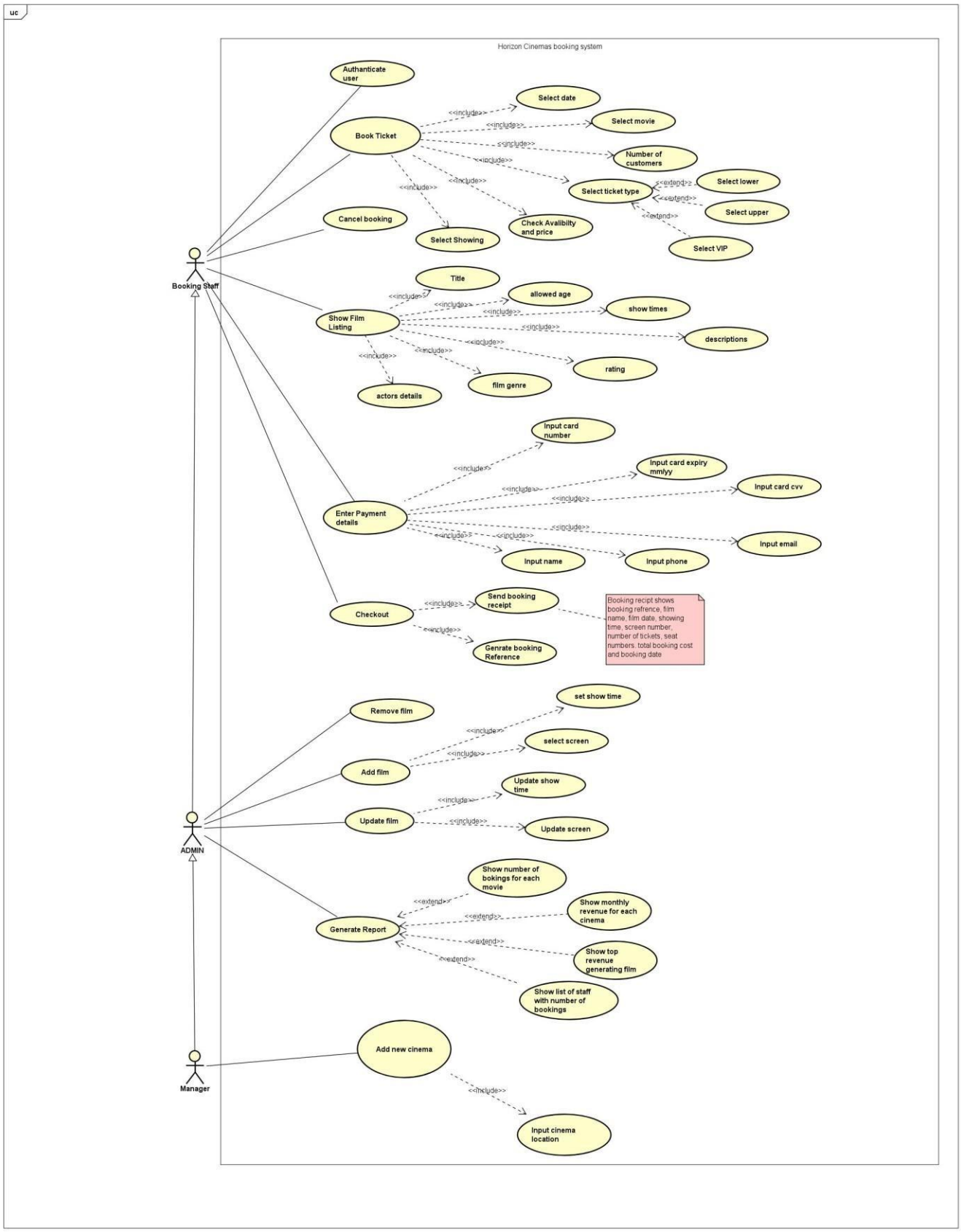
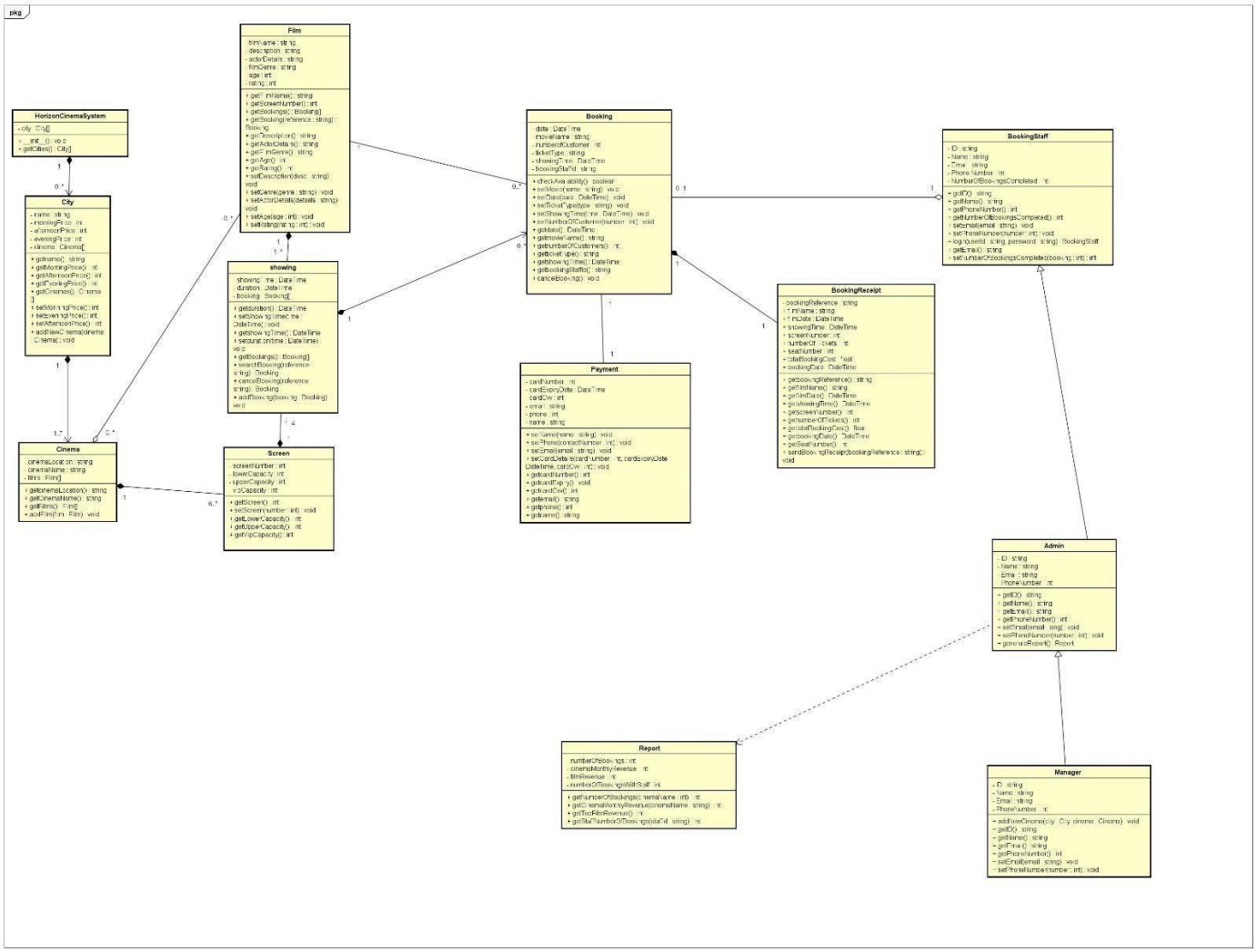
