

Type - 3 Normalization:

There are three types of anomalies that occur when the database is not normalized. These are -

update anomaly, Insert anomaly and delete anomaly.

* For 2nd normal form (2NF) \rightarrow table must be in 1NF (and for 1NF that must be in 1NF)

* There shouldn't be any transitive functional dependency.

transitive dependency is \rightarrow some attribute dependent of ~~some~~ any on some non prime attribute.

3NF for department table \rightarrow

in department table prime attribute is Department_id and Location_id is foreign key.

Hence \rightarrow

Department_ID \rightarrow Department_Name

Department_ID \rightarrow Manager_ID.

no transitive dependency. So, the department table is already in 3NF.

Note:

department table is already in 1NF - (there is no multivalued attribute)

department table is already in 2NF (no partial dependency)