CS 170 Project Phase II

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Our program is an implementation of Local search.

We start with a list of Wizards, [w1...wn], and their constraints which use to make a mapping of each wizard to a list of their constraints.

We then create a new list of the wizards sorted by their number of constraints, sorted_wizards, [w1...wn].

Then for every wizard, starting with the wizard with the most constraints, we check how many constraints are violated when they are in every possible position in wizards. We then place them in the spot that violated the least amount of constraints.

We keep doing this for all Wizards while a solution is not found, or we go a full iteration of placing all the wizards that doesn't change the amount of constraints violated, in which case we shuffle the wizards and start again.

This is done concurrently on all possible cpu cores, and when one finds a solution, they all stop.