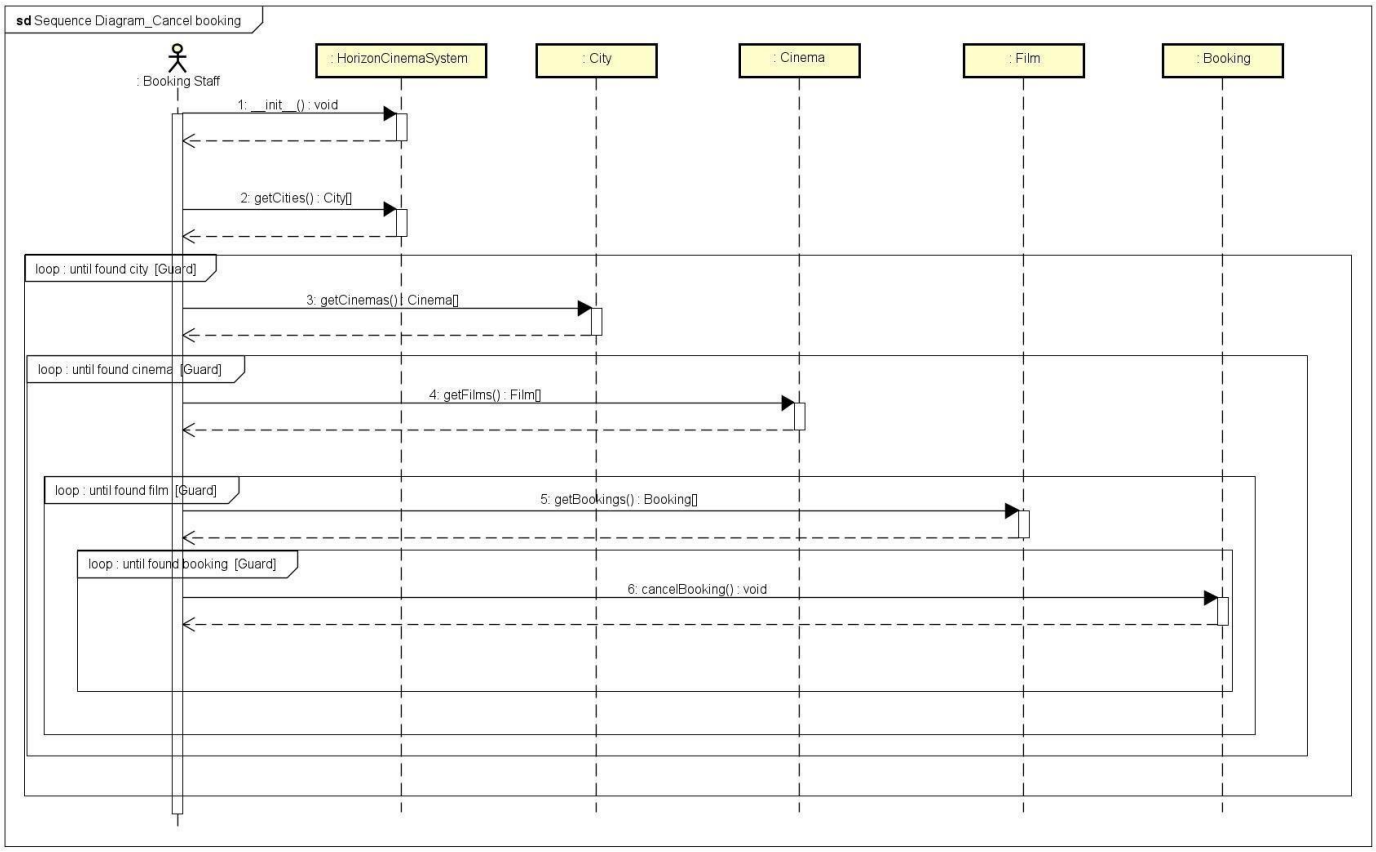
Use Case Diagram:



