

FileConstants

```

+FLIGHT_NUMBER: int
+DEPARTURE_DATE_TIME: int
+ARRIVAL_DATE_TIME: int
+AIRLINE: int
+ORIGIN: int
+DESTINATION: int
+COST: int

```

UserDatabase

```

-users: ArrayList<User>
-savedFilepath: String

```

```

+UserDatabase(filepath: String)
+readUsersFromFile(usersInformation: File): void
-retrieveDateTime(date: String): Date
+getUsers(): ArrayList<User>
+updateClientsPersonalInformation(client: User,lastName: String,
    firstName: String,billingAddress: String): void
+updateClientsEmail(client: User,email: String): void
+addUserToFile(user: User): void

```

FlightDatabase

```

-flights: ArrayList<Flight>
-adjacencyList: Map<String, ArrayList<Flight>>
-savedFilepath: String

```

```

+FlightDatabase(filepath: String)
+FlightDatabase()
+getFlights(): ArrayList<Flight>
+addFlight(flight: Flight): void
-generateGraph(): void
+readFlightsFromFile(filepath: String): void
-retrieveFlightNumber(unformattedFlightNumber: String): int
-retrieveDateTimeEntries(unformattedDateTime: String):String[]
-retrieveDateTime(date: String, time: String): DateFormat
+queryItineraryByCost(departure: DateDate,origin: String, destination: String): ArrayList<Itinerary>
+queryItineraryByTime(departure: DateDate,origin: String, destination: String): ArrayList<Itinerary>
-isFlightStartingPoint(flight Flight,departureDateTime: Date, origin: String): boolean
+addFlightToFile(flight: Flight): void

```

package driver

Driver

+MIN_LAYOVER:Duration
+MAX_LAYOVER:Duration
-date:DateFormat
-dateTime:DateFormat

+uploadClientInfo(path: String): void
+uploadFlightInfo(path: String): void
+getClient(email: String):Sstring
+getFlights(date: String,origin: String,destination: String): List<String>
+getItineraries(date: String,origin: String,destination: String): List<String>
+getItinerariesSortedByCost(date: String,origin: String,destination: String): List<String>
+getItinerariesSortedByTime(date: String,origin: String,destination: String): List<String>

Flight

-flightNumber: int
-departureDateTime: DateFormat
-arrivalDateTime: DateFormat
-airline: String
-origin: String
-destination: String
-cost: double

+Flight(flightNumber: int, departureDate: Date, departureTime: Time, arrivalDate: Date, arrivalTime: Time, airline: String, origin: String, destination: String, cost: double)
+getFlightNumber(): int
+setFlightNumber(flightNumber: int): void
+getDepartureDateTime(): DateFormat
+setDepartureDateTime(departureDateTime: DateFormat): void
+getArrivalDateTime(): DateFormat
+setArrivalDateTime(arrivalDateTime: DateFormat): void
+getAirline(): String
+setAirline(airline: String): void
+getOrigin(): String
+setOrigin(origin: String): void
+getDestination(): String
+setDestination(destination: String): void
+getCost(): double
+setCost(cost: double): void

Itinerary

-flights: ArrayList<Flight>
-totalCost: double
-totalFlightTime: Time

+Itinerary(flights: ArrayList<Flight>)
+getFlights(): ArrayList<Flight>
+setFlights(flights: ArrayList<Flight>): void
+addFlight(flight: Flight): void
+getTotalCost(): double
+getTotalTravelTime(): Time
-updateTotalCost(): void
-updateTotalTime(): void
+getOrigin(): String
+getDestination(): String

package user

Account <<abstract>>

#email: String
-billingAddress: String
-firstName: String
-lastName: String

+Account(email: String, billingAddress: String, firstName: String, lastName: String)
+setBillingAddress(billingAddress: String): void
+getFirstName(): String
+getBillingAddress(): String
+setFirstName(firstName: String): void
+getLastName(): String
+setLastName(lastName: String): void
+getEmail(): String
+updateInformation billingAddress: String, firstName: String, lastName: String): void
+hashCode(): int

User

-bookedTrips: ArrayList<Itinerary>
-creditCardNumber: String
-creditCardExpiry: Date

+User(email: String, billingAddress: String, firstName: String, lastName: String, creditCardNumber: String, creditCardExpiry: Date)
+updateClientEmail(client: User, email: String): void
+getCreditCardNumber(): String
+getCreditCardExpiry(): Date
+updateClientPersonalInformation(client: User, firstName: String, lastName: String, billingAddress: String): void
+viewUsers(): ArrayList<User>
+selectUser(): User
+addFlight(flight: Flight): void
+uploadFlights(flightPath: String): void
+getFlightTrips(origin: String, destination: String, departureDate: String, departureTime: String): ArrayList<Itinerary>
+selectItinerary(): Itinerary
+bookTrip(itinerary: Itinerary): void
+viewBookedTrips(): ArrayList<Itinerary>