Level 0 DFD:

Processes:

1. Customer: Represents the user interacting with the system to book movie tickets.

2. Admin: Represents the administrative tasks such as managing movies, theaters, and bookings.

3. Payment Processor: Handles payment transactions securely.

4. Notification Service: Sends notifications to customers regarding booking confirmation, updates, etc.

5. Booking Management: Handles the process of managing bookings, including ticket availability, reservation, and cancellation.

Data Flows:

*Customer Information: Information provided by the customer during the booking process.

*Booking Details: Details of the movie tickets booked by the customer.

*Payment Information: Payment details provided by the customer.

*Booking Confirmation: Confirmation sent to the customer after successful booking.

*Movie Information: Information about available movies.

*Booking Updates: Updates sent to customers regarding their booking status.

Level 1 DFD:

a)Customer Process:

i)Search Movies: Customer searches for available movies.

ii)Select Movie: The customer selects a movie for booking.

iii)Select Seats: The customer chooses seats for the selected movie.

iv)Provide Information: Customer provides necessary information for booking.

v)Make Payment: Customer makes payment for the booking.

b)Admin Process:

i)Manage Movies: The admin manages information about available movies.

ii)Manage Theaters: Admin manages information about theaters.

iii)Manage Bookings: Admin handles booking-related tasks such as reservation and cancellation.

c)Booking Management Process:

i)Check Availability: Checks the availability of seats for a particular movie.

ii)Reserve Seats: Reserve seats for a customer upon successful booking.

iii)Cancel Booking: Cancel a booking if requested by the customer.

d)Payment Processor Process:

i)Validate Payment Details: Validates the payment details provided by the customer.

ii)Process Payment: Processes the payment transaction securely.

iii)Notification Service Process:

iv)Send Confirmation: Sends booking confirmation to the customer.

v)Send Updates: Sends updates regarding booking status to the customer.

Level 2 DFD:

*Customer Process:

No further decomposition at this level.

Admin Process:

No further decomposition at this level.

Booking Management Process:

Check Seat Availability:

Check seat availability for a specific movie.

Reserve Seats:

Reserves seats for a customer upon successful booking.

Cancel Reservation:

Cancel a reservation if requested by the customer.

Payment Processor Process:

No further decomposition at this level.

Notification Service Process:

No further decomposition at this level.