Design BookMyShow

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Catalog
- Set<City> cities
- List<Movie> activeMovies
- addMovie(): void
- notifySystem: void
- getActiveMovies(): List<Movie>
- getCatalogInstance(): Catalog

City
- String state
- String Country
- String zipcode

MetaData
- String showId
- List<String> seatNumbers
- Coupon coupon

Coupon
- int discountPercentage
- int maxLimit
- Customer customer
- CouponStatus couponStatus

SearchByReleaseDate

SearchByCity

Admin
- Catalog catalog
- addMovie()
- addShow()
- cancelShow()
- addTheatre()

abstract Person
- String username
- String password
- resetPassword(): bool

System
- List<Customer>
- System unqSysInst
- notifyBooking(): void
- notifyNewMovie(): void
- getUnqSystemInstance():

SearchByGenre

SearchFactory
- createSearchStategy(): Search

SearchByTiltle

<<Search>>
- serchMovie(): Movie

SearchByLanguage

TheatreManager
- List<Theatre> affiliatedTheatres
- getThatreMngrUnqInstance()
- addTheatre(): bool
- getTheatre(): Theatre

Customer
- City city
- HashMap<Show,Ticket> activeBookings
- List<Coupon> coupons
- setCity(): bool
- searchMovie(): Movie
- showTheatresOfMovie(): Theatre
- getAvailShowsInTheatre(): Show
- viewSeatingArrangement(): booelan[][]
- bookTicket(): bool
- cancelTicket(): bool

Ticket
- Customer customer
- Show show
- List<ShowSeats>
- BookingStatus bookingStatus
- double totalPrice
- PaymentInfo paymentInfo
- Coupon coupon
- -notifySystem(): void
- -notifyShowMgrAddTicket() :void
- -notifyShowMgrRemoveTicket(): void
- +cancel(): bool
- +setBookingStatus(): void

PaymentInfo
- long transactionId
- Date creationDate
- PaymentStatus paymentStatus
- payBill(): bool
- refund(): bool
- setPaymentStatus(): void
- setTransactionId(): void

Address
- String streetName
- String locality
- City city
- String propertyNum

Theatre
- String TheatreName
- List<Movie> runningMovies
- List<Show> shows
- Address address
- List<Moviehall> movieHalls
- removeShow()
- addShow()
- getAvailableShowsInTheatre()
- hasMovie(): bool

ShowManager
- Map<Show, Map<String,ShowSeat>> showToShowSeatsMap
- Map<String, Show> showIdShowMap
- hMap<Show, List<Ticket>> showTicketsMap
- ShowManager showMgrUnqInst
- getShowMgrInstance(): ShowManager
- checkReqSeatAvailable(): bool
- changeSeatStatus(): void
- validateToBlockSeats(): bool
- getShowSeatsFromShowIdList(): List<ShowSeat>
- addTicketForShow(): void
- cancelShow(): bool
- removeTicketForShow(): void

TicketManager
- +validateAndBook(): bool
- -payBill(): bool

IPayment
- exectue(): bool

Movie
- String title
- String language
- String genre
- Date releaseDate
- double movieDuartion
- String MovieCertificate

Show
- String ShowId
- Date movieTime
- MovieHall movieHall
- Movie movie
- Theatre theatre
- int leftOutSeats
- ShowStatus showStatus
- viewSeatingArrangement(): bool[][]
- getMovie(): Movie
- updateLeftOutSeats(): void

ShowSeat
- String seatId
- double price
- ShowSeatStatus showSeatStatus
- ShowSeat uniqueShowSeatInstance
- MovieHallSeat movieHallSeat
- getPrice(): double
- setPrice(): void
- setShowSeatStatus(): void
- getShowSeatUniqueInstance(): ShowSeat

Cash
- execute()

CreditCard
- execute()

MovieHall
- boolean[][] seeatingArrangement
- String hallNum
- int totalSeats
- List<MovieHallSeat> hallSeats
- getSeatingArrangement(): boolean[][]
- getTotalSeats(): int
- getHallNum(): String

MovieHallSeat
- int rowNum
- int columnNum
- SeatType seatype

extends, notifies, triggers