

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 steward.

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 IncidentReport 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.