

Second Normal Form

* DB design should be in 1NF.

* No partial dependency

↓
There are some columns that depend on subset of candidate key

↓
*) set of attribute uniquely identify tuples in a table.

Ex (Employee table)

| emp Id | Dept Id | emp Name | Dept Name | Location |
|--------|---------|----------|-----------|----------|
| 1 | 23 | Abc | Mail | NP |
| 2 | 24 | xyz | Meeting | Tower |
| 3 | 28 | pqr | Mail | NP |

primary key : emp id

candidate key : (emp id, dept id)

dept Name & location is depend only on dept id.

dept id is proper subset of candidate key
(emp id, dept id)

∴ partial dependency.

(~~For~~) To remove Partial dependency
split a table into Two
(employee department)

Employee Table

| Emp ^{id} | emp Name | Dept ^{id} Name |
|-------------------|----------|---------------------------------------|
| | | |
| | | |

Dept Table

| Dept ^{id} | Dept Name | Location |
|--------------------|-----------|----------|
| | | |
| | | |

In employee & dept table there is no partial dependency, only functional dependency.