

Normalisation – Example with data

Version 1.0

Employee Project Allocation

Employee ID	Employee Name	Job Level	Employee Contact	Project Id	Project Name	Project type	Allocation Type	Client Name	Client Location
260444	Arun	Developer	2535	260145	CBNA	Billable	Permanent	CitiBank	NewYork
186878	Sunder	Manager	2108	260145	CBNA	Billable	Permanent	CitiBank	NewYork
313307	Pushpa	Designer	2322	180429	CitiCards	Billable	Permanent	CitiBank	NewYork
260444	Arun	Developer	2535	180429	CitiCards	Billable	Permanent	CitiBank	NewYork
198569	Siva	Manager	5531	180429	CitiCards	Billable	Permanent	CitiBank	NewYork
516490	Bharati	Developer	2406	156732	CitiCollections	Billable	Permanent	CitiBank	NewYork
703131	Sharath	Developer	2538	385432	BoACustCare	Billable	Permanent	BoA	Chicago
465821	Arjun	Tester	2158	385432	BoACustCare	Billable	Permanent	BoA	Chicago
214652	Megha	Manager	6071	385432	BoACustCare	Billable	Permanent	BoA	Chicago

Entities

Employee
Project
Client

Cardinality

Employee → Project many to many
Project → Client many to one

1NF

Employee_allocation

Project Id	Employee ID	Allocation Type	Employee Name	Job Level	Employee Contact
260145	260444	Permanent	Arun	Developer	2535
260145	186878	Permanent	Sunder	Manager	2108
180429	313307	Permanent	Pushpa	Designer	2322
180429	260444	Permanent	Arun	Developer	2535
180429	198569	Permanent	Siva	Manager	5531
156732	516490	Permanent	Bharati	Developer	2406
385432	703131	Permanent	Sharath	Developer	2538
385432	465821	Permanent	Arjun	Tester	2158
385432	214652	Permanent	Megha	Manager	6071

Project_Details

Project Id	Project Name	Project type	Client Name	Client Location
260145	CBNA	Billable	CitiBank	NewYork
180429	CitiCards	Billable	CitiBank	NewYork
156732	CitiCollections	Billable	CitiBank	NewYork
385432	BoACustCare	Billable	BoA	Chicago

2NF

Project_Details

Project Id	Project Name	Project type	Client Name	Client Location
260145	CBNA	Billable	CitiBank	NewYork
180429	CitiCards	Billable	CitiBank	NewYork
156732	CitiCollections	Billable	CitiBank	NewYork
385432	BoACustCare	Billable	BoA	Chicago

Employee_Details

Employee ID	Employee Name	Employee Contact	Job Level
260444	Arun	2535	Developer
186878	Sunder	2108	Manager
313307	Pushpa	2322	Designer
198569	Siva	5531	Manager
516490	Bharati	2406	Developer
703131	Sharath	2538	Developer
465821	Arjun	2158	Tester
214652	Megha	6071	Manager

Project_Allocation_Details

Project Id	Employee ID	Allocation Type
260145	260444	Permanent
260145	186878	Permanent
180429	313307	Permanent
180429	260444	Permanent
180429	198569	Permanent
156732	516490	Permanent
385432	703131	Permanent
385432	465821	Permanent
385432	214652	Permanent

3NF

Employee_Details

Employee ID	Employee Name	Employee Contact	Job Level
260444	Arun	2535	Developer
186878	Sunder	2108	Manager
313307	Pushpa	2322	Designer
198569	Siva	5531	Manager
516490	Bharati	2406	Developer
703131	Sharath	2538	Developer
465821	Arjun	2158	Tester
214652	Megha	6071	Manager

Project_Allocation_Details

Project Id	Employee ID	Allocation Type
260145	260444	Permanent
260145	186878	Permanent
180429	313307	Permanent
180429	260444	Permanent
180429	198569	Permanent
156732	516490	Permanent
385432	703131	Permanent
385432	465821	Permanent
385432	214652	Permanent

Project_Details

Project Id	Project Name	Project type	Client Name
260145	CBNA	Billable	CitiBank
180429	CitiCards	Billable	CitiBank
156732	CitiCollections	Billable	CitiBank
385432	BoACustCare	Billable	BoA

Client_Details

Client Name	Client Location
CitiBank	NewYork
BoA	Chicago