

## Définition du schéma en SQL

```
CREATE TABLE airlines (  
    carrier text NOT NULL,  
    "name" text NULL,  
    CONSTRAINT airlines_pk  
        PRIMARY KEY (carrier),  
    CONSTRAINT airlines_un  
        UNIQUE (name)  
);
```

```
CREATE TABLE airports (  
    faa text NOT NULL,  
    "name" text NULL,  
    lat float8 NULL,  
    lon float8 NULL,  
    alt float8 NULL,  
    tz float8 NULL,  
    dst text NULL,  
    tzone text NULL,  
    CONSTRAINT airports_pk  
        PRIMARY KEY (faa),  
    CONSTRAINT airports_un  
        UNIQUE (name),  
    CONSTRAINT airports_un_ll  
        UNIQUE (lat, lon)  
);
```

```
CREATE TABLE weather (  
    origin text NOT NULL,  
    "year" int4 NULL,  
    "month" int4 NULL,  
    "day" int4 NULL,  
    "hour" int4 NULL,  
    "temp" float8 NULL,  
    dewp float8 NULL,  
    humid float8 NULL,  
    wind_dir float8 NULL,  
    wind_speed float8 NULL,  
    wind_gust float8 NULL,  
    precip float8 NULL,  
    pressure float8 NULL,  
    visib float8 NULL,  
    time_hour timestampz NOT NULL,  
    CONSTRAINT weather_pk  
        PRIMARY KEY (origin, time_hour)  
);
```

```
ALTER TABLE weather ADD  
    CONSTRAINT weather_fk  
    FOREIGN KEY (origin)  
    REFERENCES airports(faa)  
    ON DELETE CASCADE  
    ON UPDATE CASCADE;
```

```
CREATE TABLE planes (  
    tailnum text NOT NULL,  
    "year" int4 NULL,  
    "type" text NULL,  
    manufacturer text NULL,  
    model text NULL,  
    engines int4 NULL,  
    seats int4 NULL,  
    speed int4 NULL,  
    engine text NULL,  
    CONSTRAINT planes_pk PRIMARY KEY (tailnum)  
);
```

```
CREATE TABLE flights (  
    "year" int4 NULL,  
    "month" int4 NULL,  
    "day" int4 NULL,  
    dep_time int4 NULL,  
    sched_dep_time int4 NULL,  
    dep_delay float8 NULL,  
    arr_time int4 NULL,  
    sched_arr_time int4 NULL,  
    arr_delay float8 NULL,  
    carrier text NULL,  
    flight int4 NULL,  
    tailnum text NOT NULL,  
    origin text NOT NULL,  
    dest text NULL,  
    air_time float8 NULL,  
    distance float8 NULL,  
    "hour" float8 NULL,  
    "minute" float8 NULL,  
    time_hour timestamptz NOT NULL,  
    CONSTRAINT flights_pk  
        PRIMARY KEY (  
            tailnum, origin, time_hour  
        )  
);
```

```
ALTER TABLE flights ADD  
    CONSTRAINT flights_fk  
    FOREIGN KEY (carrier)  
    REFERENCES airlines(carrier)  
    ON DELETE SET NULL  
    ON UPDATE CASCADE;
```

```
ALTER TABLE flights ADD  
    CONSTRAINT flights_fk_dest  
    FOREIGN KEY (dest)  
    REFERENCES airports(faa)  
    ON DELETE SET NULL  
    ON UPDATE CASCADE;
```

```
ALTER TABLE flights ADD  
    CONSTRAINT flights_fk_origin  
    FOREIGN KEY (origin)  
    REFERENCES airports(faa)  
    ON DELETE SET NULL  
    ON UPDATE CASCADE;
```

```
ALTER TABLE flights ADD  
    CONSTRAINT flights_fk_planes  
    FOREIGN KEY (tailnum)  
    REFERENCES planes(tailnum)  
    ON DELETE SET NULL  
    ON UPDATE CASCADE;
```