Recursive Relationship:
This is the situation when any attribute of one entity is associated with another attribute of the same entity. Such a link initiates from one entity and terminates on the same entity.
Many to Many Relationship:
In this type of relationship one instance of first entity can be mapped with many instances of second entity. Similarly one instance of second entity can be mapped with many instances of first entity type. In many to many relationship a third table is created for the relationship, which is also called as associative entity type. Generally,
The relationship between department to employees is ____________.

Select the correct option

- Many to many
- One to one
- One to many
- Many to one

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A _____________ is used to combine rows from two or more tables, based on a related column between them.

Select the correct option

- Select operator
- Project operator
- Join operation
- Delete operator

Join Operation:
Join is a special form of cross product of two tables. In Cartesian product we join a tuple of one table with the tuples of the second table. But in join there is a **special requirement of relationship between tuples**. For example if there is a relation STUDENT and a relation BOOK then it may be required to know that how many books have been issued to any particular student. Now in this case the primary key of STUDENT that is stid is a foreign key in BOOK table through which the join can be made. We will discuss in detail the different types of joins in our next lecture.
A database state where deletion of the information about the student record deletes the course information as well is called ____________

Select the correct option

- Insertion anomaly
- Update anomaly
- Redundancy
- Deletion anomaly

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this course yet. So we can also not insert this course. This is called as insertion anomaly which is wrong state of database. Next is the deletion anomaly. Suppose there is a course which has been enrolled by one student only. Now due to some reason, we want to delete the record of student. But here the information about the course will also be deleted, so in this way this is the incorrect state of database in which if we want to delete the information about the student record but along with...
The population of the data of the organization for which the database is created is called the ________ of the Database.

Select the correct option

- Extension
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- Intention
- Model
- Schema

Database. Extension of the database is performed on the bases of a complete intention, i.e., once a database has been defined it is populated with the data of the organization for which the database is created. This population of the database is also called as the extension of the database. Extension is always done according to the rules defined in the internal schema design or the intention of the database.
The conceptual database design can be transformed into any _______.

Select the correct option

- Data model
- Database design
- E-R model
- Entity set

As we have already discussed in previous lectures and as is given in row 2 of the above table, the conceptual database design can be transformed into any data model, like, hierarchical, network, relational or object-oriented. So the study of the logical database design requires first involves the study of the data model(s) that we can possibly use for the purpose. However, in the current era, since early eighties, the
Question # 21 of 30 ( Start time: 12:42:57 AM, 10 July 2020 )

Suppose, we have two entities “Shape” and “Triangle”, then which of the following is a correct statement?

Select the correct option

- Shape is a super type entity and Triangle is a sub type entity
- Shape is a sub type entity and Triangle is a super type entity
- Shape and Triangle both are super type entities
- Shape and Triangle both are sub type entities

Super types and Subtypes

Subtypes hold all the properties of their corresponding super-types. Means all those subtypes which are connected to a specific supertype will have all the properties of their supertype.
The attribute that is calculated from other attribute is called ____________

Select the correct option

- Derived attribute
- Multi-valued attribute
- Composite attribute
- Simple attribute

**Stored or Derived Attributes:**

Normally attributes are stored attributes, that is, their values are stored and accessed as such from the database. However, sometimes attributes’ values are not stored as such, rather they are **computed or derived based on some other value**. This other value may be stored in the database or obtained some other way. For example, we may store the name, father name, address of employees, but age can be computed from date of birth. The
Relational data model is widely accepted due to its mathematically proven foundation and its...

Select the correct option

- Complexity
- Simplicity
- Hierarchical structure
- Traditional structure

Database and Expert Systems Applications: Proceedings of the ...

Dimitris Karagiannis - 2013 - Computers
Difference between Data and Information

Data is the collection of raw facts collected from any specific environment for a specific purpose. Data in itself does not show anything about its environment, so to get desired types of results from the data we transform it into information by applying certain
dependency occurs when one non-key attribute determines another non-key attribute. For third normal form we concentrate on relations with one candidate key, and we eliminate transitive dependencies. Transitive dependencies cause insertion, deletion, and update anomalies. We will now fix it with an example.
Minimum Cardinality:
As the name suggests that the minimum cardinality is the inverse of the maximum cardinality so we can say that the minimum [cardinality show us that how many instance of one entity can be placed in another relation at least. In simple words it can be said that the minimum cardinality tells that whether the link between two relations is optional or compulsory. It is very important to determine the minimum cardinality when designing a database because it defines the way a database system will be implemented.
Question # 27 of 30 (Start time: 12:52:45 AM, 10 July 2020)

If an entity is linked with itself, then it is called ________ relationship.

Select the correct option

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Binary</td>
</tr>
<tr>
<td></td>
<td>Ternary</td>
</tr>
<tr>
<td></td>
<td>Nary</td>
</tr>
<tr>
<td></td>
<td>Recursive</td>
</tr>
</tbody>
</table>
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Changes at _____ levels of database architecture need _____ levels of user’s attention

Select the correct option

- different, different
- same, same
- different, same
- same, different

LectureNo.03 - Database Management System (CS403 Lecture ...)

For accessing data at different levels we have a number of users because not all ... the database and what information is important to be stored in the database from ... architecture need different levels of users attention for example a change to ...
If an entity "motor cycle" is associated with at most one "driver", then the relationship between these two entities is:

Select the correct option

- One to one
- One to many
- Many to many
- Many to one

- **One-to-One mapping:**
  A mapping $R$ from $X$ to $Y$ is one-to-one if each entity in $X$ is associated with at most one entity in $Y$ and vice versa.
Which levels are mostly used for Detailed DFD?

Select the correct option

- Level-0, Level-1
- Level-1, Level-2
- Level-2, Level-3
- Level-3, Level-4