Update for Tuesday

More students are signing up to the process, there is now an updated file `test2.dzn` with a larger number of participating students.

Today, we also change the objective: We first want to minimize the maximum *regret* over all students. This is the difference between the sum of the assigned preferences, and the three best indicated preferences. If a student had stated two preferences with cost one, and two with cost two, the best three choices have value four, $(1 + 1 + 2)$. If he is assigned to one interview with preference one, and two with preference two, then the assigned cost is five, $(1 + 2 + 2)$, a resulting regret of value 1. Minimizing the maximal regret is the highest priority, and then the total cost (sum of all assigned preferences) should be minimized as secondary criterion.

The companies have replied to the increased demand by also increasing the number of slots available. But they are worried that not enough student are assigned to their interviews, and they wont participate if less than half of their slots are taken. This leads to two scenarios:

- We can assign no students to a company, and incur a disappointment cost d_j for the company.
- The number of students assigned is between a given lower and an upper bound. In this case the company is happy without extra cost.

For companies j, they should either be assigned no student, at a disappointment cost d_j, or be assigned at least a given minimum number of students l_j, and at most a maximum number u_j so that they are satisfied. The data for the companies is given in Table 1.

We have provided new files for today: `test2.mzn` and `test2.dzn`. (Note that `k` has been changed to `number_of_interviews` to aid readability.)

Table 1: Updated Company Data

Nr	Company	Disappointment Cost d_j	Min Assignment l_j	Max Assignment u_j
1	AIMMS	10	5	10
2	SAS	10	5	10
3	Keelvar	10	3	6
4	Microsoft	10	10	20
5	Google	20	10	20
6	IBM	10	10	20
7	Cadence	5	5	10
8	Quintiq	10	10	20
9	Siemens	10	10	20
10	Cosling	5	3	6
11	COSYTEC	5	3	6
12	LocalSolver	5	3	6
13	N-side	5	3	6
14	UTRC-I	5	5	10
15	Zoomer	5	5	10