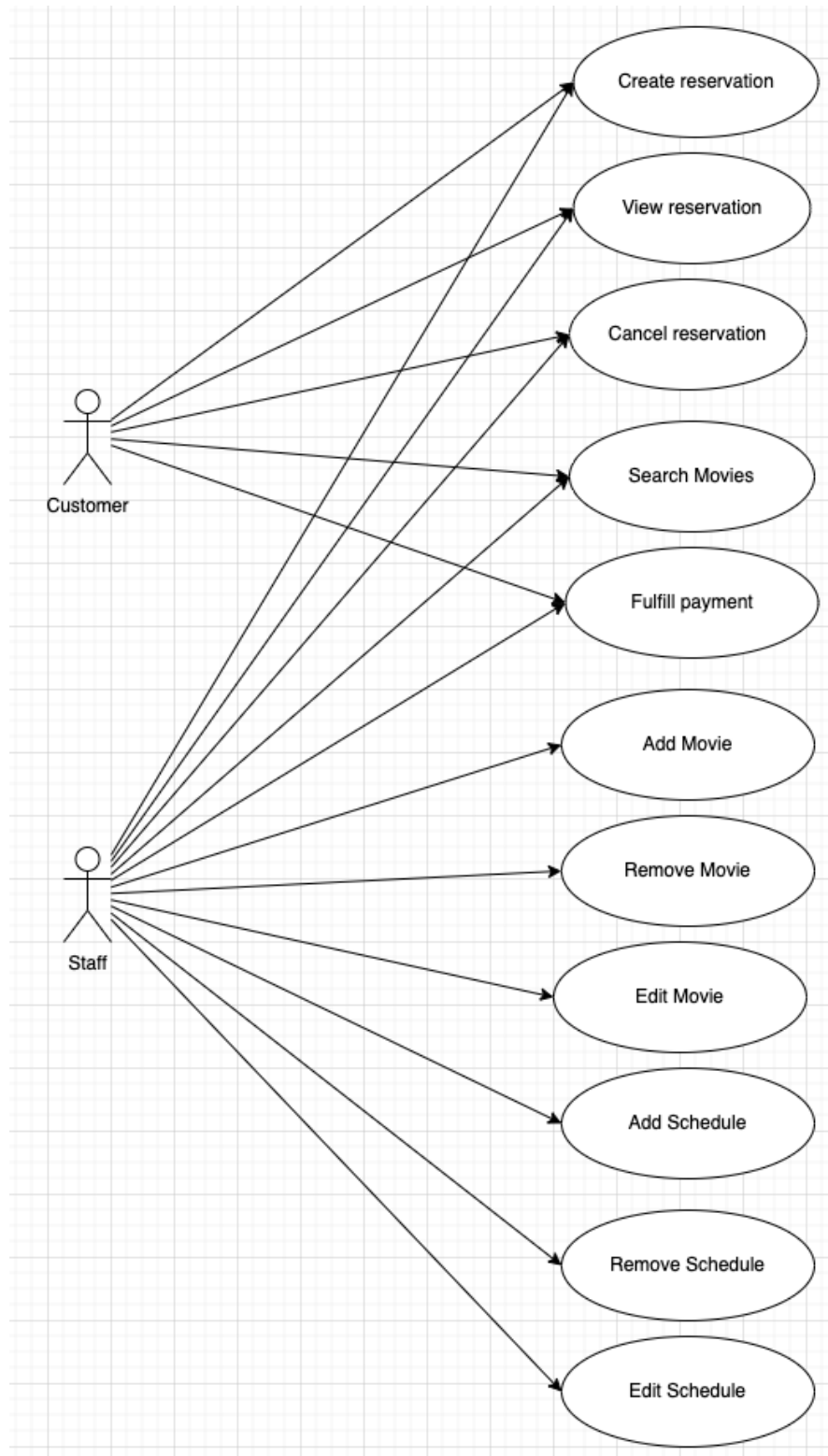


Use Cases:

Staff: Responsible for adding new movies, schedules, and processing customer requests on-site regarding reservations.

Customer: Can view movies, make and pay for reservations online.



Entities

Movies
Entity with basic information about a movie
Attributes: <ul style="list-style-type: none">• Id: PK for the movie, Integer type• Name: The title of the movie• ReleaseDate: The movie's release date• Description: A short description of the movie plot• Duration: Total movie duration in minutes
Relationships: <ul style="list-style-type: none">• One-to-many with MovieGenres: A movie may have multiple genres• One-to-many with MovieSchedules: A movie may be involved in multiple scheduled presentations

MovieGenres
Entity to implement a one to many relationship between movies and genres. The genre and movie Ids will both be used to be a composite key .
Attributes: <ul style="list-style-type: none">• genreId: PK of the genre• movieId: PK of the movie
Relationships: <ul style="list-style-type: none">• One-to-many with Movies: A movie may have multiple genres• One-to-many with Genres: A genre may be in multiple movies

Genres
Entity representing basic information about a movie genre.
Attributes: <ul style="list-style-type: none">• Id: PK of the genre• Name: Name of the movie

Relationships:

- **One-to-many** with **MovieGenres**: A genre may be in multiple movies

MovieSchedules

Entity representing a scheduled presentation for a movie, containing relevant information needed such as price and schedule date.

Attributes:

- **Id**: PK of the schedule
- **StartTime**: Start time of the presentation
- **EndTime**: End time of the presentation, may be calculated using the movie duration, adding extra time as required.
- **MovieId**: Id of the movie that will be presented
- **Price**: Ticket price
- **MovieRoomId**: Id of the room for the presentation

Relationships:

- **One-to-many** with **Movies**: A movie may be in multiple schedules
- **One-to-many** with **MovieRooms**: A movie room may be in multiple schedules

MovieRooms

Entity representing a theater room

Attributes:

- **Id**: PK of the movie room
- **Name**: Name to represent the location of the movie room

Relationships:

- **One-to-many** with **MovieRooms**: A movie room may be in multiple schedules
- **One-to-many** with **RoomSeats**: A movie room may have multiple seats

RoomSeats

Entity representing a movie seat in a theater room

Attributes:

- **Id**: PK of the seat

- **MovieRoomId**: PK of the room id
- **Location**: Location of the seat in the room

Relationships:

- **One-to-many** with **RoomSeats**: A movie room may have multiple seats
- **One-to-one** with **MovieTicket**: One ticket per seat

MovieTicket

Entity representing a movie ticket

Attributes:

- **id**: PK of the ticket
- **scheduleId**: PK of the scheduled presentation
- **seatId**: PK of the seat

Relationships:

- **One-to-many** with **MovieSchedules**: A movie schedule may have multiple tickets
- **One-to-one** with **RoomSeats**: One ticket per seat

ER Diagram:

