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Genetic Algorithms

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Progress Report #1

I am working on developing a genetic algorithm for the 0-1 knapsack problem. I plan on using the genetic algorithm library we are creating as a class. Since this library as in a beta mode, I do not want to risk breaking my genetic algorithm due to changes in the library. Therefore, I am building this genetic algorithm with the same design pattern as the library, but using all my own code. In theory, the final product should work independently to the library, but should also be able to work with the finished library with little changes.

I am at the beginning stages of this process. I have built a github repository for use with this project. This repository is located at github.com/rutherfordjw/knap\_sack. I am new to github so this took some time to create and get working on my desktop computer at home. I am trying to get github working with eclipse using the eclipse plugin egit. At the moment, the plugin is getting hung up at rsa keys on my desktop. I am working on setting a key up. I have also built a test input file for which I will be reading from in my genetic algorithm. The file lists the capacity of the knapsack following with a benefit and volume of each item.

Next week, I plan on developing a class for reading in the file I created. This involves reading the file, creating a list of knapsack items, and setting the capacity of the knapsack. I also hope to have the driver built based on the genetic algorithm library, which should be a large portion of the project.