Sean Kennedy - Quiz 6:

1) In general, normalizing a single flat-file database results

in which of the following?

a) Many tables.

b) Reduced data redundancy.

c) No INSERT, DELETE or UPDATE anomalies.

d) All of the above.

e) None of the above.

d)

2) Normalization

a) has no impact on performance.

b) is necessary for read-only databases.

c) sets the business rules.

d) is a technical exercise that does not change the

business rules.

c)

3) Normalization is required to

a) prevent updates by unauthorized personnel.

b) update multiple instances of data at the same time.

c) make sure the same data is stored in multiple

locations.

d) preserve data quality.

d)

4) In a read only database

a) denormalization is common in order to provide

efficient report generation.

b) normalization is required to prevent update anomalies.

c) normalization has no impact on reads.

d) denormalization is performed to speed up writes.

a)

5) A table normalized to first normal form (1NF) commonly

a) includes more attributes than the non-normalized

version.

b) contains more records than the non-normalized

version.

c) contains less records than the non-normalized version.

d) has no redundant data.

d)

6) A relation is in first normal form (1NF) if

a) at least one attribute in every row contain only one

single (atomic) value.

b) every non-key attribute is fully functionally dependent

on the primary key.

c) at least one attribute in every row can contain more

than one value (multivalued).

d) every attribute in every row can contain only one

single (atomic) value.

b)

7) A relation is in first normal form (1NF) if

a) it doesn’t contain an determinants.

b) it doesn’t contain any repeating groups.

c) it doesn’t contain any null values in primary key

fields.

d) it doesn’t contain any functional dependences.

b)

8) A relation is in second normal form (2NF) if

a) it is in 1NF and every key attribute is fully functionally

dependent on the primary key.

b) it is in 1NF and every attribute is fully functionally

dependent on the primary key.

c) it is in 1NF and every non-key attribute is fully

functionally dependent on the primary key.

d) it is in 1NF and no non-key attribute is transitively

dependent on the primary key.

9) A relation is in third normal form (3NF) if

a) it is in 1NF and no non-key attribute is transitively

dependent on the primary key.

b) it is in 2NF and no non-key attribute is transitively

dependent on the primary key.

c) it is in 1NF and no non-key attribute is fully

functionally dependent on the primary key.

d) it is in 2NF and no non-key attribute is fully

functionally dependent on the primary key.

10) In fourth normal form (4NF)

a) All occurrences of an entity must contain the same

number of attributes.

b) All non-key fields must be a function of the key.

c) All non-key fields must not be a function of other

non-key fields.

d) A row must not contain two or more independent

multi-valued facts about an entity.

11) When you normalize a relation by breaking it into two

smaller relations, what must you do to maintain data

integrity?

a) Link the relations by a common field.

b) Remove any functional dependencies from both

relations.

c) Assign both relations the same primary key field(s).

d) Ensure that there is no relationship or integrity

constraint between the resulting tables.

12) Table ?? is in which normal form?

a) First Normal Form (1NF)

b) Second Normal Form (2NF)

c) Third Normal Form (3NF)

d) Fourth Normal Form (4NF)

13) In Table ??, which of the following is apparently true?

a) StudentID ! TutorID

b) CourseID ! Room, Topic

c) CourseID ! TutorID

d) CourseID ! Topic

14) Normalization ensures that each fact (data) is

a) stored in exactly one location.

b) stored in multiple locations and updated simultaneously.

c) updated in all locations simultaneously.

d) not null.

a)

15) In discussing normal form, a key is

a) a unique identifier for a row in a table, used to

select the row in queries.

b) a set of attributes that describe an instance of an

entity.

c) an object defined in the system model about which

data is stored in the database.

d) a set of attributes that cannot be used to uniquely

identify a row in a table.

16) The same fact (data) that is stored in multiple locations

may become

a) normalized.

b) inconsistent.

c) a foreign key.

d) outdated.

b)

17) To alter a product name requires the name to be changed

in 5 different places. This is an example of a potential

a) DELETE anomaly.

b) INSERT anomaly.

c) UPDATE anomaly.

d) CREATE anomaly.

c)

18) A school database’s Students table contains the name

and address details of each student. However there are

many brothers and sisters in the school who live at the

same address. Splitting the address details into their own

table would occur when normalizing the Students table

into:

a) 1NF

b) 2NF

c) 3NF

d) 4NF

19) In a normalized table, the attribute A1 is functionally

dependent on the attribute A2. Which os the following

is true?

a) There can be repeating values in the A1 column.

b) The A2 column is a unique identifier.

c) Each value for A2 identifies a single value of A1.

d) All of the above.

e) None of the above.

20) A table contains data about products and customers.

Splitting this table into two would occur when normalizing

the table into:

a) 1NF

b) 2NF

c) 3NF

d) 4NF

21) During normalization it is first noticed that each time a

particular value in attribute p occurs attribute q has the

same value. Which normal form is being considered?

a) 1NF

b) 2NF

c) 3NF

d) 4NF