Normalization

1. Why ?
   1. to avoid the issues that already exist in the database.
   2. to avoid the anomalies
      1. Insertion anomaly
      2. Deletion anomaly
      3. Modification anomaly

2. Do some modifications to get the correct mapping by avoid the duplication and inconsistencies

3. Functional Dependency
   1. PK → Column
      1. Pnumber → PName
   2. PK → Columns
      1. EID → Ename, Salary
   3. Composite PK → columns
      1. EID + Pnumber → HourPerEmp

4. Types of Functional Dependency
   1. FFD "Full Functional Dependency"
      1. if the attributes depends on the WHOLE PK
   2. PFD "Partial Functional Dependency"
      1. if the attribute depends on the part of the PK
   3. TFD "Transitive Functional Dependency"
      1. if the two NON-PK depend on each other

5. Steps in Normalization
   1. NF (Normal Form) : used for modifying tables to increase the performance in Database.
   2. 0NF → Remove multivalued attribute → 1NF
   3. 1NF → Remove partial functional dependency → 2NF
   4. 2NF → Remove transitive functional dependency → 3NF