

BATTLESHIP CLASSES

SHIP

| STATE | BEHAVIORS |
|----------------------------|-----------|
| Length | Hit |
| Head_of_ship Coordinate | Sunk |
| Tail_of_ship Coordinate | |
| Damage | |

SPACE

| STATE | BEHAVIORS |
|-------------------|-----------|
| Empty or Occupied | |
| Attacked | |
| Coordinates | |
| | |

PLAYER

| STATE | BEHAVIORS |
|----------------|--------------------|
| array_of_ships | ship_count |
| shots_fired | ship_placement |
| Grid/board | attack_coordinates |
| | Fire |
| | |
| | |

Computer < Player

| STATE | BEHAVIORS |
|-------|-------------------------|
| | ship_count |
| | choose_random_space |
| | horizontal_space_choose |
| | vertical_space_choose |

BATTLESHIP CLASSES

BOARD

| STATE | BEHAVIORS |
|--------|---------------------------|
| Length | Initialize / create_space |
| Width | assign_space_to_row |
| | Places ship |
| | create_space_name |
| | space_hit? |
| | space_miss? |
| | space_occupied? |
| | contains?(coordinates) |
| | same_row? |
| | same_column? |

Initialize as an array of space objects

```
Board = {"A" => [#<space_obj_1>, #<space_obj_2>],  
        "B" => [#<space_obj_1>, [#<space_obj_2>]]}
```

GAME

| Board | Play |
|-----------------------|--|
| Player_1 | Instructions |
| Ship Validation Rules | Quit |
| | ship_placement(input) |
| | Gameflow module Printing text to screen |
| | Player_shot_sequence |

RUNNER FILE

FUNCTIONS

User input

Game initialize

User ship placement

History of game play