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Airline Reservation System

METHODS:

PACKAGE MODEL

1. Baggage
  - 1.1 getBaggageType()
  - 1.2 getWeight()
2. Customer
  - 2.1 List<Ticket> getTickets()
  - 2.2 int getCustomerId()
  - 2.3 String getName()
  - 2.4 String getEmail()
  - 2.5 Customer fromJSON(JSONObject jsonObject, CustomerManager customerManager, FlightManager flightManager )
  - 2.6 JSONObject toJSON()
3. Flight
  - 3.1 int getFlightId()
  - 3.2 String getOrigin()
  - 3.3 String getDestination
  - 3.4 getAirline()
  - 3.5 Date getDeparture()
  - 3.6 Date getArrivalDate()
  - 3.7 JSONObject toJSON()
  - 3.8 Flight fromJSON(JSONObject jsonObject)
4. Payment
  - 4.1 int getPaymentId()
  - 4.2 double getAmount()
  - 4.3 Date getDate()
5. Ticket
  - 5.1 JSONObject toJSON()
  - 5.2 Ticket fromJSON(JSONObject jsonObject, CustomerManager customerManager, FlightManager flightManager)
  - 5.3 int getTicketId()
  - 5.4 int getFlightId()

- 5.5 int getId()
- 5.6 TicketClass getTicketClass()
- 5.7 int getNumberOfPeople()
- 5.8 String getStatus()
- 5.9 Flight getFlight(FlightManager flightManager)

## 6. Users

- 6.1 String getUsername()
- 6.2 String getPassword()

## PACKAGE UTILS

### 7. CustomerDataManager

- 7.1 List<Customer> loadCustomers()

### 8. CustomerManager

- 8.1 Customer createCustomer( String name, String email)
- 8.2 List<Customer> getAllCustomers()
- 8.3 Customer getCustomer( int customerId)

### 9. FAQManager

### 10. FlightManager

- 10.1 Flight createFlight(String origin, String destination, String airline, Date departureDate, Date arrivalDate)
- 10.2 List<Flight> getAllFlights()

### 11. JsonUtils

- 11.1 List<Customer> loadCustomersFromFile( String filename)

### 12. OfferManager

- 12.1 List<String> getAllOffers()

### 13. PaymentManager

- 13.1 Payment makePayment(PaymentMethods method, double amount)
- 13.2 List<Payment> getAllPayment()

### 14. PaymentMethod

- 14.1 int getId()
- 14.2 PaymentMethods getMethods()
- 14.3 double getAmount()

14.4 Date getDate()

## 15. ReservationSystem

15.1 ReservationSystem getInstance()

15.2 CustomerManager getCustomerManager()

15.3 FlightManager getFlightManager()

15.4 TicketManager getTicketManager()

15.5 PaymentManager getPaymentManager()

15.6 OfferManager getOfferManager()

15.7 FAQManager getFaqManager()

## 16. TicketManager

16.1 Ticket bookTicket(Customer customer, Flight flight, TicketClass ticketClass, int numberOfPeople)

16.2 List<Ticket> getTicketByCustomer(Customer customer)

16.3 Ticket getTicket (int id)

16.4 List <Ticket> getAllTickets()

## PACKAGE VIEW

## 17. AirlineReservationSimulator

## 18. Login

18.1 boolean authenticate(String username, String password)

18.2 Users findUser(String username)

## 19. MenuManager

19.1 getIntInput()

## TEST CASES:

### 1. Baggage

1.1 getBaggageType()

1.2 getWeight()

### 2. Customer

2.1 List<Ticket> getTickets()

2.2 int getCustomerId()

2.3 String getName()

2.4 String getEmail()

2.5 Customer fromJSON(JSONObject jsonObject, CustomerManager customerManager, FlightManager flightManager )

2.6 JSONObject toJSON()

### 3. Flight

- 3.1 int getFlightId()
- 3.2 String getOrigin()
- 3.3 String getDestination
- 3.4 getAirline()
- 3.5 Date getDeparture()
- 3.6 Date getArrivalDate()
- 3.7 JSONObject toJSON()
- 3.8 Flight fromJSON(JSONObject jsonObject)

#### 4. Payment

- 4.1 int getPaymentId()
- 4.2 double getAmount()
- 4.3 Date getDate()

#### 5. Ticket

- 5.1 JSONObject toJSON()
- 5.2 Ticket fromJSON(JSONObject jsonObject, CustomerManager customerManager, FlightManager flightManager)
- 5.3 int getTicketId()
- 5.4 int getFlightId()
- 5.5 int getCustomerId()
- 5.6 TicketClass getTicketClass()
- 5.7 int getNumberOfPeople()
- 5.8 String getStatus()
- 5.9 Flight getFlight(FlightManager flightManager)

#### 6. Users

- 6.1 String getUsername()
- 6.2 String getPassword()

#### PACKAGE UTILS

##### 7. CustomerDataManager

- 7.1 List<Customer> loadCustomers()

