

Readme file for Greedy Approach

Input:

These are all the inputs available to our program :-

1. No of available feasible paths to our refueling system
2. Cost in terms of fuel consumption of the individual feasible path
3. List of all the stages that are involved in each feasible path

Output:

1. We get the minimum fuel consumption possible as an output of our program
2. We also get the feasible paths that are included to achieve the minimum fuel consumption.

Program Details:

This program is a greedy implementation of the basic branch and bound algorithm. In this instead of generating the feasible paths, we are asking the user to input them. In our problem the no of bases are limited so no feasible paths are also limited so we can take them as simple input / output. Now, as we have all the feasible paths possible, so we will be greedily choosing which path to traverse on and that will give us a certain lower bound for the minimum fuel consumption. This is not the best fuel consumption possible as there can be many other feasible paths reducing the fuel consumption but this is a really faster algorithm than others as it runs in linear time and also gives a good approximation to our result. As a result we get the feasible paths involved in our final route and also the fuel consumption with respect to each path, adding which we can get the total fuel consumption of our refueling request by the cruiser.