

ID	Employee	Supervisor	travel_required	Department	Project	Position
1	MICHAEL J. ANDERSON	NICOLE GRAY	yes	IT	Marketing optimization, demand forecasting	Senior Data Analyst
2	SCOTT G. ADAMS	CLARKE HAMBLEY	no	Tech	Automation of processes	Engineer
3	JAMES B. BARNS	MICHAEL J. ANDERSON	no	IT	Demand forecasting	Data Analyst
4	PAUL R. BROWN	MARGARET C. LEPAGE	no	Finance	Budget planning	Manager
5	JESSICA R. CURRIER	CATHERINE LEWIS	yes	HR	Hiring employees	Business partners
6	KRIS J. EIMICKE	MARGARET C. LEPAGE	yes	Finance	Budget planning	Account manager
7	STEVEN E. COPE	CATHERINE LEWIS	no	IT	Infrastructure development	Data engineer
8	REBECCA GREENFIELD	CLARKE HAMBLEY	yes	Tech	Automation of processes	Engineer
9	ANDREA L FRAVERT	MICHAEL J. ANDERSON	no	IT	Data visualization, Data analysis	Data Analyst
10	MATTHEW J. FOSTER	MICHAEL J. ANDERSON	no	IT	Sales optimization	Project manager

1 НФ

Исходная таблица не соответствует 1 НФ, так как в поле Project для некоторых записей содержит более одного значения.
Приведём таблицу к 1НФ

ID	Employee	Supervisor	travel_required	Department	Project	Position
1	MICHAEL J. ANDERSON	NICOLE GRAY	yes	IT	Marketing optimization	Senior Data Analyst
1	MICHAEL J. ANDERSON	NICOLE GRAY	yes	IT	Demand forecasting	Senior Data Analyst
2	SCOTT G. ADAMS	CLARKE HAMBLEY	no	Tech	Automation of processes	Engineer
3	JAMES B. BARNS	MICHAEL J. ANDERSON	no	IT	Demand forecasting	Data Analyst
4	PAUL R. BROWN	MARGARET C. LEPAGE	no	Finance	Budget planning	Manager
5	JESSICA R. CURRIER	CATHERINE LEWIS	yes	HR	Hiring employees	Business partners
6	KRIS J. EIMICKE	MARGARET C. LEPAGE	yes	Finance	Budget planning	Account manager
7	STEVEN E. COPE	CATHERINE LEWIS	no	IT	Infrastructure development	Data engineer
8	REBECCA GREENFIELD	CLARKE HAMBLEY	yes	Tech	Automation of processes	Engineer
9	ANDREA L FRAVERT	MICHAEL J. ANDERSON	no	IT	Data visualization	Data Analyst
9	ANDREA L FRAVERT	MICHAEL J. ANDERSON	no	IT	Data analysis	Data Analyst
10	MATTHEW J. FOSTER	MICHAEL J. ANDERSON	no	IT	Sales optimization	Project manager

2 НФ

Предыдущая таблица не соответствует 2НФ, так как у одного сотрудника может быть несколько проектов, при этом остальные параметры соотносятся с сотрудником как 1 к 1.

Employee_id	Employee	Supervisor	travel_required	Department	Position
1	MICHAEL J. ANDERSON	NICOLE GRAY	yes	IT	Senior Data Analyst
2	SCOTT G. ADAMS	CLARKE HAMBLEY	no	Tech	Engineer
3	JAMES B. BARNS	MICHAEL J. ANDERSON	no	IT	Data Analyst
4	PAUL R. BROWN	MARGARET C. LEPAGE	no	Finance	Manager
5	JESSICA R. CURRIER	CATHERINE LEWIS	yes	HR	Business partners
6	KRIS J. EIMICKE	MARGARET C. LEPAGE	yes	Finance	Account manager
7	STEVEN E. COPE	CATHERINE LEWIS	no	IT	Data engineer
8	REBECCA GREENFIELD	CLARKE HAMBLEY	yes	Tech	Engineer
9	ANDREA L FRAVERT	MICHAEL J. ANDERSON	no	IT	Data Analyst
10	MATTHEW J. FOSTER	MICHAEL J. ANDERSON	no	IT	Project manager

Employee_id	Project
1	Marketing optimization
1	Demand forecasting
2	Automation of processes
3	Demand forecasting
4	Budget planning
5	Hiring employees
6	Budget planning
7	Infrastructure development
8	Automation of processes
9	Data visualization
9	Data analysis
10	Sales optimization

3 НФ

Предыдущая версия не относится к 3НФ, так как Department зависит от Position

Employee_id	Employee	supervisor	travel_required	Position
1	MICHAEL J. ANDERSON	NICOLE GRAY	yes	Senior Data Analyst
2	SCOTT G. ADAMS	CLARKE HAMBLEY	no	Engineer
3	JAMES B. BARNS	MICHAEL J. ANDERSON	no	Data Analyst
4	PAUL R. BROWN	MARGARET C. LEPAGE	no	Manager
5	JESSICA R. CURRIER	CATHERINE LEWIS	yes	Business partners
6	KRIS J. EIMICKE	MARGARET C. LEPAGE	yes	Account manager
7	STEVEN E. COPE	CATHERINE LEWIS	no	Data engineer
8	REBECCA GREENFIELD	CLARKE HAMBLEY	yes	Engineer
9	ANDREA L FRAVERT	MICHAEL J. ANDERSON	no	Data Analyst
10	MATTHEW J. FOSTER	MICHAEL J. ANDERSON	no	Project manager

employee_project_id	Employee_id	Project
1	1	Marketing optimization
2	1	Demand forecasting
3	2	Automation of processes
4	3	Demand forecasting
5	4	Budget planning
6	5	Hiring employees
7	6	Budget planning
8	7	Infrastructure development
9	8	Automation of processes
10	9	Data visualization
11	9	Data analysis
12	10	Sales optimization

Position	Department
Senior Data Analyst	IT
Engineer	Tech
Data Analyst	IT
Manager	Finance
Business partners	HR
Account manager	Finance
Data engineer	IT
Project manager	IT