

# GROUP 6

## USE CASE DIAGRAM DOCUMENT

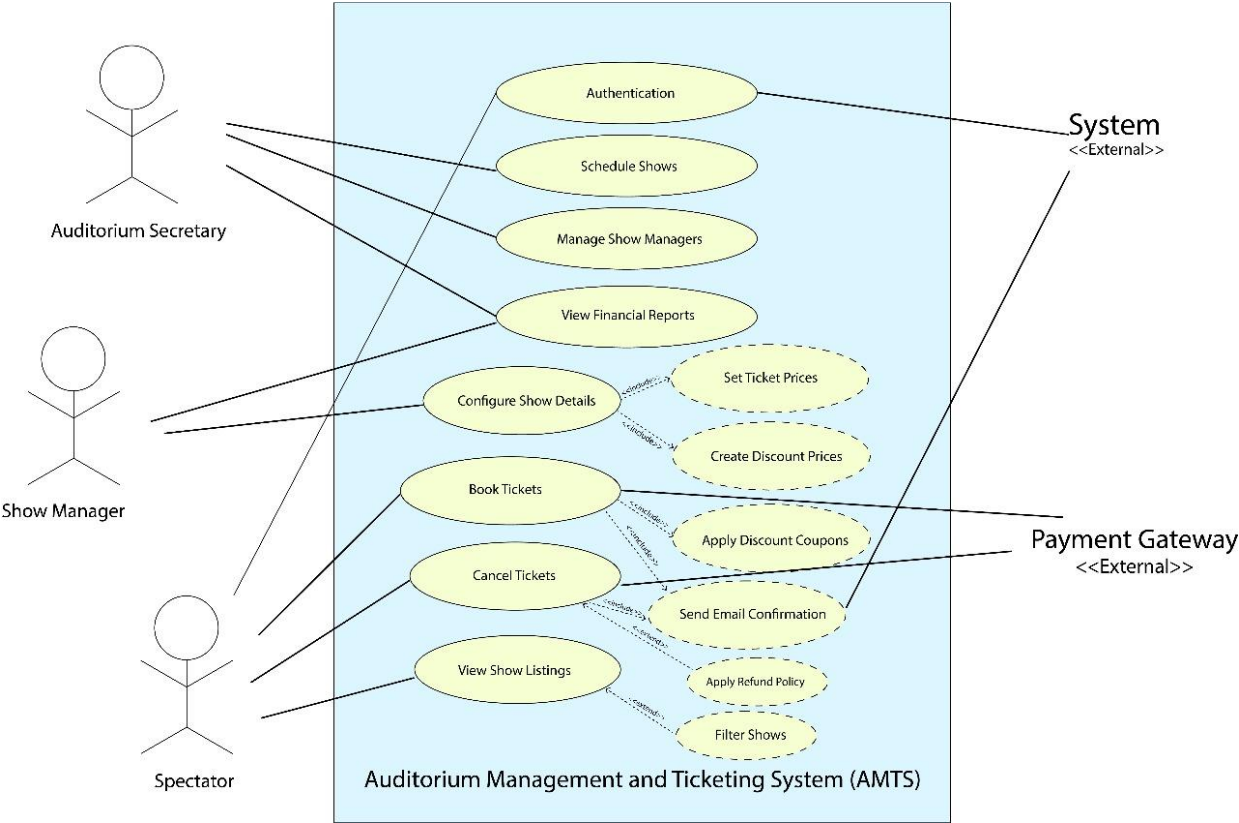


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# Use Case Diagram of Auditorium Management and Ticketing System (AMTS)



