Experiment No. 4

Aim: Demonstrate the class diagram to implement the ticket booking system.

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Objective:	To design & understand a class diagram that represents the structure & behaviour of a Ticket booking system with Unified modeling language (UML).
About class Diagram:	A class diagram is one of the most important diagrams in UML, as it provides a blueprint of a system by showing the classes, blueprints, methods & relationships between objects.
	Overview of a Ticket Booking system: A ticket booking system is a software application that allows users to look, book, manage & cancel their tickets for various services such as movies, travel, concerts, & events. It consists of different entities such as customers, tickets, payments & booking details.
	Key components of a ticket booking system: i) User: Those who books tickets. ii) Admin: Manages the system, add events or schedules. iii) Ticket: Contains details of the booking. iv) Booking: Handles the process of ticket reservation. v) Payment: Manages transactions.

vi) Event : Represents the service for which a ticket is booked.

Class Diagram Representation :

Classes : their attributes & Methods :

i) User :

Attributes : userID, name, email, phoneNumber.

Methods : register (), login (), bookticket (), cancelticket ().

ii) Admin :

Attributes : adminID, name, Email.

Methods : addEvent (), removeEvent (), manageBookings ()

iii) Event :

Attributes : eventID, EventName, eventtype, date, location.

Methods : getEventDetails (), updateAvaliability ()

iv) Ticket :

Attributes : ticketID, eventID, userID, seatNumber, price.

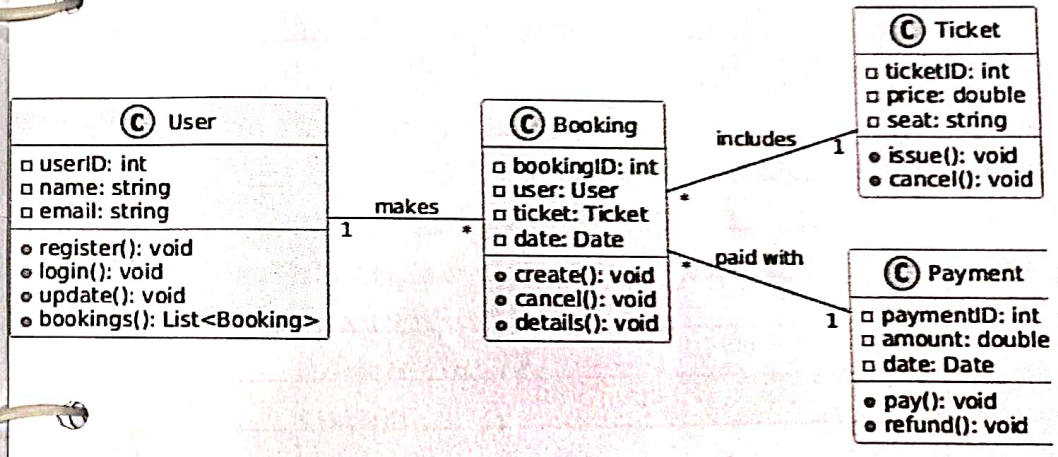
Methods : generateTicket (), getTicketDetails ().

v) Booking : Attributes : bookingID, userID, eventID, status.

Methods : createBooking (), cancelBooking (), updateBooking ()

vi) Payment : Attributes : PaymentID, userID, amount, pay-status()

Methods : processPayment (), refundPayment ().



Conclusion: A class diagram for ticket booking system was successfully designed, representing the entities, their attributes, methods & relationships.

Relationships between Classes :

A user can book multiple tickets (one-to-many)

An Admin can manage multiple events (one-to-many)

A Booking is associated with one user & one event (Many-to-one).

A payment is linked to a booking (one-to-one)

Each ticket belongs to a particular event & is linked to a Booking (Many-to-one)

Diagram Representation:

A class diagram for the ticket booking system should include :

i) Rectangles representing classes with attributes & methods.

ii) Lines with appropriate cardinality (1:1, 1:M, M:1) to show relationships

iii) Arrows including generalization, aggregation or association.

RISE & SHINE

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