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Bigcon construction

UFCFW4-30-2 - Design and Analysis of Data Structures and Algorithms Coursework

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# Introduction

BigCon, a large construction company has sites in 4 un-inhabitant islands (A, B, C and D). Currently the company is constructing housing facilities at these islands. It owns only one dhoani to carry consumables from supplier islands to construction islands.

The purpose of this coursework is to assist the company you are required to design and implement an appropriate software to undertake the following tasks:

- Taking goods for consumption.

- Accept and add items into dhoani and island warehouses.

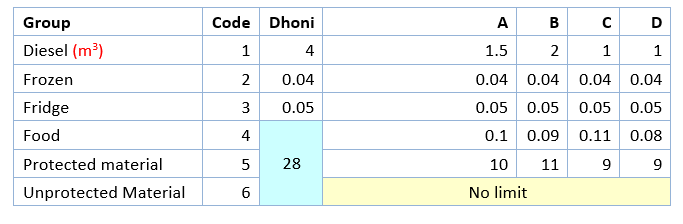
- Swap items between dhoani and island.

- Reject quantities of item beyond capacity.

# Identify and justify the choice of data structures and algorithms

## Assessing the current scenario

BigCon, a large construction company has sites in 4 un-inhabitant islands (A, B, C and D). Currently the company is constructing housing facilities at these islands. It owns only one dhoani to carry consumables from supplier islands to construction islands.

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Each site storages for the types mentioned above with the maximum space available defined.

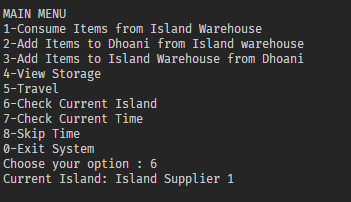
Dhoani travels between supplier islands at two ends visiting construction islands in order from A to B to C to D or D to C to B to A. Dhoni will not stop at an island where the capacity is full (for all product groups).

The following figure gives information about the distance between the islands.

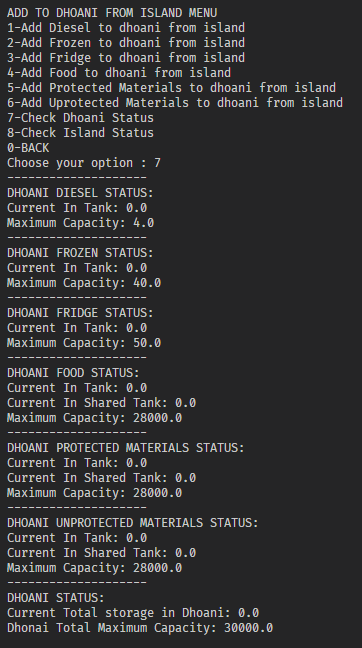


OUTPUTS

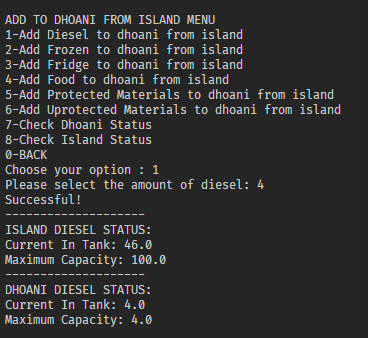
Adding materials to dhoani from island.



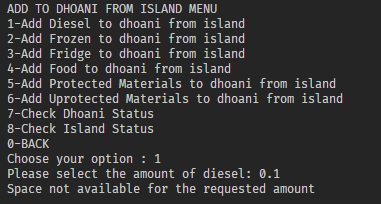
We start from supplier island.



Currently the Dhoani is empty and will be loading items from supplier island one



First we add 4 liters of diesel to Dhoani from the supplier island. The 4 liters was added successfully since it was within the Dhoani’s max capacity.



If we try to add more, the user will be alerted since it