DataBases Models and MER

DataBase Foundations

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Outline

1. Databases Types

2. Entity-Relation Model (MER)

Outline

Relational DataBases I — Structured Data
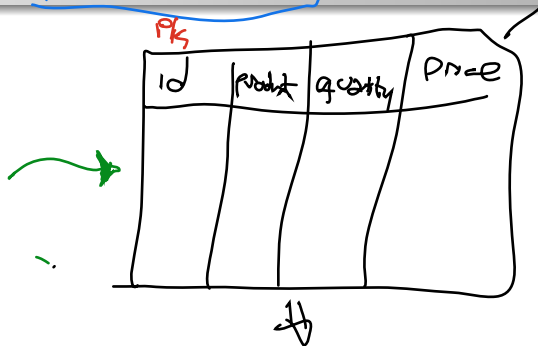
Relational DataBases II — Tables & Keys

Semi-Structured Data
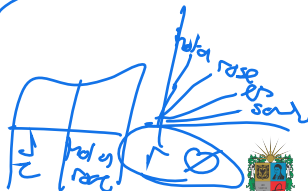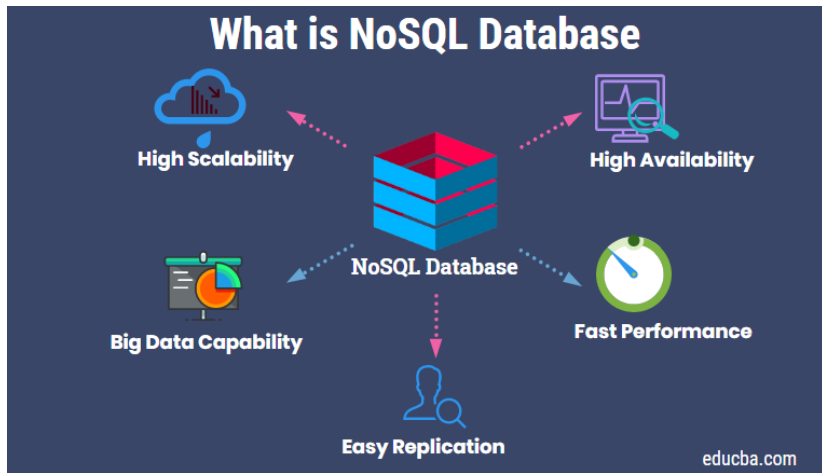
NoSQL DataBases

Document-Based NoSQL
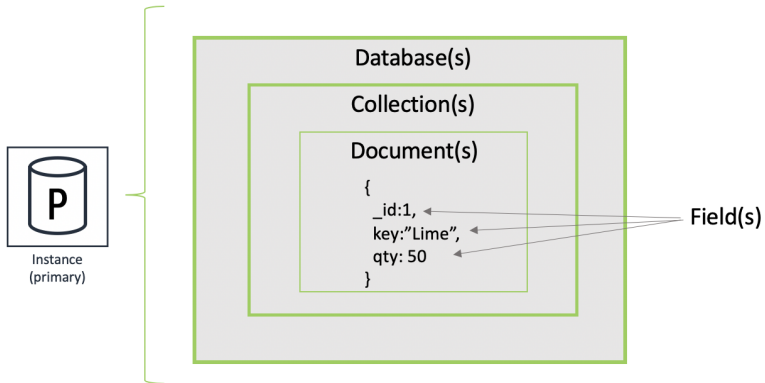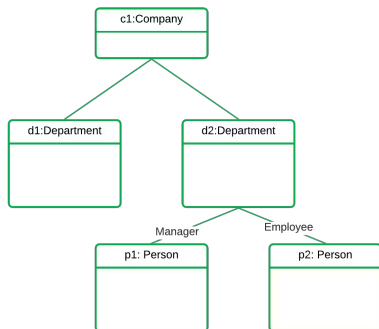
Object-Oriented NoSQL
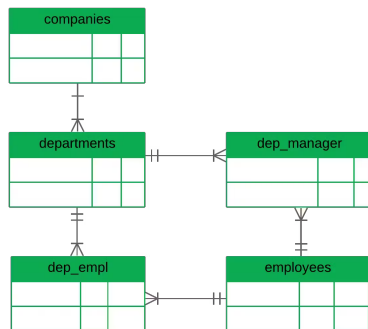
Graph-Based NoSQL

Outline

Basic Concepts

- **Entity**: A thing or object in the real world that is distinguishable from other objects.
- Attribute: A property or characteristic of an entity.
- Relationship: An association between entities.
- Cardinality: The number of instances of an entity that can be associated with another entity.
- Degree: The number of entities that participate in a relationship.

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Step 1. Define Components

Step 2. Define Entities

Step 3. Define Attributes per Entity

Step 4. Define Relationships

Step 5. Define Relationships Types

Step 6. First Entity-Relationship Draw

Step 7. First Split Many-to-Many Relationships

Step 8. Second Entity-Relationship Draw

Step 9. Get Data-Structure E-R M

Step 10. Define Constraints and Properties of Data

Outline

Thanks!

Questions?

Repo: *https://github.com/EngAndres/ud-public/tree/main/courses/databases-foundations*