

Querying Relational Databases Part 2 Notes

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1 Unique Keys

- Is configured so that no value can be repeated
- Can be null (if schema permits)
- Can have multiple unique keys per table
 - e.g. unique emails column, and unique ssn column in one table
- Can be modified to a new value
 - As long as it is not conflicted with others

2 PRIMARY Keys

- Never be null
- One primary key per table
- Cannot be modified to a new value

Person Table

PRIMARY KEY

id	name	ssn
1	Jan	123-12-1234
2	Steve	333-33-3333
2	Dorian	444-44-444

Not allowed. Nono.

3 Quiz 1

1. What happens when a Unique Constraint is violated in a database system?
 - A. An email alert is sent to the Database Administrator.
 - B. The database locks up until the Database Administrator does a reboot.
 - C. The database does not allow the data to be written to the table and an error is returned.
 - D. The database allows the data to be written anyway.

Answer: C

2. What data type does a primary key have to be?
 - A. Integer
 - B. Text
 - C. Either, as long as the value guarantees uniqueness

Answer: C

3. Which of the following is NOT something a database key can do?

- A. Ensure a value does not repeat within a given column.
- B. Guarantee a table does not return data when queried unless a specific password is supplied.
- C. Guarantee an entire row is unique within a table.
- D. Act as a pointer or a link back to another table.

Answer: B

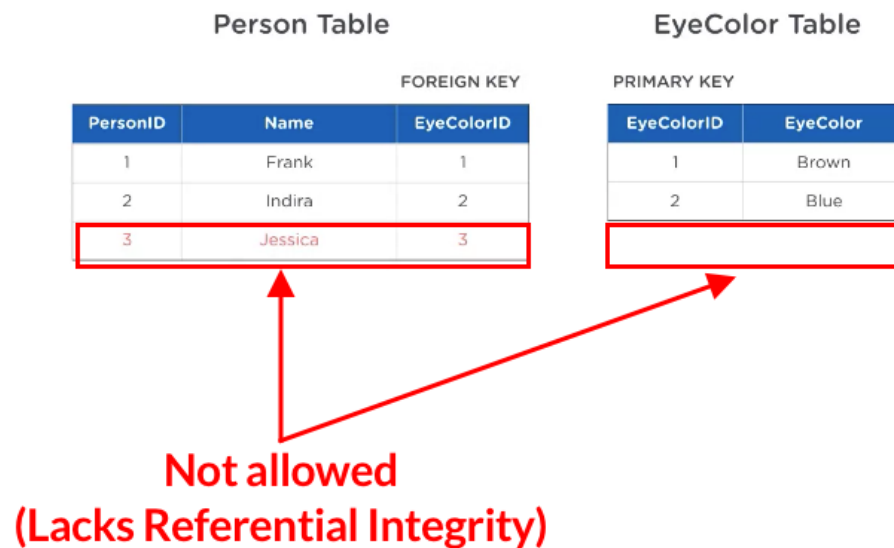
4. A Primary Key will allow one NULL value, but no more than that.

- A. True
- B. False

Answer: B

4 Foreign Keys

- value cannot be added to table with foreign key unless the value exists in the table with primary key
 - is called **referential integrity**



5 Quiz 2

1. Assuming 1, 2 and 3 are all values in the primary key table, this is a valid Foreign Key column.

FK_ID
1
2
2
3
3

- A. True
- B. False

Answer: A

2. The thing that defines the physical relationship between two tables in a database is called:

- A. Foreign Key View
- B. Foreign Key Constraint
- C. Foreign Key Hole
- D. Foreign Key Page

Answer: B

3. What are Foreign Keys?

- A. They are columns that guarantee uniqueness within the table.
- B. They are columns that contain data which relate to the Primary Key in another table.
- C. They are columns that contain international demographic information.
- D. They are keys on a piano that come from another country.

Answer: B

4. If NO Foreign Key Constraint exists between two tables, it is possible to accidentally record data in a foreign key column that does not have a matching value in the primary key table.

- A. True
- B. False

Answer: A

5. Once a Foreign Key Constraint is created to enforce the referential integrity between two tables, what happens if you try to insert a value that does NOT exist in the primary key table?

- A. It will insert the data anyway.
- B. It will alert the Database Administrator that someone is trying to violate referential integrity and lock the database.
- C. It will NOT insert the data, and will return an error.

Answer: C