Scenario: Movie Ticket Reservation System

You are tasked with building a movie ticket reservation system using Django. The system should allow users to browse movies, select showtimes, and reserve seats for their preferred movie and showtime.

Requirements:

User Registration and Authentication:
Users should be able to register an account and log in.
Use Django's built-in authentication system for user management.

Movie Management:

Implement a database model to store movie information, including title, description, genre, duration, and poster image.
Create a page to list all available movies, along with their details.
Allow administrators to add, update, and delete movies.

Showtime Management:

Implement a database model to store showtime information, including movie, date, time, and available seats.
Create a page to display showtimes for each movie.
Allow administrators to add, update, and delete showtimes.

Seat Reservation:

When a user selects a movie and showtime, display a seating arrangement diagram.
Users should be able to select available seats and reserve them.
Ensure that seats are locked during the reservation process to prevent multiple users from reserving the same seat simultaneously.
Implement a timeout mechanism to release locked seats if the reservation is not completed within a certain time.

User Dashboard:

Users should have a dashboard where they can view their reservations and manage their bookings.
Provide an option to cancel reservations.

Admin Panel:

Implement an admin panel using Django's built-in admin interface.
Admins should have the ability to manage movies, showtimes, and view reservations.

Additional Features (optional):

Implement a search functionality to search for movies by title or genre.
Implement pagination for the movie list and reservation history.
Provide email notifications for successful reservations and reservation cancellations.

Remember to follow Django's best practices, such as using Django's ORM for database operations, implementing proper URL routing, and utilizing Django's templating system for rendering views.

This scenario provides a good opportunity to practice various aspects of Django development, including models, views, forms, authentication, and database relationships. It will also allow you to learn about handling user sessions, implementing locking mechanisms, and working with user interfaces.