#1. Which normal form allows a relation to be in 5NF and eliminates join dependencies?

☐

Sixth Normal Form (6NF)

☐

Fifth Normal Form (5NF)

☐

Fourth Normal Form (4NF)

☐

Third Normal Form (3NF)

☐

Second Normal Form (2NF)

#2. What is the primary goal of normalization in database design?

☐

Minimizing redundancy and dependency

☐

Maximizing data duplication

☐

Simplifying query complexity

☐

Maximizing data retrieval speed

☐

Enhancing foreign key constraints

#3. Which normal form eliminates partial and transitive dependencies on a composite primary key?

☐

Fifth Normal Form (5NF)

☐

Fourth Normal Form (4NF)

☐

Third Normal Form (3NF)

☐

Second Normal Form (2NF)

☐

First Normal Form (1NF)

#4. What does the term "superkey" refer to in the context of database normalization?

☐

A set of attributes that uniquely identifies a tuple

☐

A primary key in a table

☐

A foreign key in another table

☐

A composite key in a relation

☐

A candidate key in a table

#5. Which normal form allows a relation to be in 1NF and removes repeating groups?

☐

First Normal Form (1NF)

☐

Second Normal Form (2NF)

☐

Third Normal Form (3NF)

☐

Fourth Normal Form (4NF)

☐

Fifth Normal Form (5NF)

#6. What is a composite key in the context of database normalization?

☐

A key made up of multiple attributes

☐

A primary key with a single attribute

☐

A foreign key with a single attribute

☐

A unique key with a single attribute

☐

A secondary key with a single attribute

#7. Which normal form allows a relation to be in 2NF and removes partial dependencies?

☐

Second Normal Form (2NF)

☐

Third Normal Form (3NF)

☐

Fourth Normal Form (4NF)

☐

Fifth Normal Form (5NF)

☐

Sixth Normal Form (6NF)

#8. What is the key difference between 4NF (Fourth Normal Form) and BCNF (Boyce-Codd Normal Form)?

☐

Handling multivalued dependencies

☐

Handling transitive dependencies

☐

Handling partial dependencies

☐

Handling join dependencies

☐

Handling functional dependencies

#9. What is a functional dependency in the context of database normalization?

☐

A relationship between tables

☐

A connection between databases

☐

A correlation between records

☐

A hierarchy between data items

☐

A dependency between two attributes

#10. Which normal form allows a relation to be in 3NF and removes transitive dependencies between non-prime attributes?

☐

Boyce-Codd Normal Form (BCNF)

☐

Second Normal Form (2NF)

☐

Third Normal Form (3NF)

☐

Fourth Normal Form (4NF)

☐

Fifth Normal Form (5NF)

#11. What is a transitive dependency in the context of database normalization?

☐

A dependency between two attributes through another attribute

☐

A direct dependency between two attributes

☐

A dependency between two tables

☐

A dependency between two databases

☐

A dependency between records

#12. Which normal form allows a relation to be in 4NF and removes multivalued dependencies?

☐

Fourth Normal Form (4NF)

☐

Third Normal Form (3NF)

☐

Second Normal Form (2NF)

☐

Fifth Normal Form (5NF)

☐

Sixth Normal Form (6NF)

#13. What is the primary objective of normalization in database design?

☐

Minimizing redundancy and dependency

☐

Maximizing data duplication

☐

Simplifying query complexity

☐

Maximizing data retrieval speed

☐

Enhancing foreign key constraints

#14. Which normal form eliminates the possibility of a transitive dependency between non-key attributes?

☐

Fourth Normal Form (4NF)

☐

Second Normal Form (2NF)

☐

Third Normal Form (3NF)

☐

Fifth Normal Form (5NF)

☐

Sixth Normal Form (6NF)

#15. In which normal form are non-prime attributes fully functionally dependent on every candidate key of the relation?

☐

Fourth Normal Form (4NF)

☐

Second Normal Form (2NF)

☐

Third Normal Form (3NF)

☐

Fifth Normal Form (5NF)

☐

Sixth Normal Form (6NF)

#16. What does the term "candidate key" refer to in normalization?

☐

A set of attributes that uniquely identify a tuple

☐

A unique constraint on a table

☐

A foreign key in another table

☐

A primary key in another table

☐

A composite key in a relation

#17. What is the process of decomposing a relation into smaller, more manageable relations called?

☐

Normalization

☐

Denormalization

☐

Decomposition

☐

Redundancy

☐

Aggregation

#18. Which normal form allows a relation to be in 2NF and removes partial dependencies on a composite primary key?

☐

Third Normal Form (3NF)

☐

Second Normal Form (2NF)

☐

Fourth Normal Form (4NF)

☐

Fifth Normal Form (5NF)

☐

Sixth Normal Form (6NF)

#19. What is a partial dependency in the context of database normalization?

☐

A dependency between two attributes

☐

A dependency between three or more attributes

☐

A dependency between two tables

☐

A dependency between two databases

☐

A dependency between records

#20. Which normal form ensures that non-key attributes are fully functionally dependent on the primary key?

☐

First Normal Form (1NF)

☐

Second Normal Form (2NF)

☐

Third Normal Form (3NF)

☐

Fourth Normal Form (4NF)

☐

Fifth Normal Form (5NF)

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