

Database model documentation

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1. Model details

Model name:

A Database Model for a Movie Theater Reservation System

Version:

2.4

Database engine:

MySQL

Description:

2. Tables

2.1. Table movie

2.1.1. Columns

Column name	Type	Properties	Description
id	int	PK	
title	varchar(256)		
director	varchar(256)	null	
cast	varchar(1024)	null	
description	text	null	
duration_min	int	null	

2.2. Table employee

Description:

Employee list (users of system)

2.2.1. Columns

Column name	Type	Properties	Description
id	int	PK	
username	varchar(32)		
password	varchar(100)		

2.3. Table seat

2.3.1. Columns

Column name	Type	Properties	Description
id	int	PK	
row	int		
number	int		
auditorium_id	int		

2.4. Table auditorium

Description:

seats_no is redundancy (it could be computed by counting Seat.id_seat related to specific room)

2.4.1. Columns

Column name	Type	Properties	Description
id	int	PK	
name	varchar(32)		
seats_no	int		

2.5. Table screening

2.5.1. Columns

Column name	Type	Properties	Description
id	int	PK	
movie_id	int		
auditorium_id	int		
screening_start	timestamp		

2.5.2. Alternate keys

Key name	Columns	Description
Projection_ak_1	auditorium_id, screening_start	

2.6. Table reservation_type

2.6.1. Columns

Column name	Type	Properties	Description
id	int	PK	
reservation_type	varchar(32)		

2.7. Table reservation

2.7.1. Columns

Column name	Type	Properties	Description
id	int	PK	
screening_id	int		
employee_reserved_id	int	null	

reservation_type_id	int	null	
reservation_contact	varchar(1024)		
reserved	bool	null	
employee_paid_id	int	null	
paid	bool	null	
active	bool		

2.8. Table seat_reserved

2.8.1. Columns

Column name	Type	Properties	Description
id	int	PK	
seat_id	int		
reservation_id	int		
screening_id	int		

3. References

3.1. Reference Seat_Room

auditorium	0..*	seat
id	<->	auditorium_id

3.2. Reference Projection_Movie

movie	0..*	screening
id	<->	movie_id

3.3. Reference Projection_Room

auditorium	0..*	screening
id	<->	auditorium_id

3.4. Reference Reservation_Projection

screening	0..*	reservation
id	<->	screening_id

3.5. Reference Reservation_reserving_employee

employee	0..*	reservation
id	<->	employee_reserved_id

3.6. Reference Reservation_paid_Employee

employee	0..*	reservation
id	<->	employee_paid_id

3.7. Reference Reservation_Reservation_type

reservation_type	0..*	reservation
id	<->	reservation_type_id

3.8. Reference Seat_reserved_Seat

seat	0..*	seat_reserved
id	<->	seat_id

3.9. Reference Seat_reserved_Reservation_reservation

reservation	0..*	seat_reserved
id	<->	reservation_id

3.10. Reference Seat_reserved_Reservation_projection

Description:

reference is here so that we include id_projection in Seat_reserved (id_seat and id_projection is alternative key)

screening	0..*	seat_reserved
id	<->	screening_id