

# **UCS2313: Object Oriented Programming Lab**

## **Java Mini Project**

### **Airline Reservation System**

#### **Team Members:**

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**Class Passenger:**

Passenger
- name: String - address: String - telephoneNumber: String
+ Passenger() + Passenger(Name name, Address address, String telephoneNumber) + setName: void + setAddress: void + setTelephoneNumber: void + getName(): String + getAddress(): String + getTelephoneNumber(): String + toString(): String

**Class Reservation:**

Reservation
- reservationNumber: int - numberOfPassengers: int - passengers: Passenger[] - flightNumber: String - departureDate: String - reservedSeats: Seat[]
+ Reservation() + Reservation(int reservationNumber, int numberOfPassengers, Passenger[] passengers, String flightNumber, String departureDate, Seat[] reservedSeats) + setReservationNumber: void + setNumberOfPassengers: void + setPassengers: void + setFlightNumber: void + setDepartureDate: void + setReservedSeats(Seat[] reservedSeats): void + getReservationNumber(): int + getNumberOfPassengers(): int + getPassengers(): void + getPassengersArray(): Passenger[] + getFlightNumber(): String + getDepartureDate(): String + getReservedSeats(): String[] + toString(): String

**Class Airport:**

Airport
- airportId: String - city: String - country: String
+Airport(airportId, city, country) +setAirportID(airportID):void +setCity(city):void +setCountry(country):void +getAirportID():String +getCity():String +getCountry():String +toString():String

**A sub-class Flight of class Airport:**

Flight
- airlineID: String - airlineName: String - reservationNumber: int - numberOfPassengers: int - passengers: Passenger[] - flightNumber: String - departureDate: String - reservedSeats: Seat[]
+Flight() +Flight(flightNumber,day,month,year,departureAirport,destinationAirport,departureTime,arrivalTime) +setAirlineID(airlineID):void +setAirlineName(airlineName):void +getAirlineID():String +getAirlineName():String +setFlightNumber(airlineID, number): void +setDepartureDate(day, month, year): void +setDepartureAirport(departureAirport): void +setDestinationAirport(destinationAirport): void +setDepartureTime(hour, minute): void +setArrivalTime(hour, minute): void +getFlightNumber(): String +getDepartureDate(): String

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+getDepartureAirport(): String
+getDestinationAirport(): String
+getDepartureTime(): String
+getArrivalTime(): String
+toString(): String

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#### A sub-class Seat of class Flight:

Seat
<pre> - seatID : String - status : boolean + enum SeatClass </pre>
<pre> + Seat(String seatID, boolean status) + setSeatID(String seatID) : void + setStatus(boolean status) : void + getSeatID() : String + isStatus() : boolean + toString() : String </pre>

#### Class SystemManager:

SystemManager
<pre> - inputFile : String - airport : Airport[] - flights : Flight[] - seats : Seat[][] - reservations : Reservation[] + reservationNumber : static int </pre>
<pre> + SystemManager(String inputFile) + setAirport(Airport[] airport) : void + setFlights(Flight[] flight) : void + setSeat(Seat[][] seat) : void + setInputFile(String inputFile) : void + setReservations(Reservation[] reservations) : void + getAirport() : Airport[] + getFlights() : Flight[] + getSeat() : Seat[][] + getInputFile() : String + readAirportDetails() : final void + readAirLineDetails() : final void + readFlightDetails() : final void + readFlightSeatDetails(String flightID) : Seat[] + setFlightSeatDetails() : void </pre>

+ searchFlight(int day, int month, int year, String departureAirport, String destinationAirport, String airlineID) : String  
+ searchFlightSeatAvailability(String flightID) : String  
+ getSeatDetails(String flightID) : Seat[]  
+ getDeparturedate(String flightID) : String  
+ makeReservation(int number, Passenger[] passengers,String flightID,String deptDate,Seat[] seat) : Reservation  
+ saveReservations() : void  
+ loadReservations() : void  
+ cancelReservation(int resNumber) : void  
+ saveFlightInfo() : void  
+ viewPassengerList(String flightID) : Passenger[]

### Inheritance Diagram

