Database Documentation - flights

Table des matières

[1. Introduction 1](#_Toc202704560)

[2. Tables Overview 1](#_Toc202704561)

[3. Data Volume Summary 2](#_Toc202704562)

[4. Dictionary 2](#_Toc202704563)

[Table: aircraft 2](#_Toc202704564)

[Table: airlines 2](#_Toc202704565)

[Table: airports 2](#_Toc202704566)

[Table: passenger 2](#_Toc202704567)

[Table: passenger\_flights 2](#_Toc202704568)

[Table: flights 2](#_Toc202704569)

# 

# 1. Introduction

The flights database is designed to simulate the operational and logistical data for an airline company, including aircraft specifications, flight details, airport data, passenger information, and ticketing operations. This database supports use cases such as flight analytics, aircraft performance tracking, passenger behavior analysis, and revenue monitoring.

Une image contenant texte, capture d’écran, Police, diagramme

Le contenu généré par l’IA peut être incorrect.

# 2. Tables Overview

* - aircraft
* - airlines
* - airports
* - passenger
* - passenger\_flights
* - flights

# 3. Data Volume Summary

Here is the current volume of data per table:

|  |  |
| --- | --- |
| Table Name | Number of Records |
| aircraft | 19 |
| airlines | 11 |
| airports | 32 |
| passenger | 100 007 |
| passenger\_flights | 700 008 |
| flights | 25 001 |

# 4. Dictionary

## Table: aircraft

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Data Type | Description | Constraints / Allowed Values |
| aircraft\_id | VARCHAR(50) | Unique aircraft identifier | PK |
| manufacturer | VARCHAR(50) | Aircraft manufacturer (e.g., Airbus, Boeing) |  |
| aircraft\_type | VARCHAR(50) | Type of aircraft (e.g., Wide-body, Narrow-body) |  |
| year\_built | INTEGER | Year the aircraft was built |  |
| engine\_type | VARCHAR(50) | Type of engine (e.g., Turbofan, Turboprop) |  |
| mass | INTEGER | Mass of the aircraft in kilograms |  |
| length\_meters | INTEGER | Length of the aircraft in meters |  |
| cost | DECIMAL(15,2) | Cost of the aircraft in euros |  |
| capacity | INTEGER | Maximum seating capacity |  |
| fuel\_capacity\_liters | INTEGER | Fuel tank capacity in liters |  |
| burn\_rate\_liters\_per\_minute | DECIMAL(6,2) | Fuel consumption rate per minute |  |
| aircraft\_status | VARCHAR(50) | Operational status of the aircraft | CHECK: 'Active, 'Maintenance', 'Retired' |

## Table: airlines

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Data Type | Description | Constraints / Allowed Values |
| airline\_code | VARCHAR(10) | Unique airline code | PK |
| airline\_name | VARCHAR(50) | Name of the airline |  |
| headquarters | VARCHAR(50) | Headquarters location |  |
| date\_founded | DATE | Founding date of the airline |  |
| market\_cap | BIGINT | Market capitalization in euros |  |
| employees | INTEGER | Number of employees |  |

## Table: airports

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Data Type | Description | Constraints / Allowed Values |
| airport\_code | VARCHAR(5) | Unique airport code (IATA or ICAO) | PK |
| airport\_name | VARCHAR(50) | Name of the airport |  |
| city | VARCHAR(50) | City where the airport is located |  |
| country | VARCHAR(50) | Country where the airport is located |  |
| airport\_employees | INTEGER | Number of airport employees |  |
| airport\_size\_m2 | INTEGER | Airport size in square meters |  |

## Table: passenger

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Data Type | Description | Constraints / Allowed Values |
| passenger\_id | INT | Unique passenger identifier | PK |
| first\_name | VARCHAR(50) | Passenger's first name |  |
| last\_name | VARCHAR(50) | Passenger's last name |  |
| birthdate | DATE | Passenger's birthdate |  |
| nationality | VARCHAR(50) | Passenger's nationality |  |
| gender | VARCHAR(10) | Passenger's gender | CHECK: 'Male', 'Female', 'Other' |
| passenger\_status | VARCHAR(20) | Passenger loyalty status | CHECK: 'First Timer', 'Regular', 'Frequent Flyer' |

## Table: passenger\_flights

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Data Type | Description | Constraints / Allowed Values |
| pf\_id | INT | Unique passenger flight ticket ID | PK |
| passenger\_id | INT | Reference to the passenger | FK → passenger(passenger\_id) |
| flight\_id | VARCHAR(50) | Reference to the flight | FK → flights(flight\_id) |
| booking\_date | DATE | Booking date |  |
| seat\_number | VARCHAR(5) | Assigned seat number |  |
| ticket\_class | VARCHAR(50) | Ticket class | CHECK: 'Economy', 'Business', 'First' |
| ticket\_price | DECIMAL(10,2) | Ticket price in euros |  |
| check\_in\_status | VARCHAR(50) | Check-in status | CHECK: 'Checked In', 'No Show', 'Cancelled' |

## Table: flights

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Data Type | Description | Constraints / Allowed Values |
| flight\_id | VARCHAR(50) | Unique flight identifier | PK |
| departure\_time | DATETIME | Scheduled departure time |  |
| arrival\_time | DATETIME | Scheduled arrival time |  |
| delay\_minutes | INTEGER | Flight delay in minutes |  |
| departure\_airport\_code | VARCHAR(5) | Code of departure airport | FK → airports(airport\_code) |
| destination\_airport\_code | VARCHAR(5) | Code of destination airport | FK → airports(airport\_code) |
| flight\_status | VARCHAR(10) | Current flight status | CHECK: 'On Time', 'Delayed', 'Cancelled' |
| passenger\_count | INTEGER | Number of passengers onboard |  |
| revenue | DECIMAL(15,2) | Total revenue from the flight |  |
| asm\_domestic | DECIMAL(15,2) | Available Seat Miles (domestic) |  |
| asm\_international | DECIMAL(15,2) | Available Seat Miles (international) |  |
| flights\_domestic | DECIMAL(15,2) | Number of domestic flights |  |
| flights\_international | DECIMAL(15,2) | Number of international flights |  |
| passengers\_domestic | DECIMAL(15,2) | Domestic passengers count |  |
| passengers\_international | DECIMAL(15,2) | International passengers count |  |
| rpm\_domestic | DECIMAL(15,2) | Revenue Passenger Miles (domestic) |  |
| rpm\_international | DECIMAL(15,2) | Revenue Passenger Miles (international) |  |
| airline\_code | VARCHAR(10) | Reference to operating airline | FK → airlines(airline\_code) |
| aircraft\_id | VARCHAR(50) | Reference to aircraft used | FK → aircraft(aircraft\_id) |