

## Program Functioning.

The program consists of 2 auxiliary functions, a class definition and the main program function. The first auxiliary function is `parse(file)`. This function aims to extract variables and storage them in list data structures by parsing the input file using simple regular expressions. The function returns a list of objects locations, vehicles, cargoes, goals in this order.

The second auxiliary function is used to calculate distance between locations. Assuming that in the problem the locations are linked circularly, we can calculate distance. There's always a way to reach one location from other, so we always take the shortest. It's also used a helper function to calculate distance with an intermediary location.

The class we define "mprime" when it's instantiated is an object that represent the problem. Here we deal with the variables and operations defined in the domain of the problem.

Finally in the main program function we code a procedure that follows a strategy.

To parse the code we use the module `re` included in python. Basically what was done is to create a data structure that represent the problem once the input file is parsed. So the methods `move`, `load`, `unload`, `donate` were hard coded following the rules stated in the domain file. Then by using the data structures created we can generate the plan applying the same rules and preconditions. This way we don't need to input the domain file. I intend to fully explain it, and give further details in the presentation, which include a running demo.