

# S1: Skimmer Design

Nate Jones

A Skimmer is a Ship and should follow normal ship commands, so it should derive from the Ship class. A Skimmer is not similar enough to any other classes derived from Ship to warrant deriving from one of them instead. Therefore, the best place to put the Skimmer class in the class hierarchy is directly inheriting from the Ship class.

In order to support the new “start\_skimming” command, a new function was added to the fat interface of Ship, called start\_skimming(), and implement it in the Skimmer class. This function tells a Skimmer to start skimming a spill of the provided size at the provided location. If this function is called for another subclass of Ship, the function will throw an error since skimming is not supported for those classes. This Error throwing function is defined in the Ship class so we don’t have to modify other Ship classes’ header files when adding this function.

Besides the new function and command, the Skimmer overrides functions from the Ship class in order to implement the functionality of the Skimmer, and provide a useful description of the state of the Skimmer.