GD PY 4

Let’s review the fundamentals before moving on. This is a Prove Yourself (PY). It allows you to showcase all of the topics that you have learned so far. You can use any of the previous projects (website and curriculum) that you have completed to help complete this PY.

The Sensei can give hints and minimal help because the goal of a PY is to have the student showcase their own unique solution to the problem. **GD 1 and 10 is a good reference point.**

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1. **Class Definition**

    1.1. Create a class definition named “**SpaceShip**”
    1.2. The inputs to the constructor are xPos and yPos
    1.3. Inside the body of the constructor, create 2 private variable named shipXPos and shipYPos. Remember, private variable means using “**this.**”
      a. Also, inside the body of the constructor, load the input xPos into the private variable shipXPos
      b. Also, inside the body of the constructor, load the input yPos into the private variable shipYPos

    1.4. Create a private function named **move_forward()**. Inside the private function, add 1 to the private variable shipYPos
    1.5. Create a private function named **move_sideways()**. Inside the private function, add 1 to the private variable shipXPos

Remember: when we are on the **inside** of the class definition, we use “**this.**”

```
/* ===================================
* Class Definition
* ==================================== */
```

2. Create Objects

2.1. Declare a variable named **ssObj**
2.2. Use the "**new**" operator to create an object of class "**SpaceShip**"
2.3. Next, put the object into the array named **ssArr** by using **.push(ssObj)**

Perform steps 2.1 – 2.3 three more times

```
/* ===================================
* Create Objects
* =================================== */
```

3. **Loopy – A**ssume that an array named `ssArr` already exists

Your goal is to write a `for` loop

3.1. Create a digital key named `s`
3.2. What is the starting position?
3.3. What is the ending position?
3.4. How much do we jump by?

3.5. Inside the body of the `for` loop, use square brackets to select one position.
   a. Next, call the private function **move_forward() by using the member access operator. Who is the owner?**

We are on the **outside** of the class definition, so we say the **name of the object**

```
/* ===================================
* Loopy
* =================================== */
```