CAPSTONE PROJECT REPORT

(Project duration June-July 2025)

Event Management and Booking System

Submitted by

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Python full stack and 9S090

CSES009

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Abstract

The Event Management and Booking System is a web-based application developed using Python and modern web development technologies aimed at streamlining the process of organizing, managing, and booking events. This system addresses the challenges faced by event organizers and participants by providing a centralized platform that enables efficient event creation, real-time booking, attendee registration, and seamless communication.

The platform supports various user roles including Admin, Event Organizers, and Customers. Event Organizers can create and manage event listings with essential details such as venue, date, time, ticket categories, and pricing. Users can browse available events, view event details, book tickets, and receive confirmation notifications. Admins have the ability to monitor platform activity, manage users, and approve events for publication.

Tools and Technologies Used

1. Python
    - Core programming language used for backend development.
2. Django Framework
    - A high-level Python web framework used for rapid development, handling routing, authentication, and database integration.
3. HTML (HyperText Markup Language)
    - Used for creating the structure of web pages and content layout.
4. CSS (Cascading Style Sheets)
    - Used for styling HTML elements to enhance the visual appearance of the web pages.
5. Tailwind CSS
    - A utility-first CSS framework used to design responsive and modern UI components with minimal effort.
6. SQLite / PostgreSQL / MySQL
    - (Choose one based on your project) Used as the relational database for storing data such as users, events, and bookings.
7. JavaScript
    - Used for client-side interactivity such as form validation, modal popups, and dynamic content updates.

8. Django Admin Panel
    - Used for managing users, events, and bookings through an out-of-the-box admin interface.
9. Bootstrap
    - An additional frontend framework for responsive design (if Tailwind is not used exclusively).

Modules

Major Modules

1. **User Management Module**
    - User Registration (Customer, Organizer)
    - Secure Login & Logout
    - Role-based Access Control (Admin, Organizer, User)
2. **Event Management Module**
    - Create, Edit, and Delete Events (Organizer)
    - Event Details: Name, Description, Date, Time, Location, Tickets
    - Event Approval (Admin side – optional)
3. **Booking System Module**
    - Browse Events
    - Book Tickets
    - Seat/Ticket Availability Check
    - Booking Confirmation & History
4. **Admin Panel Module**
    - View all users and roles
    - Approve or Reject events
    - Manage Bookings and Platform Activities
    - Reports and Analytics (optional)

Minor Modules

1. **Search and Filter Module**
    - Search events by name, location, or date
    - Filter by category, type, or price range
2. **Notification Module**
    - Email notifications for registration and booking confirmation
    - Alerts for upcoming events or cancellations
3. **Feedback & Review Module**
    - Allow users to give ratings and reviews for events
    - View reviews per event
4. **Event Gallery / Media Module**
    - Upload images/videos for event promotions
    - View media in event details page
5. **Report Generation Module (Optional)**
    - Generate reports for event attendance, bookings, and revenue
    - Export to PDF/Excel (for admin and organizers)
6. **Payment Module (Optional)**
    - Payment Gateway Integration (e.g., Razorpay, Stripe)
    - Payment confirmation and tracking

Tables

Users Table:

Field Name	Data Type	Description
user_id	Integer (PK)	Unique ID for each user
username	Varchar	Username for login
email	Varchar	Email address
password	Varchar	Hashed password
role	Varchar	'admin', 'organizer', or 'customer'
date_joined	DateTime	Registration date

Events Table:

Field Name	Data Type	Description
event_id	Integer (PK)	Unique ID for each event
title	Varchar	Event title
description	Text	Event details
date	Date	Event date
time	Time	Event time
location	Varchar	Event venue
category	Varchar	Music, Tech, Workshop, etc.
status	Varchar	'Pending', 'Approved', 'Rejected'
created_at	DateTime	When event was created
Organizer_name	Varchar	Name of the Organizer

Tickets Table:

