

→ Airline Crew Scheduler

→ region range

1 Lincoln, Nebraska

2 Iowa City, Iowa

3 Evanston, Illinois

4 West Lafayette, Indiana

The Airline needs: System to keep track of employees are on each flight

* Crew positions

□ cockpit positions

- captain (qualified pilot for the particular aircraft)



needs two files

bool qualified GBR-10

,, " NU-150

- First officer (qualified pilot or co pilot)

flight Attendant

crew members who work in the main cabin dealing with passengers

\leq number of flight Attendant tied with the number of passengers.

* Air Crafts

* type

1) GBR-10 (carry 45 passengers)

2) NU-150 (carry 75 passenger)

Both have the same range and average speed of 500 mph under ideal conditions

* registration number

max 1 flight attendant

max 2 flight attendants

* flights

* flight number

* aircraft

* crew (captain, first officer
and 1 flight attendant per
50 passenger)

$$\text{flight attendant} = \left[\frac{\text{passengers}}{50} \right]$$

* origin airport

* destination //

* scheduled take off time

class

* estimated touchdown time

* actual " "

example

time → date 5/3/2022

time → time of date 5:20 pm

Each airport have a standby crew for each type of aircrafts, they could be assigned to flights individually.

Schedule update → electronic log

electronic log → Searched by --

- flights
- crew member
- airport
- date range

- each update will generate a unique update number (Semantically - Significant)

ex include date of change or date of the flight

→ any time when the schedule is updated

- 1 - check constraints
- 2 - alert the user to the violations

If constraints are violated

current information about past and future flights
and crew assignment must be recoverable
after a power outage

→ I think we could save these backup data
in a file e.g. backup.txt after each update
or having a backup database.

