**Coding Challenge**

**Pokemon Battle Simulator**

You are to build a pokemon battle simulator.

**Project Goal:**

The player will be presented with a random list of 6 pokemon while the computer displays a selected opposing pokemon to battle. Player will select one of the 6 given to defeat the opponent. Whoever is the victor(calculated based on the stats of the chosen pokemon) will be displayed as the winner.

**Angular principals to use:**

To build this you will:

* Create multiple components(including a container component for nesting)
* Create a Service to pass data between components
* Create a Model to use an interface as a template
* Use angular specific HTML methods like @For and @If
* Create buttons with (click) events
* Create non-button (click) events
* Write JS style functions with operations that are non angular specific
* Create an application while keeping DRY and KISS in mind
* Play with pokemon!(Most Important)

**Due Date:**

Take your time. This is meant to be fun, and can honestly be added to later. Maybe you want to expand on it or just come back and refactor later on. I would like to see finished projects, but this should by all means be done in free time and used as a learning tool, not an assignment.

**Mechanics:**

The data for this will be provided in the pokeSim-data file; this is a breakdown of what you should build that data into.

Each pokemon object will have the following properties:

* Id(number)
* Name(string)
* Type(string)
* ATK(number or Null)
* DEF(number)
* SATK(number or Null)
* SDEF(number)
* Selected(boolean)

When a battle takes place you will use the properties of the selected pokemon to determine the following:

* Is the pokemon a special or physical attacker?
* Both pokemon damage each other; example:
  + 100 ATK, 50 SDEF vs 200 SATK, 30 DEF
  + 100 - 30 = 70
  + 200 - 50 = 150
* The second pokemon is the winner because they dealt more damage

**Bonus Challenges:**

*Add type advantage:*

* Use the supplied type property to determine if a pokemon has type advantage(create your own logic here) and give the attack a 2x multiplier

*Critical Attack:*

* Create a random function for the battle on each pokemon that provides a % chance(10% maybe) to deal a critical hit and add a 1.5x multiplier.

*Wins tracker:*

* Add a wins tracker for each pokemon and save it into local storage(this will probably be done by adding a wins/losses property to the pokemon data array)
  + **EXTRA BONUS**: Add a button on the container the wins are in to change to losses when clicked.

*Difficulty selector:*

* Add a difficulty selector that changes the battle type from easy mode(6 random pokemon given) to medium(5 given) and hard mode(only 3 given) for battle selection.

*Favorite: -* ***BIG CHALLENGE***

* Add the ability to select a favorite pokemon that will always appear on your battle team. This will involve:
  + Changing the random selector logic
  + Adding a property to the pokemon data array
  + Adding a menu for selection
  + Saving that property to local storage
  + Making sure you can only have a single pokemon selected as a favorite
* This is a challenge that requires a LARGE amount of refactoring. But if you know your code, it's very doable