Field Name	Data Type	Description
ticket_id	Integer (PK)	Unique ID for each ticket type
event_id	Integer (FK)	References event_id from Events
ticket_type	Varchar	Regular, VIP, etc.
price	Decimal	Cost per ticket
total_quantity	Integer	Total tickets available
available_qty	Integer	Remaining tickets

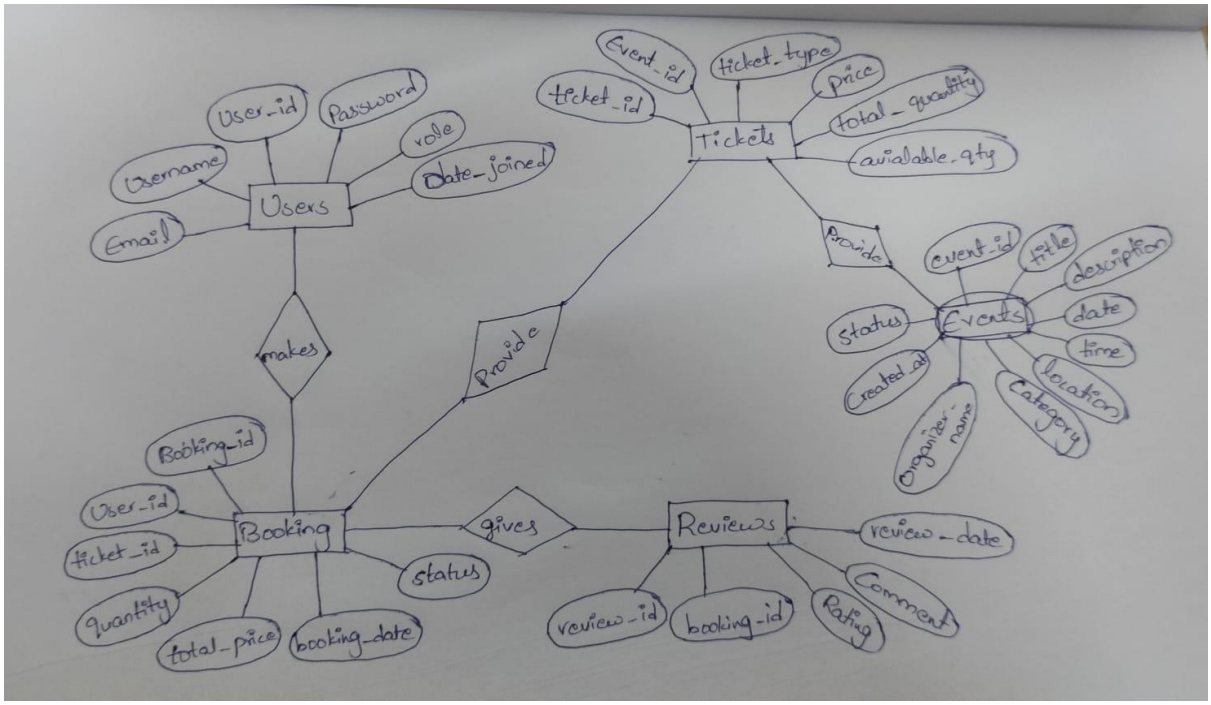
Booking Table:

Field Name	Data Type	Description
booking_id	Integer (PK)	Unique ID for each booking
user_id	Integer (FK)	References user_id from Users table
ticket_id	Integer (FK)	References ticket_id from Tickets
quantity	Integer	Number of tickets booked
total_price	Decimal	Quantity × Price
booking_date	DateTime	When the booking was made
status	Varchar	Confirmed, Cancelled

Reviews Table:

Field Name	Data Type	Description
review_id	Integer (PK)	Unique ID for each review
booking_id	Integer (FK)	References booking_id from Booking
rating	Integer	Rating out of 5
comment	Text	User feedback
review_date	DateTime	When the review was submitted

ER diagram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