##### 8. CustomerManager

### 8.1 Customer createCustomer( String name, String email)

Input1: name

Input2: email

Output: Customer

Input1	Input2	expectOutput
John Doe	john.doe@example.com	Customer(1, "John Doe", "john.doe@example.com")
Jane Smith	jane.smith@example.com	Customer(2, "Jane Smith", "jane.smith@example.com")
Test User	test.user@example.com	Customer(3, "Test User", "test.user@example.com")
	no.email@example.com	Customer(4, "", "no.email@example.com")
Empty Email		Customer(5, "EmptyEmail", "")
Numeric Name	12345@example.com	Customer(6, "12345", "12345@example.com")
NullName	null@example.com	Customer(7, null, "null@example.com")
LongName	long.name@example.com	Customer(8, "LongName", "long.name@example.com")
SpecialChars	@@@@@.example.com	Customer(9, "SpecialChars", "@@@@@.example.com")
		Customer(10, "", "")

### 8.2 List<Customer> getAllCustomers()

### 8.3 Customer getCustomer( int customerId)

Input : customerId

Output: Customer

Input	expectOutput
1	Customer(1, "John Doe", "john@example.com")
2	Customer(2, "Jane Smith", "jane@example.com")
3	Customer(3, "Test User", "test@example.com")
4	Null
-1	Null
0	Null
100	Null
10	Null

8	Customer(8, "LongName", "long.name@example.com")
-2	Null

## 9. FAQManager

## 10.FlightManager

10.1 Flight createFlight(String origin, String destination, String airline, Date departureDate, Date arrivalDate)

Input1: origin

Input2: destination

Input3: airline

Input4: departureDate

Input5: arrivalDate

Output: Flight

Input1	Input2	Input3	Input4	Input5	expectOutput
"NYC"	"LAX"	"Delta"	2024-07-01	2024-07-01	Flight(1, "NYC", "LAX", "Delta", 2024-07-01, 2024-07-01)
"LAX"	"SFO"	"United"	2024-07-02	2024-07-02	Flight(2, "LAX", "SFO", "United", 2024-07-02, 2024-07-02)
"ORD"	"JFK"	"American"	2024-07-03	2024-07-03	Flight(3, "ORD", "JFK", "American", 2024-07-03, 2024-07-03)
"MIA"	"ATL"	"Delta"	2024-07-04	2024-07-04	Flight(4, "MIA", "ATL", "Delta", 2024-07-04, 2024-07-04)
"SEA"	"DEN"	"Southwest"	2024-07-05	2024-07-05	Flight(5, "SEA", "DEN", "Southwest", 2024-07-05, 2024-07-05)
""	"LAX"	"Delta"		2024-07-06	

			2024-07-06		Flight(6, "", "LAX", "Delta", 2024-07-06, 2024-07-06)
"NYC"	"	"Delta"	2024-07-07	2024-07-07	Flight(7, "NYC", "", "Delta", 2024-07-07, 2024-07-07)
"NYC"	"LAX"	"	2024-07-08	2024-07-08	Flight(8, "NYC", "LAX", "", 2024-07-08, 2024-07-08)
"NYC"	"LAX"	"Delta"	null	2024-07-09	Flight(9, "NYC", "LAX", "Delta", null, 2024-07-09)
"NYC"	"LAX"	"Delta"	2024-07-10	null	Flight(10, "NYC", "LAX", "Delta", 2024-07-10, null)

10.2 List<Flight> getAllFlights()

## 11. JsonUtils

11.1 List<Customer> loadCustomersFromFile( String filename)

## 12. OfferManager

12.1 List<String> getAllOffers()

## 13. PaymentManager

13.1 Payment makePayment(PaymentMethods method, double amount)

13.2 List<Payment> getAllPayment()

## 14. PaymentMethod

14.1 int getPaymentId()

14.2 PaymentMethods getMethods()

14.3 double getAmount()

14.4 Date getDate()

## 15. ReservationSystem

- 15.1 ReservationSystem getInstance()
- 15.2 CustomerManager getCustomerManager()
- 15.3 FlightManager getFlightManager()
- 15.4 TicketManager getTicketManager()
- 15.5 PaymentManager getPaymentManager()
- 15.6 OfferManager getOfferManager()
- 15.7 FAQManager getFaqManager()

## 16. TicketManager

- 16.1 Ticket bookTicket(Customer customer, Flight flight, TicketClass ticketClass, int numberOfPeople)
- 16.2 List<Ticket> getTicketByCustomer(Customer customer)
- 16.3 Ticket getTicket (int id)
- 16.4 List <Ticket> getAllTickets()

## PACKAGE VIEW

## 17. AirlineReservationSimulator

## 18. Login

- 18.1 boolean authenticate(String username, String password)

Input1: username

Input2: password

Output: boolean

Input1	Input2	expectoutput
"john_doe"	password123"	true
"jane_smith"	"mypassword"	true
"alice_jones"	"alicepass"	true
"bob_brown"	"bobpass"	true
"charlie_clark"	"charliepass"	true
"john_doe"	"wrongpassword"	false
"non_existent"	"password"	false
""	"password123"	false
"john_doe"	""	false
null	"password123"	false

- 18.2 Users findUser(String username)

Input: username

Output: Users



Input	Output
"john_doe"	Users("john_doe", "John", "Doe")
"jane_smith"	Users("jane_smith", "Jane", "Smith")
"alice_jones"	Users("alice_jones", "Alice", "Jones")
"bob_brown"	Users("bob_brown", "Bob", "Brown")
"charlie_clark"	Users("charlie_clark", "Charlie", "Clark")
"non_existent"	null
""	null
"JOHN_DOE"	null
"john_doe "	null
null	null

## 19. MenuManager

### 19.1 getIntInput()