**Question 4.**

Airline reservation system from INFO8230 is a simple system that doesn’t implement any design patterns, to redesign the system using façade pattern, we will need to understand how the system work as a whole system and how can we break it down into smaller subsystem.

As assignment 4 states, the system is to provide two basic services to an airline, the first is airline perspective, and the second is customer perspective.

Based on what we have, the system can be broken down into two subsystems, serving airline and serving customer.

Be definition, “Façade patter provide a unified interface to a set of interfaces in a subsystem. Facade defines a higher-level interface that makes the subsystem easier to use.”

Façade class will be providing the required interfaced based on the identity of the user, that are divided into 2 categories, customers and employees whom inherit from Account class. If a customer arrives at the airline system and requests a service, Façade will delegates the request to the appropriate subsystem, in our situation, ServeCustomer package, that will allow the user to query flight schedules, reserve, purchase or cancel.

From employee’s perspective, the Façade class will delegate him to the ServeEmloyee package where he will be able to AddAirCraft, AddFlight, AddPlane ,etc