Denormalization and NoSql Data Modelling

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Part 1 - Denormalization

Possible foreign keys:

Store - managerID (reference to Employee)?

Employee - whereWork (reference to Store)?

Department - managerID (reference to Employee)?

Schedule - departmentID (reference to Department!!), employeeID (reference to Employee!!)

Can Apply Denormalization to :

Schedule - Department - Employee

Store - Employee

It appears Schedule is an associative entity type between Employee and Department entity types. This is seen in how employeeID and departmentID, primary keys of their respective entity types, is found in the Schedule entity type. Thus we know the relationships of the entities. Denormalization the entity types by adding more attributes to the Schedule such as employeeName, salesGoal. This adds more redundancy to the relations but this also requires more space usage and may increase inconsistencies. It also introduces possible update anomalies.

Denormalization might be possible on Store - Employee but questions would need to be answered for it to be possible -> What is the meaning and contents found in the whereWork attribute found in the Employee entity? Is this something referencing the storeID? or it this storing information on where the employee works? can an employee work in 1 location or multiple?

What is the meaning of the managerID attribute found in the Store entity? Does this attribute refer to the employeeID found in the Employee entity type? Is a manager instance also an employee instance?

Part 2 - NoSQL Modelling

Task 1) Based on the given ERD, the aggregate boundary is thus: when we access profile aggregate, we do not expect to see enrollee personal information.

Task 2) A diagram of a company

AI-generated content may be incorrect.

Task 3) JSON file

Profile.json

[{ target: 1,

Experience: [{ relevant\_experience: "Has relevent experience"

}],

Company: [{ company\_id: "C01",

training\_hours: "18",

type: "Pvt Ltd",

company\_size: "Oct-49"

}],

Education: [{

major\_discipline: "STEM",

level: "Graduate",

enrolled\_university: "no\_enrollment"

}]

}]

Enrollee.json

[{ city: "city\_114",

city\_development\_index: "0.925999999999999",

gender: "Male",

experience: "16",

last\_new\_job: ">4"

}]