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Software Engineering
Homework 4

Design Rationale

I designed my project to have four classes: OceanExplorer, OceanMap, Pirate, and Ship. OceanExplorer called each of the other classes, which were each meant for different components of the assignment. OceanMap created the grid with both water and randomly placed islands, Ship allowed for the movement of Chris Columbus's ship, and Pirate placed pirate ships into the ocean and had them chase around Columbus's ship. The Pirate and Ship classes had similarities in that they both had to access their respected ship at any given instance, but they differed in how they moved the ships. Ship based the movement of Chris's ship based off of the user pressing the arrow keys, while the pirate ships moved based on Chris's ship. This design worked well, as it allowed for very logical connections to be made between each class.