

PORT HANDLING AGENCY

Main class is called **Agency**. It has a name and it has port objects in linked list. It can add,remove ports and control them.

Second class is **Port**. It has 3 kinds of ship objects in 3 different linked lists. It can add,remove,load,unload ships. Every port has a maximum ship limit and has a capacity of load can be placed in it.

Also they have its own name and id.

Third class is **Ship**. It's a base class while **CargoShip** , **OilTanker** and **PassengerShip** are derived from Ship. Every ship has id,name and capacity. **CargoShip** carries containers. Containers take 10 spaces both in the ship and in the port. This class' private value is the amount of containers in it.

OilTanker carries tankers. Tankers take 15 spaces both in the ship and in the port. This class' private value is the amount of tankers in it.

PassengerShip carries Passengers.Passengers take 1 space in ship and port. This class' private value is the amount of people in it.

Agencies can move its ships from one port to other. But load and unload functions can be done by the Agencies who owns the port that ship is in it.

Every ship created (added to port) is empty at first. Also ports.

Agencies can get passengers,tankers and containers to ports from land so that ships can load them.

Ports have private values of number of passengers,tankers and containers in it. And the total value is equal to passenger + tankers*15 + containers*10. This value can not be greater than the capacity.