

## Description

Airline companies such as Turkish Airlines, Lufthansa, United Airlines, Air France faces very complex planning problems to distribute flights to available pilots. With making use of pilot resources efficiently, such company can increase its profit significantly.

Such planning problem has various parameters such as pilots' locations, pilots' holidays, pilots' flying limits, flights' routes, flights' durations, fair distribution of flights between pilots, some other constraints such as pilot should not goes 2 long flight in sequence. Also, the problem can be extended to make use of airliner resources efficiently because airliners' overall costs are important as well. In order to solve such complex problem, AI power can be very useful.

In the task4-domain.pddl file, basic domain for such planning problem is written. It contains pilot, flight and day definitions excepting from pilots' locations, flights' durations. It is assumed each flight fill 1 day of pilot's plan.

In the task4-problem.pddl file, problem with 2 pilot complete 4 flight in 2 days while 1 pilot is off day 1. The result shows that pilot needs to be called to duty to complete flight, otherwise pilot resources are not sufficient to complete all flights in time.