Osman Khan

Gustavo Cisneros

CECS 323

April 15, 2020

Class and Association Definitions

**Class Definitions:**

**Airport**: a complex of runways and buildings for the takeoff, landing, and maintenance of civil aircraft, with facilities for passengers.

**Airline**: an organization providing a regular public service of air transportation on one or more routes.

**Plane**: a powered flying vehicle with fixed wings and a weight greater than that of the air it displaces.

**CrewMember**: An employee of an airline that operates on an aircraft with a specific role related to flight operations.

**FlightCrew**: a group of people who work on and operate an aircraft made up of a pilot, co-pilot, navigator, and flight attendants.

**Incident Report**: a report related to any type of incident that occurred on a flight. Could include a problem, a concern, an emergency, or recognition of good customer service.

**Flight**: a scheduled journey made by an airline with an associated number that references a journey from one airport to another one. It has a departure time and arrival time.

**FlightInstance:** A specific flight that is the actual flight from one airport to another on a specific date.

**Pilot:** a person who operates the flying controls of an aircraft.

**Co-Pilot:** a second pilot in an aircraft that assist the pilot.

**Navigator:** a person who directs the course of an aircraft by using instruments and maps**.**

**FlightAttendant:** a person employed to provide a service to the passengers as a sterward.

**Associations:**

**FlightCrew and FlightInstance**

A FlightCrew works for one to many FlightInstances.

A FlightInstance is worked on by one and only one FlightCrew.

**Flight and FlightInstance**

A Flight is carried out by one to many FlightInstances.

A FlightInstance carries out one and only one Flight.

**Flight and Airport**

A Flight departs from one and only one Airport.

An Airport has zero to many Flights departing from it.

A Flight arrives at one and only one Airport.

An Airport has zero to many Flights arriving at it.

**FlightCrew and CrewMember**

A FlightCrew is composed of one to many CrewMembers.

CrewMembers do or do not compose a FlightCrew.

**Flight and Airline**

A Flight is represented by one and only one Airline.

An Airline represents planes for one to many Flights.

**Flight and Plane**

A Flight flies on one and only one plane.

A Plane is flown on one to many Flights.

**IncidentReport and CrewMember**

An IncidentReport is written by one and only one CrewMember.

A CrewMember writes zero to many IncidentReports.

An IncidentReport is reported on one and only one CrewMember.

A CrewMember is reported in zero to many IncidentReports.

**Airline and Plane**

An Airline owns one to many Planes.

A Plane is owned by one and only one Airline.

**FlightInstance and Incident Report**

A FlightInstance can have one to many IncidentReports.

An IncidenReport can be reported for one and only one FlightInstance.

**CrewMember, Pilot, Co-Pilot, Navigator, and FlightAttendant**

A Pilot is a CrewMember.

A Co-Pilot is a CrewMember.

A Navigator is a CrewMember.

A FlightAttendant is a CrewMember.