CRC Cards

- ❖ TheaterReservationTerminal
  - ➢ Responsibilities
    - ▪ Initialize UserMangement.java
    - ▪ Transfer control TheaterReservationWelcome
- ❖ TheaterReservationWelcome
  - ➢ Responsibilities
    - ▪ Display "Sign [U]p   Sign [I]n   E[X]it" to user at launch
    - ▪ Handles selection of valid options
    - ▪ If sign in success
      - • Initialize and pass control to TheaterReservationMainSystem.java
    - ▪ If exit, clean up and close
      - • Write reservation using ReservationFileManage
- ❖ ReservationFileManagement
  - ➢ Responsibilities
    - ▪ Read from reservation.txt at initialization
    - ▪ Write to reservation.txt
- ❖ UserMangement
  - ➢ Responsibilities
    - ▪ Initiates UserFileMangement
    - ▪ Handles sign in and sign up for users
    - ▪ Maintains array of users
- ❖ User
  - ➢ Responsibilities
    - ▪ Holds username
    - ▪ Holds password (hashed & salted)
    - ▪ Holds salt
- ❖ Authentication
  - ➢ Responsibilites
    - ▪ Securely generate salt
    - ▪ Securely hash password using salt
- ❖ UserFIleMangement
  - ➢ Responsibilities
    - ▪ Initiation read user.txt if exists
    - ▪ Writes User data to file user.txt
    - ▪ Reads User data from user.txt on auth
- ❖ TheaterReservationMainSystem
  - ➢ Responsibilities
    - ▪ Display "[R]eserve   [V]iew   [C]ancel   [O]ut" on sign in
    - ▪ Initalize ReservationManagement
    - ▪ Initalize ReservationFileManagement
    - ▪ Reserve mode
      - • Create Reservation
    - ▪ View mode

- View current Reservation
  - Cancel mode
    - Removes/Modify current Reservation
  - Out
    - Prints out current Reservation and cost
    - Signs out user and exits to TheaterReservationWelcome
- ❖ Reservation
  - ➢ Responsibilities
    - Hold date, time, section, seat data
- ❖ ReservationManager
  - ➢ Responsibilities
    - Holds user selected Reservations
    - Allows user to reserve tickets
- ❖ Price
  - ➢ Responsibilities
    - Reports ticket price with discount nights if eligible
- ❖ Discounts
  - ➢ Responsibilities
    - Reports eligible discounts including discount nights
- ❖ MovieTimeSlots
  - ➢ Responsibilities
    - Maintains available time slots
    - Holds its individual seat availability manager (SectionSeat)
- ❖ SectionSeat
  - ➢ Responsibilities
    - Maintains current seat availability at each section
- ❖ TicketItem
  - ➢ Responsibilities
    - Holds price and number of seats per seat type
- ❖ ReservationPriceCalculator
  - ➢ Responsibilities
    - Calculates the total cost of a reservation
- ❖ ReservationTotalCostBreakDown
  - ➢ Responsibilities
    - Holds the cost breakdown data using TicketItem
- ❖ Exceptions
  - ➢ UserNotFoundException
    - Responsibilities
      - Report error if user is not found
        - ♦ Handled by both sign up (ignored) and sign in (error out)
  - ➢ UserExistsException
    - Responsibilities
      - Report error if user is found during attempted sign up
  - ➢ AuthenticationErrorException

- Responsibilities
  - Report error if authentication fails
- ➤ SeatDoesNotExistException
  - Responsibilities
    - Report error if seat type or seat number does not exist
- ➤ SeatOverBookException
  - Responsibilities
    - Report error if user attempts to book more than available
- ❖ Enums
  - ➤ ReservationManagerMode
    - Responsibilities
      - Holds the states that the reservation manager is in when "reserving seats"
  - ➤ SeatType
    - Responsibilities
      - Holds the different types of seats for SectionSeat, ReservationPriceCalculator, and ReservationTotalCostBreakDown
- ❖ Interfaces
  - ➤ Comparable<User>
    - Responsibilities
      - Allow users to be compared for finding user with username
  - ➤ Comparable<Reservation>
    - Responsibilities
      - Allow reservations to be compared so viewReservations can display reservations in order