

## Quiz

Three types of normalization exists : 1NF, 2NF and 3NF.

Department table:

Dept (dept\_id, dept\_name, man\_id, man\_name, man\_salary, loc\_id, loc\_city)

Functional dependencies:

dept\_id  $\rightarrow$  dept\_name, man\_id, man\_name, man\_salary, loc\_id, loc\_city

man\_id  $\rightarrow$  man\_name, man\_salary

loc\_id  $\rightarrow$  loc\_city

e.k = { dept\_id }

1NF:

In order to be in 1st normal form, the relation must have a ~~a~~ unique key.

Dept (dept\_id, dept\_name, man\_id, man\_name, man\_salary, loc\_id, loc\_city)



### 2NF:

The relation is also in 2NF because there is no partial dependency, that is, all non-prime attributes ~~are~~ functions can be determined by the all attributes of candidate key.

### 3NF:

The schema has transitive dependency, that is, some non-prime attribute is functionally dependent on ~~some~~ another non-prime attribute.

In order to get 3NF form, we need to decompose.

Dept ( dept\_id , dept\_name, man\_id, loc\_id )

Man ( man\_id , man\_name, man\_salary )

Loc ( loc\_id , loc\_city )