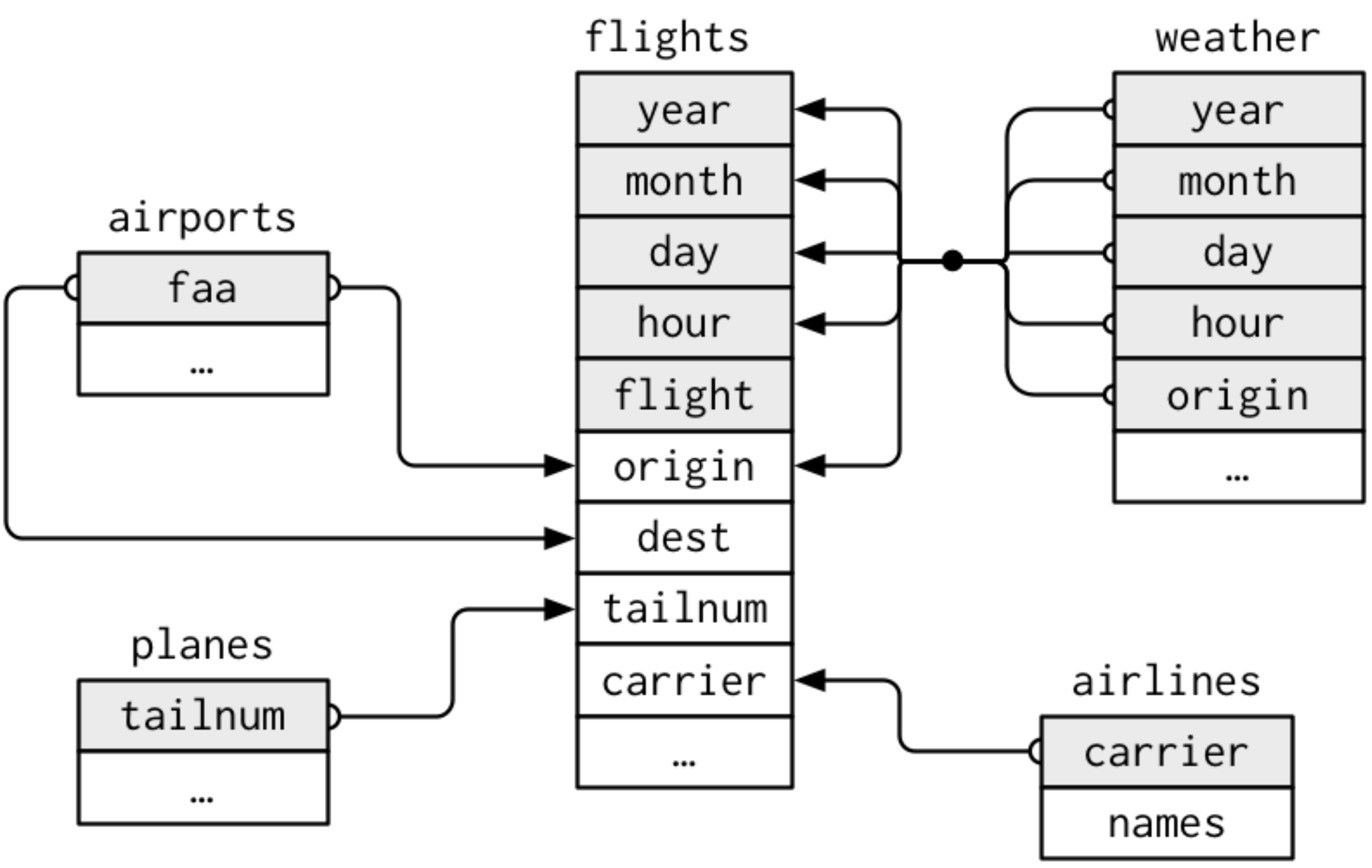
Each table has **keys** that link it to other tables


flights
year
month
day
hour
flight
origin
dest
tailnum
carrier
…
weather
year
month
day
hour
origin
…
airports
faa
…
planes
tailnum
…
airlines
carrier
names

