# **🎟️ Problem Statement: Movie Ticket Booking System**

Write a Python program to simulate a **movie ticket booking system**.

## **✅ Requirements**

1. **Display Available Movies**
   1. Show a list of movies with details:
      1. Name
      2. Ticket Price
      3. Age Rating (U / UA / A)
      4. Available Seats
2. **User Booking**
   1. User selects a movie by entering its number.
   2. Ask for number of tickets.
   3. Check **age restriction** if applicable.
3. **Seat Management**
   1. Reduce the number of available seats after booking.
   2. If requested tickets > available seats → reject booking.

## **🎯 Booking Rules**

1. A user can book **maximum 6 tickets** per transaction.
2. If movie is rated **“A” (Adults Only)**, user must be **18+ years old**.
3. Add **5% GST** to the final ticket price.
4. Display a **booking summary** including:
   1. Movie name
   2. Number of tickets
   3. Total price (with GST)
   4. Remaining seats for that movie

## **🔹 Concepts to Use**

* **Functions**
  + show\_movies() → Displays movie list with details.
  + book\_tickets() → Handles ticket booking, applies rules.
  + calculate\_bill() → Calculates total with GST.
  + movie\_system() → Main function to control flow.
* **Loops**
  + Allow repeated bookings until user chooses to exit.
* **Conditions**
  + Age check for “A” rated movies.
  + Ticket count validation (≤ 6).
  + Seat availability check.
* **Data Structures**
  + Use a **list of dictionaries** for movies, e.g.:

movies = [  
 {"name": "Avengers", "price": 200, "rating": "U", "seats": 50},  
 {"name": "Joker", "price": 250, "rating": "A", "seats": 30},  
 {"name": "Pushpa 2", "price": 300, "rating": "UA", "seats": 40}  
]

* **Arithmetic Operations**
  + Subtotal = tickets × price
  + GST = 5% of subtotal
  + Final = subtotal + GST
* **String Formatting**
  + Display a **neat booking summary** (like a real ticket confirmation).

## **🚀 Implementation Strategy**

1. **Step 1: Setup Data**
   1. Define a list of movies with details (name, price, rating, seats).
2. **Step 2: Show Movies**
   1. Display all movies with an index for selection.
3. **Step 3: Take User Input**
   1. Ask user for:
      1. Movie choice
      2. Number of tickets
      3. Age (if “A” rated movie).
4. **Step 4: Validate Booking**
   1. If tickets > 6 → reject.
   2. If tickets > available seats → reject.
   3. If age < 18 and movie = “A” → reject.
5. **Step 5: Calculate Bill**
   1. Subtotal = tickets × price
   2. GST = 5% of subtotal
   3. Final = subtotal + GST
6. **Step 6: Update Seats**
   1. Reduce the available seats of that movie.
7. **Step 7: Show Summary**
   1. Print ticket confirmation: movie name, tickets booked, GST, total amount, seats left.
8. **Step 8: Loop Option**
   1. After one booking → ask if user wants to continue or exit