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Real Estate Sales Management – Implementation

Description:

In real estate, we’d like to make pairings of people to houses that will create maximum revenue to the agency and also satisfy the people buying the houses. We can use price settings to change consumers’ incentives in housing selection to ensure that both sides are happy. Here we will use the perfect matching algorithm to make this happen.

Pseudo code:

Start with M equal to the empty set

Define p(x)=0 for x in X, and p(y)= minimum cost ce for y in Y.

While M is not a perfect matching

Find a minimum-cost s-t path P in GM using Dijkstra with prices p

Augment along P to produce a new matching M’

Find a set of compatible prices with respect to M’

EndWhile

Progress:

At this moment, I’m still analyzing all the required steps needed to begin this project. This report is just the starting point and contains a lot of generalization for what actually need to be done.

So all cases within the progress is not working yet.

Difficulties:

I’m having issues with fully understanding augmentation and network flow, but this will be solved promptly.