<b>ID:</b>	UC-001
<b>Title:</b>	Authenticate User
<b>Description:</b>	Allows users to log in with credentials and access the system based on their role.
<b>Primary Actor:</b>	Auditorium Secretary, Show Manager, Spectator
<b>Secondary Actor:</b>	Authentication System
<b>Preconditions:</b>	User has valid credentials.
<b>Postconditions:</b>	User is authenticated and redirected to role-specific dashboard.
<b>Dependency</b>	None
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. User enters username/password. 2. System validates credentials. 3. System grants role-based access.
<b>Extensions or Alternate Flow:</b>	2a. Invalid credentials: System displays error. 2b. Forgot password: System sends reset link.
<b>Frequency of Use:</b>	Very High
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	High

<b>ID:</b>	UC-002
<b>Title:</b>	Schedule Shows
<b>Description:</b>	Auditorium Secretary schedules new shows with date, time, and auditorium availability checks.
<b>Primary Actor:</b>	Auditorium Secretary
<b>Secondary Actor:</b>	None
<b>Preconditions:</b>	Secretary is authenticated.
<b>Postconditions:</b>	Show is added to the system.
<b>Dependency</b>	None
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Secretary enters show details. 2. System checks availability. 3. Show is saved.
<b>Extensions or Alternate Flow:</b>	3a. Time conflict: System alerts user.
<b>Frequency of Use:</b>	Medium
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	High

<b>ID:</b>	UC-003
<b>Title:</b>	Manage Show Managers
<b>Description:</b>	Assign or modify Show Managers for scheduled shows.
<b>Primary Actor:</b>	Auditorium Secretary
<b>Secondary Actor:</b>	None
<b>Preconditions:</b>	Show is scheduled.
<b>Postconditions:</b>	Show Manager assignments are updated.
<b>Dependency</b>	UC-002 (Schedule Shows)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Secretary selects a show. 2. Assigns/removes Show Manager. 3. System updates records.
<b>Extensions or Alternate Flow:</b>	2a. Show Manager not in system: Secretary adds new user.
<b>Frequency of Use:</b>	Low
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	Medium

<b>ID:</b>	UC-004
<b>Title:</b>	View Financial Reports
<b>Description:</b>	Generate financial reports for shows and overall operations.
<b>Primary Actor:</b>	Auditorium Secretary
<b>Secondary Actor:</b>	None
<b>Preconditions:</b>	Financial data exists.
<b>Postconditions:</b>	Reports are generated and exported.
<b>Dependency</b>	None
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Secretary selects parameters. 2. System compiles data. 3. Report is displayed.
<b>Extensions or Alternate Flow:</b>	2a. No data: System alerts user.
<b>Frequency of Use:</b>	Medium
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	High

<b>ID:</b>	UC-005
<b>Title:</b>	Configure Show Details
<b>Description:</b>	Show Manager updates show parameters (performers, duration, etc.).
<b>Primary Actor:</b>	Show Manager
<b>Secondary Actor:</b>	None
<b>Preconditions:</b>	Show is assigned to the Manager.
<b>Postconditions:</b>	Show details are updated.
<b>Dependency</b>	UC-002 (Schedule Shows)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Manager edits details. 2. System validates and saves changes.
<b>Extensions or Alternate Flow:</b>	1a. Unauthorized access: System blocks changes.
<b>Frequency of Use:</b>	Medium
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	Medium

<b>ID:</b>	UC-006
<b>Title:</b>	Set Ticket Prices
<b>Description:</b>	Show Manager defines pricing tiers for seating categories (VIP, balcony, normal).
<b>Primary Actor:</b>	Show Manager
<b>Secondary Actor:</b>	System (AMTS)
<b>Preconditions:</b>	Show is scheduled and assigned to the Show Manager.
<b>Postconditions:</b>	Ticket prices are updated and visible to Spectators.
<b>Dependency</b>	UC-002 (Schedule Shows)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Manager selects “Set Ticket Prices”. 2. Defines price tiers for each seat category. 3. System validates and saves prices.
<b>Extensions or Alternate Flow:</b>	2a. Invalid price (e.g., negative value): System rejects input.
<b>Frequency of Use:</b>	Low
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	High



