

- Additional functional dependencies
 - Our company has multiple buildings
 - Each building has multiple conference rooms
 - Each building has multiple floors
 - Every conference room has a unique room number
 - Room numbers are formatted: [First Initial of the Building][Floor it's on][room]
 - Employees can submit multiple songs they enjoy
 - Employees can submit genres of music they enjoy
 - Employees can submit multiple playlists they enjoy
 - Employee can only have one favorite genre
 - All game names are unique

BuildingInformation

BuildingName (string/varchar(50))

NumberOfFloors (int)

NumberOfConferenceRooms (int)

Super Keys: $(2^3)-1=7$

1. BuildingName
2. NumberOfFloors
3. NumberOfConferenceRooms
4. BuildName, NumberOfFloors
5. BuildingName, NumberOfConferenceRooms
6. BuildingName, NumberOfFloors, NumberOfConferenceRooms
7. NumberOfFloors, NumberOfConferenceRooms

Candidate Keys:

1. BuildingName
2. BuildingName, NumberOfFloors
3. BuildingName, NumberConferenceRooms
4. BuildingName, NumberOfFloors, NumberOfConferenceRooms

Primary Key:

1. BuildingName

BuildingFloors

Floor (int)

ConferenceRoomNumber (int) FK to ConferenceRoomTable

BuildingName (string.varchar(50)) FK To BuildingInformation

ConferenceRoom

RoomNumber (string/varchar(10))

Length (double)
Width (double)
Max seating capacity (int)
Number of windows (int)
Number of doors (int)
blackboard/whiteboard? (boolean)
Projector? (boolean)

Playlist

PlaylistName
SongName
ArtistNames

FavoriteSong

SongName
PersonName

EmployeeName

PersonName
Position
Manager
Age
FavoriteGenre

EmployeePlaylist

PersonName
PlaylistName

Song

SongName
Artist
Genre
ReleaseDate

Games in 1NF

GameName string/varchar(100)

NumberOfPlayers int

GameType varchar(50)

GameOwner varchar(100)

GameOwnerPosition varchar(50)

GameOwnerManager varchar(100)

Games

GameName string/varchar(100)

NumberOfPlayers int

GameType varchar(50)

GameOwner varchar(100)

GameOwnerPosition varchar(50)

GameOwnerManager varchar(100)

Songame

Genre

Artist

SuperKeys $(2^6)-1=63$

CandidateKeys:

GameName, GameOwner

GameName, GameOwner, GameManager

PrimaryKey

GameName, GameOwner

NumberOfPlayers -> GameName

GameType -> GameName

GameOwner -> GameName

GameOwnerPosition -> GameOwner

GameOwnerManaggee -> GameOwner

GameName -> GameName

Games

GameName

Type

NumberOfPlayers

EmployeeGames

EmployeeName

GameName

Prizes

Name

Amount

Age?

Category?

Gifts

Names

Amount

Age

Category