A **primary key** uniquely identifies an observation in its own table. For example, `planes$tailnum` is a primary key because it uniquely identifies each plane in the `planes` table

A **foreign key** uniquely identifies an observation in another table. For example, `flights$tailnum` is a foreign key because it appears in the `flights` table where it matches each flight to a unique plane

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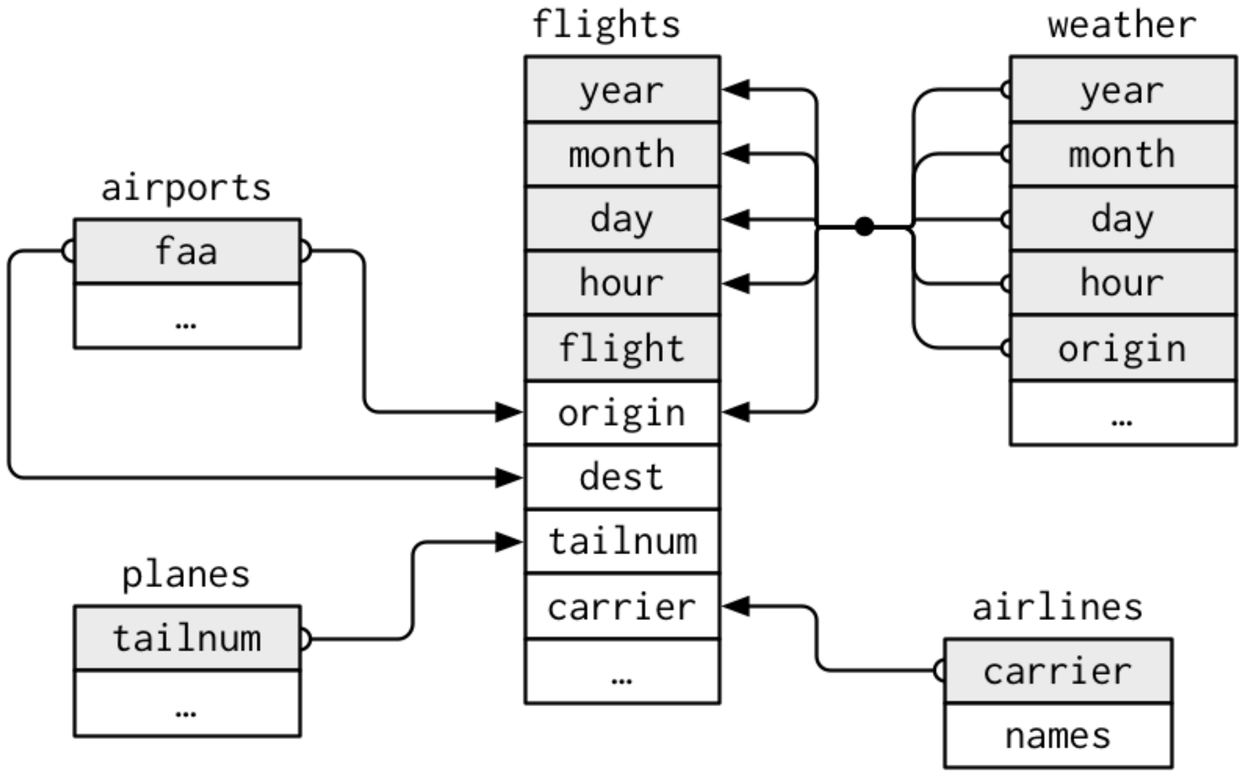

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Exercise set 1

1. Imagine you wanted to draw (approximately) the route each plane flies from its origin to its destination. What variables would you need? What tables would you need to combine?
2. We know that some days of the year are “special”, and fewer people than usual fly on them. How might you represent that data as a data frame? What would be the primary keys of that table? How would it connect to the existing tables?