

Normalization

Empno	Deptcode	Deptlocation	Name	Job	hiredate	salary
1001	3D	Sidokumpul	Benjamin Miguet	Programmer IV	2019-10-25	133608.91
1002	1C	Pointe-à-Pitre	Biddy Coppock.	Health Coach II	2016-12-09	135302.24
1003	4B	Lilla Edet	Desmond Ogbourne	Senior Cost Accountant	2020-03-24	55991.73
1004	1A	Lemery	Marita Dubery	Executive Secretary	2019-03-13	53720.04
1005	1C	Changhua	Meg Holleran	Executive Secretary	2014-10-20	73794.5

1. Empno
2. Empno -> (Deptcode, Deptlocation, Name, Job, hiredate, salary)
Deptcode -> (Deptlocation)
2. Relation Is not well formed =>
 - a. DEPARTMENT(Deptcode, Deptlocation)
 - b. DEPARTMENT(Deptcode, Deptlocation)
 - c. EMPLOYEE(Empno, Deptcode, Name, Job, hiredate, salary)
 - d. Employee.Deptcode -> Department.Deptcode

1nf ok - no repeating groups.

2nf Redundancy occurs because deptlocation depends on deptcode not Empno. So, he has two potential keys.

3nf After identify dependency we decompose into two tables. Employee table and Department table.

EMPLOYEE(Empno, Deptcode, Name, Job, hiredate, salary)

Empno	Name	Job	Hiredate	Salary	Deptcode
101	Alice Wong	Analyst	2020-01-15	60000	D01
102	Bob Smith	Analyst	2021-03-10	62000	D01
103	Carol Lee	Manager	2019-07-22	80000	D02
104	David Kim	Clerk	2022-05-05	40000	D02
105	Eva Brown	Analyst	2020-11-30	61000	D03

DEPARTMENT(Deptcode, Deptlocation)

Deptcode	Deptlocation
D01	New York
D02	Chicago
D03	Boston

