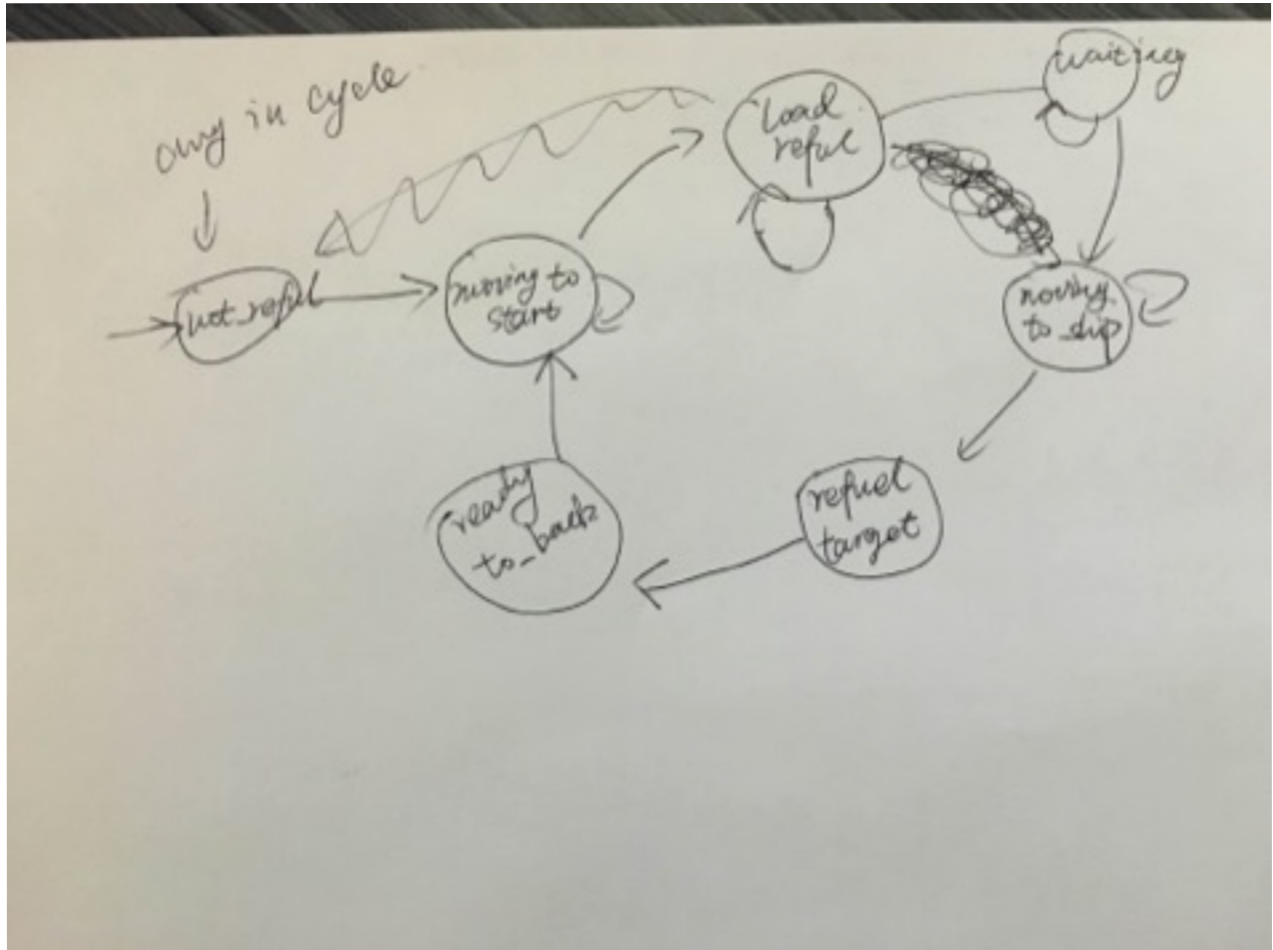states:

Interface:

public:
set_destination_island_and_speed(Island* island_ptr) : go to that island.

update(): tick 1: docked at the island. tick 2: refuel and load the cargo. Tick 3: start finding nearest dead in water ship and go to that ship's location. according to state diagram.

describe(): output a message for every state.

set_destination_island(): update all information and change state to moving_to_island. add some output message.

set_course_and_speed(): throw Exception if not in not_refueling state.

set_destination_position(): throw Exception if not in not_refueling state.

stoped(): forget all information and change state to not_refueling.

status: not_refueling, docked_at_island, load_cargo, moving_to_ship, refuel_the_ship, moving_back_to_island

private:
Ship* target_ship
Island* base_island
double cargo;
double cargo_capacity
State state;

Notes:
Model.h: add get_ships() function.