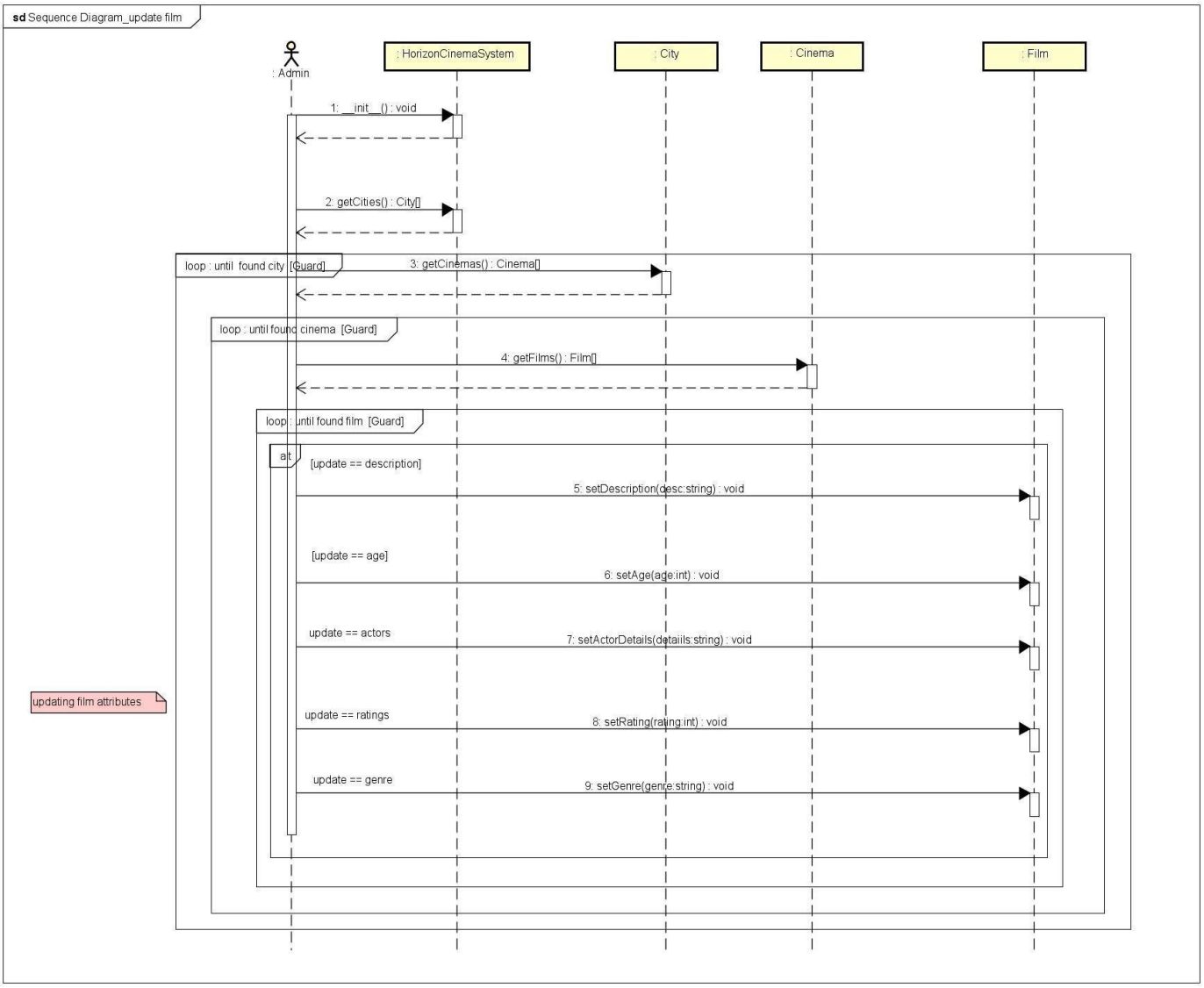
Class Diagram:



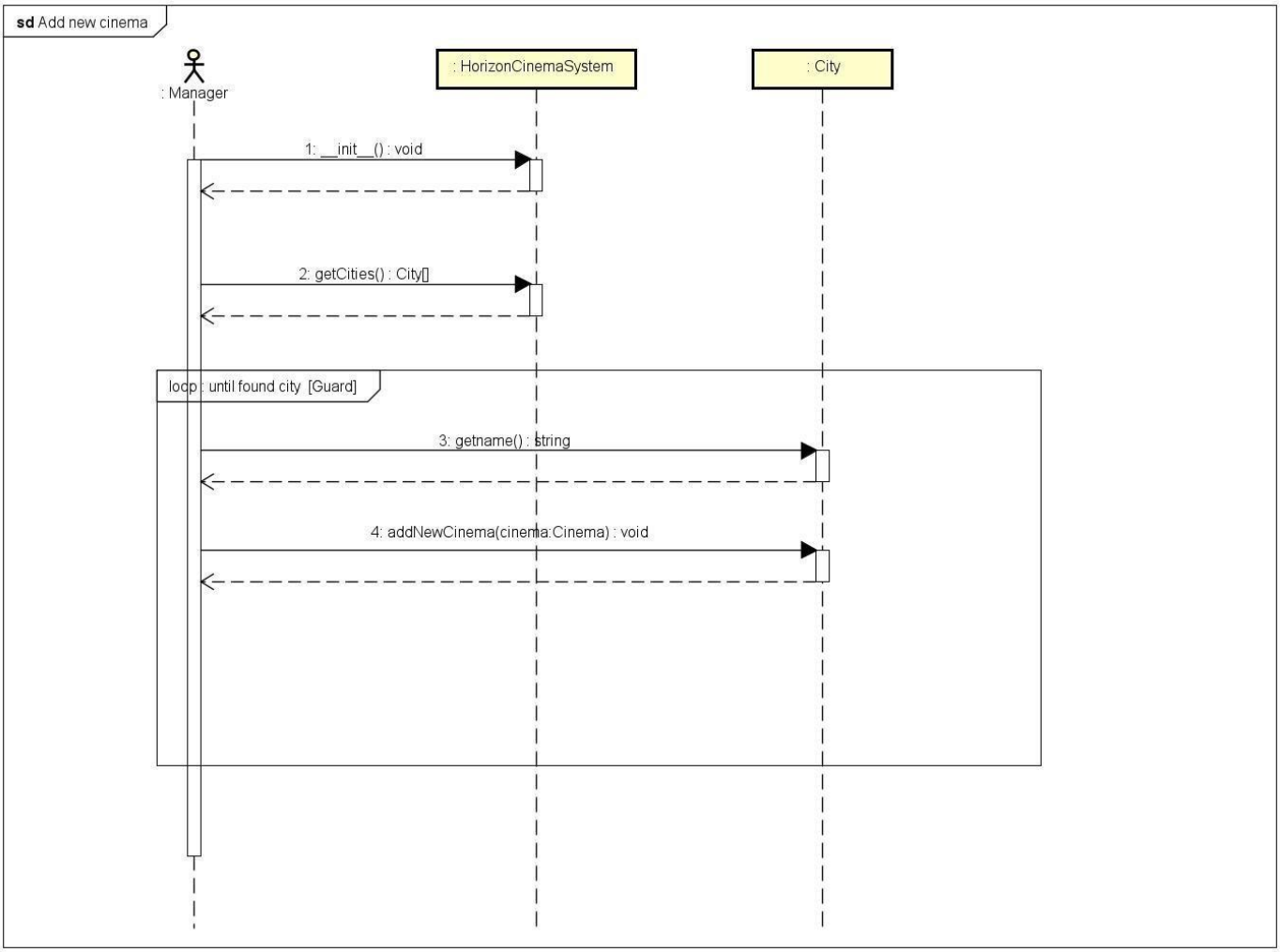
Sequence Diagram Cancel Booking:



