

# 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

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