

1NF Table

BookingID	BookingDateTime	BookingStatus	CustomerID	CustomerFirstName	CustomerLastName
5001	2024-09-10 18:45	Confirmed	C001	Emily	Carter
5002	2024-09-11 20:10	Pending	C002	Michael	Reynolds
5003	2024-09-12 14:05	Cancelled	C001	Emily	Carter

MovielID	MovieTitle	HallID	HallName	SeatID	SeatNumber
M001	The Last Horizon	H01	Grand Theater	SE020	12
M002	Silent Echo	H02	City Hall	SE078	10
M001	The Last Horizon	H01	Grand Theater	SE033	6

This 1NF table contains atomic values only from our database, as you can see the table is presented in two parts because it is too long, but together they represent a single 1NF relation.

2NF Tables

CustomerID	CustomerFirstName	CustomerLastName	CustomerEmail
C001	Emily	Carter	emily.carter@example.com
C002	Michael	Reynolds	michael.reynolds@example.com

MovielID	MovieTitle
M001	The Last Horizon
M002	Silent Echo

HallID	HallName
H01	Grand Theater
H02	City Hall

CustomerEmail
emily.carter@example.com
michael.reynolds@example.com
emily.carter@example.com

SeatPriceAtBooking
16
24
12

BookingID	BookingDateTime	BookingStatus	CustomerID	MovieID	HallID
5001	2024-09-10 18:45	Confirmed	C001	M001	H01
5002	2024-09-11 20:10	Pending	C002	M002	H02
5003	2024-09-12 14:05	Cancelled	C001	M001	H01
SeatID	SeatNumber	HallID			
SE020	12	H01			
SE078	10	H02			
SE033	6	H01			
BookingID	SeatID	SeatPriceAtBooking			
5001	SE020	16			
5002	SE078	24			
5003	SE033	12			

In 2NF, as you can see the table was separated into multiple tables to remove repeated information.

This removes redundancy and makes sure each table contains data about only one subject.

Each non-key attribute depends fully on the primary key of its own table.

3NF Tables

CustomerID	CustomerFirstName	CustomerLastName	CustomerEmail
C001	Emily	Carter	emily.carter@example.com
C002	Michael	Reynolds	michael.reynolds@example.com
MovieID	MovieTitle		
M001	The Last Horizon		

M002	Silent Echo				
HallID	HallName				
H01	Grand Theater				
H02	City Hall				
BookingID	BookingDateTime	BookingStatus	CustomerID	MovieID	HallID
5001	2024-09-10 18:45	Confirmed	C001	M001	H01
5002	2024-09-11 20:10	Pending	C002	M002	H02
5003	2024-09-12 14:05	Cancelled	C001	M001	H01
SeatID	SeatNumber	HallID			
SE020	12	H01			
SE078	10	H02			
SE033	6	H01			
BookingID	SeatID	SeatPriceAtBooking			
5001	SE020	16			
5002	SE078	24			
5003	SE033	12			
The tables already in 2NF also it was in 3NF, because In each table, every non-key attribute depends directly on the primary key and not on another non-key attribute.					

