

BackendControlPanel (singleton)

- Act as the access point for the frontend to access all backend features
- Stores a reference to all the managers
- Keeps track of which user is logged in and checks if the user has permission to do things
- Opens files for the managers to load data from
- Frontend
- Managers
 - AuthorizationManager
 - ClientManager
 - FlightManager
 - BookingManager
- Search

Manager (Abstract)

- Store the data in a map
- Load/Save data
- Get/Set the data
- DatabaseEntry

DatabaseEntry (interface)

- Generate a unique key for this entry
- Generate a CSV line to represent this entry

AuthorizationManager (singleton, Manager)

- Know how to parse a passwords.txt
- Store data about users' passwords and whether they are admin or not
- Check if a user is an admin
- Check if a username and password matches
- AuthorizationInfo

AuthorizationInfo (is a DatabaseEntry)

- Store email, password, and whether user is admin
- Use the email as the key

ClientManager (singleton, Manager)

- Know how to parse a client.csv file
- Add new users
- Get existing user's info
- Set a new version of user's info
- ClientInfo

ClientInfo(DatabaseEntry)

- Store all parameters of a client (personal, billing)
- Get/set all info
- Use the user's email as a key
- Generate a CSV representation of itself

FlightManager(singleton, Manager)

- Know how to parse a flights.csv file
- Get flight info
- Add new flights
- Set a new version of a flight's info
- FlightInfo

FlightInfo(Database Entry)

- Store all info about a flight
- Get/set all parameters of a flight
- Use the flight ID (eg AC101) as a key
- Generate a CSV representation of itself.

BookingManager(singleton, Manager)

- Know how to parse a bookings.csv file
- Get a list of itineraries booked by a user
- Add itineraries to a user's account (create a booking account if user does not exist yet)
- BookedItin

BookedItin(DatabaseEntry)

- Store a user email and a list of booked itineraries
- Use the user email as a key
- Generate a CSV representation of itself

Search

- Search flights and generate itineraries
- Return a list of Itineraries sorted by cost or time
- FlightManager
- FlightInfo
- Itinerary

Itinerary

- Store a list of flights
- Calculate total Duration and Cost of the itinerary
- FlightInfo