Sequence Diagram Update Film:



Sequence Diagram Add New Cinema:



ITEM	VALUE
UseCase	Add film
Summary	adding a new film to a cinema if it does not exist yet
Actor	Admin
Precondition	film does not exist yet for the cinema
Postcondition	film is added to the database for the cinema
Base Sequence	1. check if film exist in the database for the cinema 2. film does not exist 3. add the film from database for the cinema
Branch Sequence	
Exception Sequence	if the film does exist for the cinema, prompt an error message to alert the use r
Sub UseCase	set show time, select screen
Note	

ITEM	VALUE
UseCase	Add new cinema
Summary	add a new cinema to the database
Actor	Manager
Precondition	cinema is not added yet
Postcondition	cinema is added
Base Sequence	1. check if cinema exist 2. cinema does not exist 3. cinema is added
Branch Sequence	
Exception Sequence	cinema already exist in the database, it will prompt an error message to alert user.
Sub UseCase	Input cinema location
Note	

ITEM	VALUE
UseCase	Authenticate user
Summary	verify if user is a booking staff, admin or a manager
Actor	Booking Staff
Precondition	user is not logged in
Postcondition	user is logged in
Base Sequence	1. user enter username 2. user enter password 3. check if username exist 4. check if it matches password 5. user is logged in
Branch Sequence	At step 4 if username does not match password from database, it will prompt user to re enter password. If it matches user will be logged in.
Exception Sequence	At step 3 if iusername does not exist it will raise an error which shows username does not exist.
Sub UseCase	
Note	

