

Airline Company

We want to design a database for an airline company to underpin a system that will store information on flight schedules, passengers and their bookings, and the staff assigned to the planned flights. There is a particular need to track pilots and their ability to fly certain aircraft types.

The database will allow users to know:

- The passengers of a flight,
- The crew of a flight,
- What plane is assigned to a particular trip,
- The pilot's type rating. A type rating is a license a pilot is granted to fly a particular type of aircraft.
- What are the flight schedules: e.g. Paris-Caracas (weekly schedule), etc?

Staff: Each member of staff in the company is identified by a number (*EMPNUM*), and is described by his or her name (*SURNAME*), given name (*NAME*), address (*ADDRESS*), telephone number (*PHONE*) and his or her monthly salary (*SALARY*). Among the staff, pilots are distinguished to indicate the type ratings they hold and the planes they can fly with these ratings.

Airplane: Each airplane owned by the company has a serial number (*NUMSER*). Each airplane is also identified by its manufacturer and model number. Together, these constitute what we call the aircraft: e.g., BOEING 747.

Passenger: Passengers are identified by their surname (*SURNAME*), given name (*NAME*), address (*ADDRESS*), telephone number (*PHONE*). A departure is a flight on a certain date (*DATE*). Flights are identified by a number (*FLIGHTNUM*), origin (*ORIGIN*) and a destination (*DEST*) and various intermediate cities (each pair of connected cities defines a stretch). For each city served, we record the time of arrival (*ARR-TIME*) and departure time (*DEP-TIME*) of the flight concerned.

The planes that can be assigned to a flight needs to be recorded. For each flight, a pilot must have been appointed and a particular airplane must have been allocated.

Requirements:

1. Each passenger can be associated with one or more flights, and each flight has an airplane.
2. Each flight can serve one or more intermediate cities, and it can have one or more staff allocated to it.
3. Each flight is associated with one or more passengers.
4. Each staff member can be allocated to one or more flights, specifically crew members can be assigned to many flights.
5. Each city can be intermediate for one or more flights.

We want to design a database for an airline company to support a system that will contain data on flight schedules, passengers and their bookings, and the staff assigned to the flights. Tracking pilots and their aptitude to fly specific aircraft types is essential.

Users will be able to access the following information from the database:

- the passengers of a flight,
- the crew of a flight,
- the plane assigned to a specific journey, and
- the pilot's type rating. A type rating is a pilot's authorization to operate a specific type of aircraft.
- What are the flight schedules, such as Paris-Caracas (weekly schedule) and so forth?

Each member of the company's employees is identified by a number (EMPNUM), followed by his or her surname, given name, address, phone number, and monthly salary (SALARY). Pilots are distinguished on the basis of their type ratings and the aircraft they can fly with these ratings.

Each aircraft possessed by the company is assigned a serial number (NUMSER). Additionally, each aircraft is distinguished by its manufacturer and model number. This is what we refer to as the aircraft, such as the BOEING 747.

Passenger: Passengers are identified by their last name, first name, address, and phone number. A departure is a specific date (DATE) flight. Flights are designated by their flight number (FLIGHTNUM), origin (ORIGIN), and destination (DEST), as well as intermediate cities (each pair of connected cities defines a stretch). For each city served, we keep track of the flight's arrival (ARR-TIME) and departure (DEP-TIME) times.

The aircraft that can be designated to a flight must be documented. A pilot and a specific aircraft must have been designated for each voyage.

Requirements:

1. Each passenger can be associated with multiple flights, and each flight has its own aeroplane.
2. Each flight may serve one or more intermediate locations and may be assigned one or more personnel.
3. There are one or more passengers associated with each flight.
4. Each employee can be assigned to one or more flights, and crew members can be assigned to multiple flights.
5. Each city may serve as a stopover for one or more aircraft.