Milestone 3
15-400, Spring 2018

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Major Changes

No major changes.

What You Have Accomplished So Far

- Working on the previously mentioned setting of fair division with fixed agents but online arriving items.

- Read one of Alex's unpublished papers on fair division with arriving items but with a cache of fractionally divisible items. Unfortunately, does not look like it will translate into the disruptions model.

- Read Online Scheduling with Bounded Migration. The paper looks at the Job Scheduling Problem where the goal is to minimize makespan when allowed a fixed migration factor (if a job of size v_i arrives, allowed to move βv_i total size of jobs).

- There's probably some some analogy/useful techniques to be gleaned here. Mainly, migration factor is analogous to disruptions and job size is really just a simplified form of valuation.

- Made some progress on the two person setting. I have a rough idea of an algorithm that only requires d disruptions that guarantees maximum envy of $2\frac{d}{d-1}$.

Meeting Your Milestone

I've met the milestone.

Surprises

None.

Looking Ahead

My guess is that I'm probably going to need to do some more reading to find techniques I can apply to tackling the generalized n person setting.

Milestone Revisions

No need for milestone revisions. I plan to continue working on the above problem.

Resources Needed

No resources needed.