ITEM	VALUE
UseCase	Book Ticket
Summary	allow booking staff to book ticket for user if it's available.
Actor	Booking Staff
Precondition	if there is available seats
Postcondition	user receive booking receipt with all the booking info on it
Base Sequence	1. enter date 2. select movie 3. enter amount of customer 4. Select seat type 5. Select showing 6. Check availability 7. Enter payment details 8. User will receive booking receipt with booking info on it
Branch Sequence	at step 6 there is no availability, user will select a different showing at step 5. There is availability for that showing and user will enter payment details and will receive booking receipt with booking info on it.
Exception Sequence	There is no availability on any showing, it will prompt an error message for us er to reenter all the information.
Sub UseCase	Select date , Select movie, Number of customers, Select ticket type, Check Avalibilty and price , Select Showing
Note	

ITEM	VALUE
UseCase	Cancel booking
Summary	cancel user booking if the shows have not start yet.
Actor	Booking Staff
Precondition	the shows have not started and user has booked the ticket
Postcondition	the booking is cancelled and the seats will be available for others to book
Base Sequence	1. enter booking reference number 2. check if booking reference exist 3. get the booking info 4. check if the show have started 5. cancel the booking if the show have not started
Branch Sequence	
Exception Sequence	at step 2 reference number does not exist and it prompts an error message fo r user to enter another reference number.
Sub UseCase	
Note	

ITEM	VALUE
UseCase	Checkout
Summary	display the booking receipt and send it to customer
Actor	Booking Staff
Precondition	completed payment
Postcondition	customer receive booking receipt
Base Sequence	1. generate booking reference 2. sends booking receipt to customer
Branch Sequence	
Exception Sequence	
Sub UseCase	Genrate booking Reference, Send booking receipt
Note	

ITEM	VALUE
UseCase	Enter Payment details
Summary	booking staff enter card details of the customer.
Actor	Booking Staff
Precondition	there is availability to seats and customer is satisfy with the price
Postcondition	payment is completed
Base Sequence	1. enter card details 2. check if all card details is entered correctly 3. booking is complete
Branch Sequence	
Exception Sequence	
Sub UseCase	Input card number, Input card expiry mm/yy, Input phone, Input card cvv, Input email, Input name
Note	

ITEM	VALUE
UseCase	Generate Report
Summary	display information about revenue and bookings made by staff overall or monthly.
Actor	Admin
Precondition	user is an admin or manager
Postcondition	display option for user to view number of bookings for each listing, total monthly revenue for each cinema, top revenue generating film, monthly list of staff making number of bookings in sorted order
Base Sequence	1. user is logged in 2. user select option to view number of bookings for each listing 3. get all the data from bookings 4. display the data according to each listing
Branch Sequence	
Exception Sequence	
Sub UseCase	
Note	

ITEM	VALUE
UseCase	Remove film
Summary	film will be remove if it exist in the database
Actor	Admin
Precondition	if film exist in the database for the cinema
Postcondition	film is being removed from database for the cinema
Base Sequence	1. check if film exist in the database for the cinema 2. film exist 3. remove the film from database for the cinema
Branch Sequence	
Exception Sequence	if the film does not exist for the cinema, prompt an error message to alert the user
Sub UseCase	
Note	

ITEM	VALUE
UseCase	Show Film Listing
Summary	display all the available film in the cinema
Actor	Booking Staff
Precondition	
Postcondition	display all the available film
Base Sequence	1. get all the film that is available in cinema from database 2. display all the film to user
Branch Sequence	
Exception Sequence	there is no film available in the cinema, prompt an error to user to display tha t error message.
Sub UseCase	Title, allowed age, show times, descriptions, rating, film genre, actors details
Note	

ITEM	VALUE
UseCase	Update film
Summary	film will be updated if it exist in the database
Actor	Admin
Precondition	if film exist in the database for the cinema
Postcondition	film is being updated from database for the cinema
Base Sequence	1. check if film exist in the database for the cinema 2. film exist 3. update the film from database for the cinema
Branch Sequence	
Exception Sequence	if the film does not exist for the cinema, prompt an error message to alert the user
Sub UseCase	Update show time, Update screen
Note	