// BaysideBasics (Jason Kim & Derek Song)
// APCS1 - pd1
// HW#62 - Pointing Your Rocket Skyward
// 2018 - 01 - 04

Human
Instance Variables - int _missleCount - int _shipsAlive - int _carrierHP - int _battleshipHP - int _cruiserHP - int _submarineHP - int _destroyerHP - Boolean _playing - String _lastShipHit //the last ship the human hit
Accessors/Mutators + getCarrierHP() + getBattleshipHP() + getCruiserHP() + getSubmarineHP() + getDestroyerHP() + getShipsAlive() + setCarrierHP(int newHP) + setBattleshipHP(int newHP) + setCruiserHP(int newHP) + setSubmarineHP(int newHP) + setDestroyerHP(int newHP) + setShipsAlive(int newShipsAlive)
Methods + attackOpponent(int row, int column, Object opponent) + letterToInt(String letter) + placeShip(int row, int column, int direction) + toString()

BeginnerAI
Instance Variables - int _missleCount - int _shipsAlive - int _carrierHP - int _battleshipHP - int _cruiserHP - int _submarineHP - int _destroyerHP - Boolean _playing
Accessors/Mutators + getCarrierHP() + getBattleshipHP() + getCruiserHP() + getSubmarineHP() + getDestroyerHP() + getShipsAlive() + setCarrierHP(int newHP) + setBattleshipHP(int newHP) + setCruiserHP(int newHP) + setSubmarineHP(int newHP) + setDestroyerHP(int newHP) + setShipsAlive(int newShipsAlive)
Methods + attackOpponent(int row, int column, Object opponent) + placeShip(int row, int column, int direction) + toString()

AdvancedAI

Instance Variables
- int _missleCount
- int _shipsAlive
- int _carrierHP
- int _battleshipHP
- int _cruiserHP
- int _submarineHP
- int _destroyerHP
- Boolean _playing
- int _lastShipHitRow
- int _lastShipHitCol
- int rowAttempts
- int currentRow
- int currentCol

Accessors/Mutators
+ getCarrierHP()
+ getBattleshipHP()
+ getCruiserHP()
+ getSubmarineHP()
+ getDestroyerHP()
+ getShipsAlive()
+ setCarrierHP(int newHP)
+ setBattleshipHP(int newHP)
+ setCruiserHP(int newHP)
+ setSubmarineHP(int newHP)
+ setDestroyerHP(int newHP)
+ setShipsAlive(int newShipsAlive)
+ setLastShipHit(int row, int col)

Methods
+ attackOpponent(int row, int column, Object opponent)
+ placeShip(int row, int column, int direction)
+ changeRow()
+ hitMiddle()
+ whichColumn(int row)
+ checkLogic()
+ toString()

Woo
Instance Variables - Player _human = new Human() - Computer _AI
Methods - difficulty() - newGame() - playTurn() + main(String [] args)

       As you can see, there are MANY common methods. These common methods will not need to be written multiple times as Human, AdvancedAI, and BeginnerAI have the same superclass. We have also decided to get rid of the Computer class as we see that AdvancedAI and BeginnerAI actually don't have much in common besides the method that all 3 classes share. Now, it will simply be 3 subclasses of superclass Player. Woo class is our executable class and implementation of the 3 subclasses should be simple as everything will be in the same directory.