Database Design (part 3)

**what should I use surrogate Keys or Natural Keys?**

**Natural Key :**

you have to define any new data because it's already

within your table, and you can use that' as your natural Key. so you're required

to store less information in your data base

**Downside in nabural -:**

you might not always be able to figure out what to use for your natural Key

**Surrogate Key:**

have to store new data to store more data

**Note:** using any of these Key it just depends on what to do if you prefer to use natural or. surrogate Keys

**surogate Keys:-**

prefer to used it because it simple

**Foreign Key**:

it is areference a primary Key,are what connect

tables, and that you protect that integrity with foreign key constrain.

Note: should have just one primary Key.

**Not Nell Foreign Key:-**

you should call value , in freign key using null is optionad or required

**Note** : primany Key can’t change but foreign key can change

**Foreign Keyconstrain**: - need constrains to protect the integrity of our database

* ﻿﻿on Delete
* ﻿﻿on update

They refer to the parent.

**Note**: When we delete, Update the parent we do the same thing on child

**- Restrict :(**No Action) is going to throw an error

**-Cascade: do** whatever we do to the parent to the child

**-Set Null**

**Simple Key- (surrogate Key)**

Means Key consists of one call

**Composite Key.. (Natural Key)**

means it consists of two or more columns

**Compound Key:.**

it's a call, it's a key that has multiple columns, and they are all Keys themselves,

Review and Key points

Introduction to Entity Relationship Modeling

* ERD
* ER Model
* EER Model

**Cardinality:**

-It talks about the maximum number of associations between rows of tables.

There are different types

- One-to-one, one-to-many, many-to-many.

-is basic relationship type between tables

**Modality:**

- It talks about the minimum number of row associations in a table.

-There are different types Nullable and

Not nullable.

**1NF:**

* + Each table cell should contain a single value.
  + Each record needs to be unique.

**2NF:**

* Rule 1- Be in 1NF
* Rule 2- Single Column Primary Key that does not functionally dependant on any subset of candidate key relation

**3NF:**

* Rule 1- Be in 2NF
* Rule 2- Has no transitive functional dependencies