

CSC 675 Milestone Two: Movie Ticket Booking System Entity Relationship Diagram (ERD)

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Version History	
Checkpoint 1 (Version 1)	2/20/2024
Checkpoint 2 (Version 2)	3/8/2024

Entity Description

Ticket (weak)

- id: key numeric
- movie_id: foreign_key numeric
- showing_time_id: foreign_key numeric
- price: numeric
- seat_id: foreign_key numeric
- theatre_id: foreign_key numeric
- status: foreign_key numeric
- ticket_type: foreign_key numeric
- bought_by: foreign_key nullable numeric → maps to User table

Movie (strong)

- id: key numeric
- title: string
- language: foreign_key numeric
- description: string
- film_rating: foreign_key numeric
- duration: time

Showing (weak)

- id: key numeric
- movie_id: foreign_key numeric
- resolution: foreign_key numeric
- subtitles: nullable foreign_key numeric
- dub: nullable foreign_key numeric
- sound_type: foreign_key numeric
- status: string (showing | not showing)
- theatre_id: foreign_key numeric
- start_time: datetime
- end_time: datetime

Seat (weak)

- id: key numeric
- theatre_id: foreign_key numeric
- is_occupied: boolean
- seat_type: foreign_key numeric

Theatre_Room (strong)

- id: key numeric

- name: string
- num_seats: numeric

User (strong)

- id: key numeric
- account_id: nullable foreign_key numeric
- creation_date: datetime
- status: foreign_key numeric

Account (strong)

- id: key numeric
- role: foreign_key numeric → maps to Role table
- password: encrypted string
- email: string
- phone_number: string
- user_id: foreign_key numeric
- first_name: string
- last_name: string

Guest (weak)

- id: key numeric
- user_id: foreign_key numeric
- transaction_date: datetime

Member (weak)

- id: key numeric
- user_id: foreign_key numeric
- account_id: foreign_key numeric
- points: numeric
- discount: numeric (float)
- creation_date: datetime

Employee (weak)

- id: key numeric
- user_id: foreign_key numeric
- account_id: foreign_key numeric
- pay_rate: numeric (float)
- permissions: bitmap
- creation_date: datetime

Admin (weak)

- id: key numeric

- user_id: foreign_key numeric
- account_id: foreign_key numeric
- employee_id: foreign_key numeric
- pay_rate: numeric (float)
- permissions: bitmap
- creation_date: datetime

Payment_Information (weak)

- All fields are encrypted
- id: key numeric
- user_id: foreign_key numeric
- creation_date: datetime
- address: string
- city: string
- state: string
- zip: number
- cvv: number
- card_number: number
- expiry: date
- first_name: string
- last_name: string

Role (strong)

- id: key numeric
- name: string
- description: string

Sale (strong)

- id: key numeric
- discount: numeric (float)
- name: string
- description: string

Ticket_Status (strong)

- id: key numeric
- name: string (unsold | sold | used | expired | refunded)
- description: string

Ticket_Type (strong)

- id: key numeric
- name: string (default | senior | child | family)
- description: string

- suggested_price: numeric (float)

Seat_Type (strong)

- id: key numeric
- name: string (regular | luxury | handicap)
- description: string

Resolution (strong)

- id: key numeric
- name: string (3D | 4D Experience | ultra-widescreen | 4k, etc...)
- description: string

Language (strong)

- id: key numeric
- language_name: string (English | Espanol | Fracais | etc...)
- description: string

Sound_System (strong)

- id: key numeric
- name: string (THX | Dolby Atmos | etc...)
- description: string

User_Status (strong)

- id: key numeric
- name: string (guest | active | deactivated)
- description: string

Dub (strong)

- id: key numeric
- language_id: foreign_key numeric
- description: string

Subtitle (strong)

- id: key numeric
- language_id: foreign_key numeric
- description: string

Film_Rating (strong)

- id: key numeric
- name: string (G | PG | PG-13 | R | NC-17)
- description: string