

Deliverable 1 - Concert system

SCENARIO

This concert system allows for users to search for concerts, book tickets, and manage their reservations. Admins can manage concerts by adding them or removing them, they can also view bookings and handle cancellations. This system will prevent people from booking twice, support different concert types and save data by text tiles.

DESIGN PARADIGM

- Admin can add new concerts or remove them. They can also view bookings.
- Users can view available concerts, book tickets, and cancel their booking
- Uses file I/O, exception handling, Streams, and various collections(List.Map.Set).

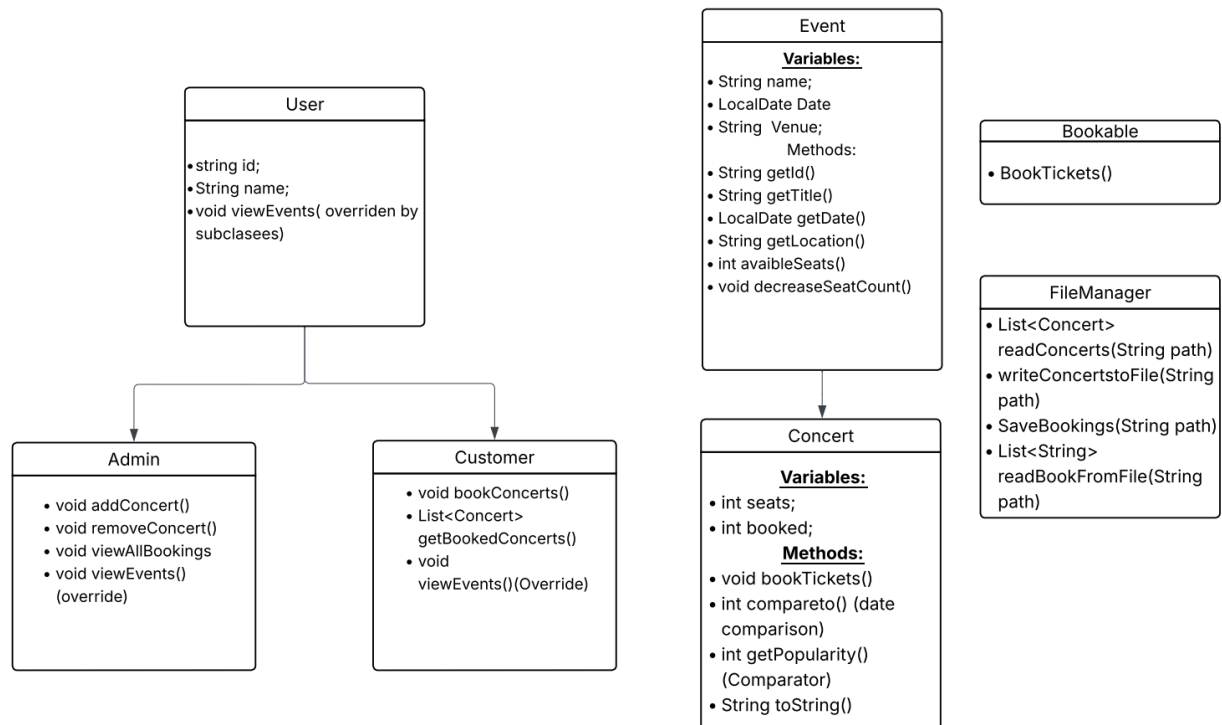
Expected Output

- Concerts listed with details (dates, venue, seats)
- Users tickets with confirmation.
- File output for bookings
- Sorted results: concerts by date, most booked concerts

CLASS HIERARCHIES

1. User (superclass) -> Admin, Customer
2. Event(Superclass) -> Concert

UML DIAGRAM



INTERFACE

Interface: Bookable

Method: void bookTicket()

Allows concerts and other events to be bookable for example theatre shows, festivals, private events.

Runtime Polymorphism

- Override methods in Admin.viewEvents() and customer.viewEvents()
- Interface polymorphism in Bookable

TEXT I/O

Class FileManager

Goal: Read and write the concert/booking data to text files (concerts.txt, bookings.txt)

COMPARABLE AND COMPARATOR

- Concert implements Comparable(by date)
- ConcertPopularityComparator for sorting by number of bookings

Deliverable 2 Plan

- Bookable Interface : void bookTicket()
- User (Abstract class) : - void viewEvents()
- Admin : - add/remove concert method & void view event() (override)
- Customer : - void bookConcerts
 - List<Concert> getBookedConcerts()
 - Void viewEvents() (override)
- Event : - String getId()
 - String: getTitle()
 - LocalDate getDate()
 - String getLocation()
 - int availableSeats()
 - void decreaseSeatCount()
- Concert: - void bookTickets()
 - int compareTo
 - String toString()
- FileManager : - List<Concert> readConcerts(String path)
 - Void writeConcertsToFile(String path)