<b>ID:</b>	UC-007
<b>Title:</b>	Create Discount Coupons
<b>Description:</b>	Show Manager generates promotional coupons with discounts and validity periods.
<b>Primary Actor:</b>	Show Manager
<b>Secondary Actor:</b>	System (AMTS)
<b>Preconditions:</b>	Show is scheduled and assigned to the Show Manager.
<b>Postconditions:</b>	Coupons are active and available for use.
<b>Dependency</b>	UC-006 (Set Ticket Prices)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Manager selects “Create Discount Coupons”. 2. Configures discount rules (e.g., 10% off). 3. System generates coupon codes.
<b>Extensions or Alternate Flow:</b>	2a. Discount exceeds 100%: System blocks invalid input.
<b>Frequency of Use:</b>	Low
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	Medium

<b>ID:</b>	UC-008
<b>Title:</b>	View Booking Statistics
<b>Description:</b>	Show Manager accesses real-time analytics on ticket sales and audience demographics.
<b>Primary Actor:</b>	Show Manager
<b>Secondary Actor:</b>	System (AMTS)
<b>Preconditions:</b>	Show is scheduled and assigned to the Show Manager.
<b>Postconditions:</b>	Coupons are active and available for use.
<b>Dependency</b>	UC-006 (Set Ticket Prices)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Manager selects “Create Discount Coupons”. 2. Configures discount rules (e.g., 10% off). 3. System generates coupon codes.
<b>Extensions or Alternate Flow:</b>	2a. Discount exceeds 100%: System blocks invalid input.
<b>Frequency of Use:</b>	Low
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	Medium

<b>ID:</b>	UC-008
<b>Title:</b>	View Booking Statistics
<b>Description:</b>	Show Manager accesses real-time analytics on ticket sales and audience demographics.
<b>Primary Actor:</b>	Show Manager
<b>Secondary Actor:</b>	System (AMTS)
<b>Preconditions:</b>	Show has active bookings.
<b>Postconditions:</b>	Statistics are displayed in graphical/tabular format.
<b>Dependency</b>	UC-009 (Book Tickets)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Manager selects “View Booking Statistics”. 2. Filters data by date or category. 3. System generates report.
<b>Extensions or Alternate Flow:</b>	2a. No bookings: System displays “No data available.”
<b>Frequency of Use:</b>	Medium
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	Medium

<b>ID:</b>	UC-009
<b>Title:</b>	Book Tickets
<b>Description:</b>	Spectator selects seats, applies coupons, and completes payment.
<b>Primary Actor:</b>	Spectator
<b>Secondary Actor:</b>	Payment Processing System
<b>Preconditions:</b>	Show has available seats.
<b>Postconditions:</b>	Tickets are booked; confirmation email sent.
<b>Dependency</b>	Includes: UC-012 (Apply Discount Coupon), UC-013 (Send Email Confirmation)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Spectator selects seats. 2. Applies coupon (optional). 3. Pays via gateway. 4. System confirms booking.
<b>Extensions or Alternate Flow:</b>	3a. Payment fails: Spectator retries.
<b>Frequency of Use:</b>	Very High
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	Critical

<b>ID:</b>	UC-010
<b>Title:</b>	Cancel Tickets
<b>Description:</b>	Spectator cancels tickets; system processes refund per policy.
<b>Primary Actor:</b>	Spectator
<b>Secondary Actor:</b>	Payment Processing System
<b>Preconditions:</b>	Valid booking exists.
<b>Postconditions:</b>	Seats are released; refund initiated.
<b>Dependency</b>	Extends: UC-014 (Apply Refund Policy)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Spectator selects booking. 2. System calculates refund. 3. Refund processed.
<b>Extensions or Alternate Flow:</b>	2a. Cancellation deadline passed: No refund.
<b>Frequency of Use:</b>	Low to Medium
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	High

