

Milestone 7

15-400, Spring 2018

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Major Changes

No major changes.

What You Have Accomplished So Far

- For n agents, if we drop the goal to only try to maintain a proportional allocation, this is possible with $n - 1$ fractional, reassignable items.
- For 2 agents, we came up with a slightly different setting where the values of all items are known ahead of time, but the items still arrive one by one. So if you think of our previous settings as being able to modify the past but not knowing the future, this setting is knowing the future but not being able to modify the past. The goal, as usual, is to ensure the allocation at each step is EF1. Adapted an algorithm we had used earlier (cycle elimination) to this setting.

Meeting Your Milestone

Unfortunately, I did not make that much progress on upper or lower bounds for n agents in the settings I've been focusing on.

Surprises

Lower bounds are harder than expected.

Looking Ahead

Start working on Meeting of the Minds poster.

Milestone Revisions

None.

Resources Needed

No resources needed.