



Exercise Session 11

This week, you are the head of the planning department at a small airline company. The demand division of your company has forecasted demand for the following flights:

Flight No.	Origin	Departure	Destination	Arrival	Demand
762	London	07:20	Oslo	09:30	150
763	Oslo	10:50	London	13:15	80
768	London	15:40	Oslo	17:45	100
769	Oslo	18:45	London	21:10	190
778	London	10:20	Stockholm	12:50	80
779	Stockholm	13:55	London	16:30	90
780	London	14:15	Stockholm	16:45	100
781	Stockholm	17:55	London	20:35	130
811	Copenhagen	07:20	London	09:25	144
812	London	07:10	Copenhagen	09:00	168
813	Copenhagen	09:50	London	11:40	80
820	London	18:40	Copenhagen	20:30	170

Table 1: Daily Itinerary

Your company uses only one type of the aircraft with the capacity of 135 seats. The bases of the company are located in London and Copenhagen. To ease up the operation, the aircrafts have to return by the end of the day to the base they have started from. The fare is same for all of the flights and all classes (*i.e.* only one class exists) – 4000. The pullout cost of an aircraft is 935 000 and the operating cost is 65 000. The aircraft needs at least 45 minutes to turnaround, every time it lands in leg's destination (unless it's finished with operation for the day).

Task

- Solve the Aircraft Rotation Problem using CPLEX Optimization Studio