<b>ID:</b>	UC-011
<b>Title:</b>	View Show Listings
<b>Description:</b>	Spectator browses upcoming shows with basic details (date, time, price).
<b>Primary Actor:</b>	Spectator
<b>Secondary Actor:</b>	None
<b>Preconditions:</b>	Shows are scheduled.
<b>Postconditions:</b>	Shows are displayed to Spectator.
<b>Dependency</b>	None
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Spectator navigates to listings. 2. System displays shows.
<b>Extensions or Alternate Flow:</b>	1a. No shows: System displays “No upcoming events.”
<b>Frequency of Use:</b>	Very High
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	High

<b>ID:</b>	UC-012
<b>Title:</b>	Apply Discount Coupon
<b>Description:</b>	Spectator redeems a valid coupon during ticket booking to reduce costs.
<b>Primary Actor:</b>	Spectator
<b>Secondary Actor:</b>	System (AMTS)
<b>Preconditions:</b>	Valid coupon exists; Spectator is booking tickets.
<b>Postconditions:</b>	Discount is applied to the total price.
<b>Dependency</b>	Included in UC-009 (Book Tickets)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Spectator enters coupon code during booking. 2. System validates coupon. 3. Discount applied to total price.
<b>Extensions or Alternate Flow:</b>	2a. Invalid coupon: System rejects code
<b>Frequency of Use:</b>	Medium (coupon-dependent bookings)
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	Medium

<b>ID:</b>	UC-013
<b>Title:</b>	Send Email Confirmation
<b>Description:</b>	System automatically sends booking confirmation emails to Spectators.
<b>Primary Actor:</b>	System (AMTS)
<b>Secondary Actor:</b>	Email Service Provider
<b>Preconditions:</b>	Ticket booking is successful.
<b>Postconditions:</b>	Confirmation email is delivered to Spectator's inbox.
<b>Dependency</b>	Included in UC-009 (Book Tickets)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. System generates email with booking details. 2. Email is sent via provider.
<b>Extensions or Alternate Flow:</b>	2a. Email delivery fails: System retries or alerts admin.
<b>Frequency of Use:</b>	Very High (every booking)
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	High



<b>ID:</b>	UC-014
<b>Title:</b>	Apply Refund Policy
<b>Description:</b>	System calculates refund amount based on cancellation timing
<b>Primary Actor:</b>	System (AMTS)
<b>Secondary Actor:</b>	Payment Processing System
<b>Preconditions:</b>	Cancellation is initiated.
<b>Postconditions:</b>	Refund is processed.
<b>Dependency</b>	Extended by UC-010 (Cancel Tickets)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. System checks cancellation time. 2. Applies policy rules. 3. Refund processed.
<b>Extensions or Alternate Flow:</b>	3a. Refund fails: System alerts administrators.
<b>Frequency of Use:</b>	Low to Medium
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	High

<b>ID:</b>	UC-015
<b>Title:</b>	Filter Shows
<b>Description:</b>	Spectator narrows down show listings by date, genre, or price range.
<b>Primary Actor:</b>	Spectator
<b>Secondary Actor:</b>	System (AMTS)
<b>Preconditions:</b>	Shows are listed in the system.
<b>Postconditions:</b>	Filtered results are displayed.
<b>Dependency</b>	Extended by UC-011 (View Show Listings)
<b>Generalization</b>	None
<b>Main Success Scenario:</b>	1. Spectator selects filter criteria. 2. System updates listings.
<b>Extensions or Alternate Flow:</b>	1a. No matches: System displays "No shows found."
<b>Frequency of Use:</b>	High (frequent browsing)
<b>Status:</b>	Implemented
<b>Owner:</b>	Group-6
<b>Priority:</b>	Medium

**Notes:**

- **Includes:** Mandatory sub-processes (e.g., sending email confirmation is required after booking).
- **Extends:** Optional/conditional extensions (e.g., filtering shows is optional).
- All use cases align with the **SRS Document** and **Use-Case Diagram**.
- Secondary actors (e.g., Payment Gateway, Email Service Provider) are explicitly defined.

This document provides full coverage of all 15 use cases from the system, including dependencies and extensions.