



# CINEMA MANAGEMENT SYSTEM

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Cinema management system has many parts

- We need to store information about employee such as gender , address ,name , salary and SSN ( primary key) . Each employee may have several phone numbers. Employee takes information from many customers (1:N) .
- Each customer is inquired about his ID which is a unique value , age and full name .
- Each customer has to buy tickets . tickets has it's ID , movie name , seat number , price and the time of the movie .
- Sometimes any movie has discount which is stored on the system as offer-ID , movie name and price .Customers have the ability to choose favorite type of movies which can be displayed in halls .
- Halls have types : VIP and local and have number of seats . Every hall display

different movies at the same time . Movies differ in type , rate , name and duration .

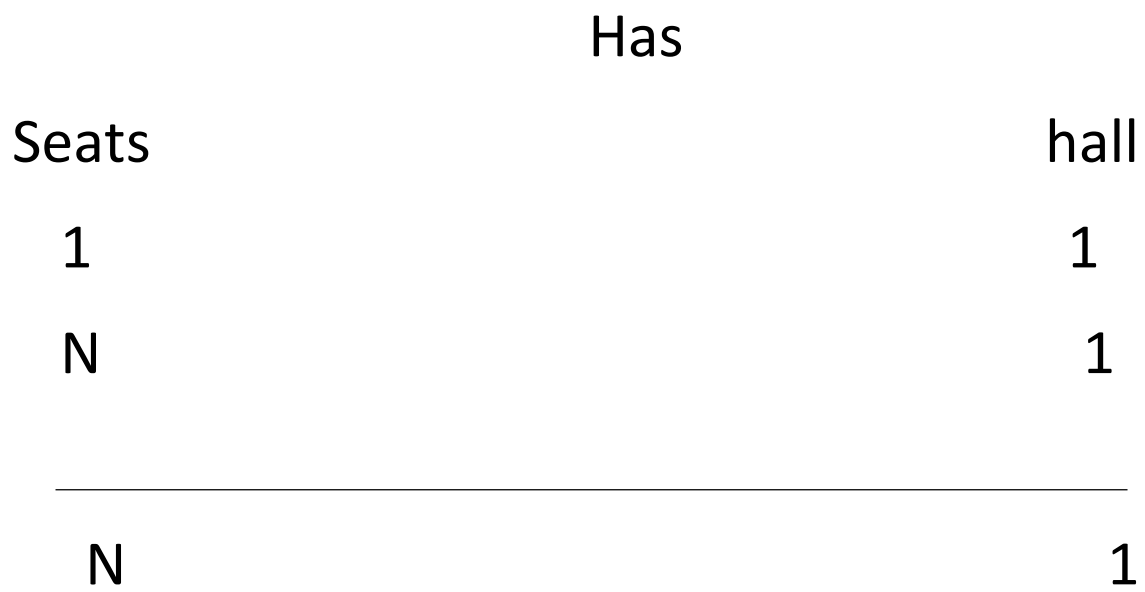
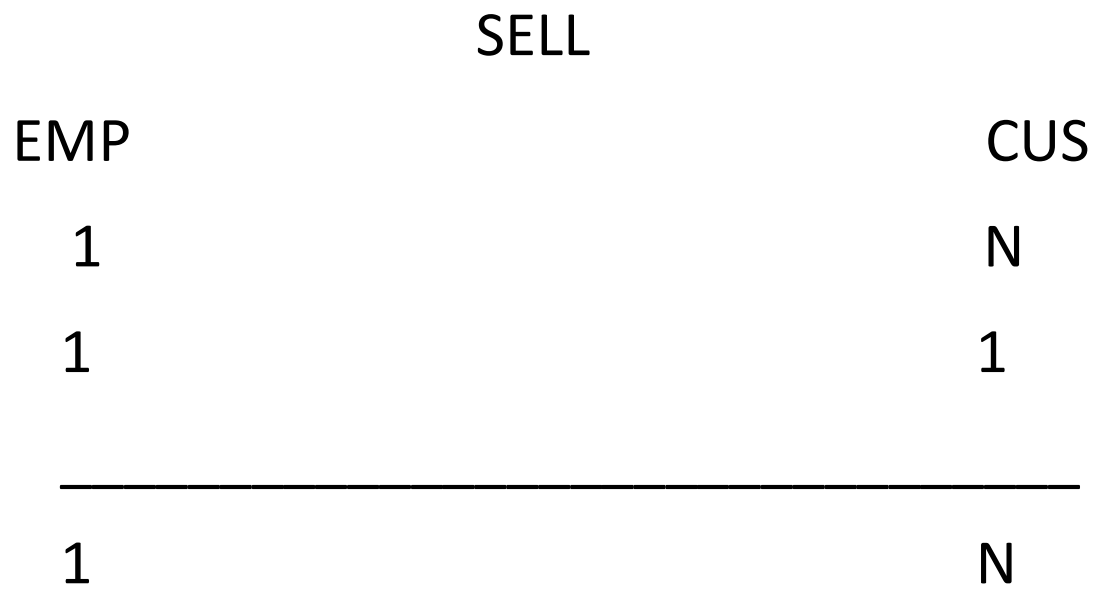
- Offer-ID , seat number , customer- ID , movie- ID , hall- ID and ticket- ID is assigned to be a primary key assigned to be a primary key because it's a unique value and not null .
- Employee's phone number is a multivalued because the employee may have more than one phone number .
- Each supervisor supervise a group of employees but every employee has supervisor .

INQUIRE

EMP	customer
1	N
1	1
<hr/>	
1	N

Show

TIC	hall
1	1
N	1
<hr/>	
N	1



## BOOK

TIC

CUS

OFFERS

1

1

N

1

TIC

DIS

1

1

N

1

N

1

N

1

## DISPLAY

Hall

movie

SUPERVISE

1

M

N

1

N

M

SVISOR

SVISEE

1

N

1

1

1

M



- Both of EMP.SSN and EMP-PHONE are the primary key in the entity EMP-PHONE because EMP-PHONE is a multi-valued attribute
- SSN is the primary key of the entity EMPLOYEE because SSN is a unique value
- ID is a unique value in the entity customer and makes it strong entity so we call ID primary key
- Ticket.ID is the primary key of the entity ticket
- HALL-ID is the primary key of the entity HALL (strong entity )

- Offer.id is a unique value called primary key
- Number of seats has a partial dependence on Hall.id      HALL.ID  $\rightarrow$  Number of seats
- Seat.id has a total dependence on HALL.ID and Seat.num .
- {HALL.ID ,SEATNUM}  $\rightarrow$  SEAT.ID
- Movie.id is the primary key of entity movie
- BOTH OF HALL.ID and MOVIE.ID are the primary key of entity display