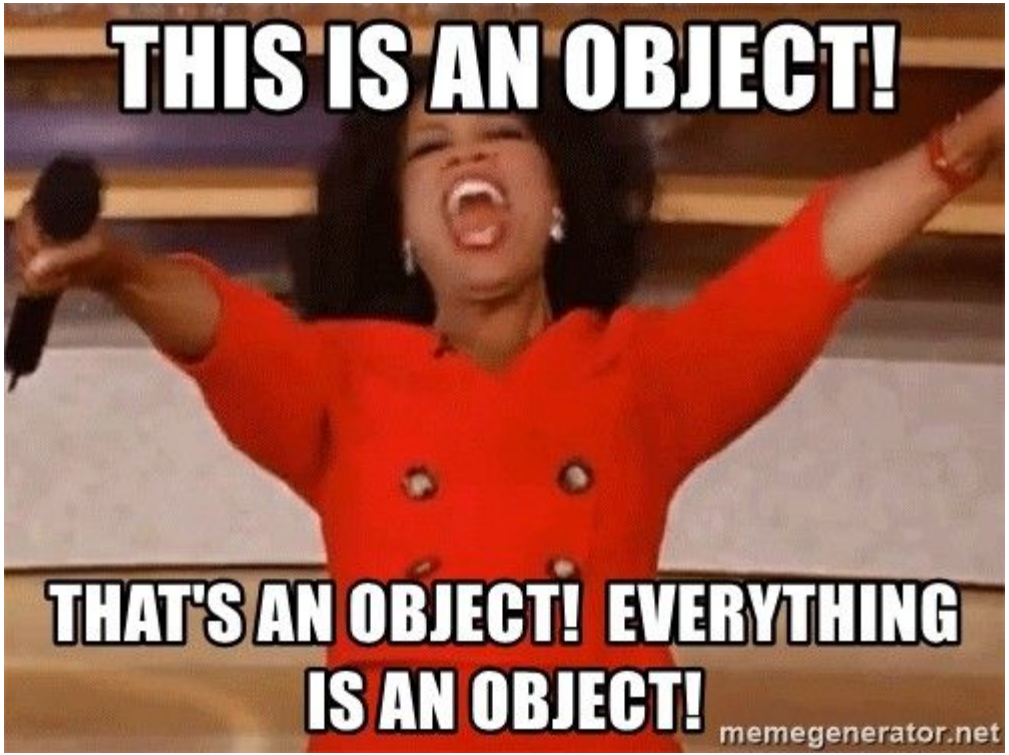

Image Source

Week 16, Bonus Lecture

Deep Dive into Object-Oriented Programming

06/14/22

Agenda

- Review Functions & Related Vocabulary
- Preview Object-Oriented Programming Vocabulary
- CodeAlong: Making an OOP PlayingCard
- Revisit OOP Vocabulary

Vocabulary

- Function:
  -
- Parameter:
  -
- Arguments:
  -
- Positional Argument
  -
- Keyword Argument
  -
- “Calling” a function/”callable”
  -

Vocabulary

- Class
  -
- Instance:
  -
- Method:
  -
- Attribute
  -
- Private Attributes/Methods:
  -
- Special Methods
  -

CodeAlong

- Repo: https://github.com/coding-dojo-data-science/bonus-deep-dive-into-oop
  - We will be creating a PlayingCard class.
  - We will review functions.
  - We will define/introduce Classes and related concepts.
  - We will make a really nerdy but cool example of OOP!

Solutions

Vocabulary

- Function:
  - A reusable, flexible block of code that runs a process, but only when it is called.
- Parameter:
  - The values that are accepted by a function. Refers to the name of the arguments in a function definition.
- Arguments:
  - The actual values that are passed into the function for each parameter.
- Positional Argument
  - Arguments are identified by the order in which they are passed. Must come before keyword arguments.
- Keyword Argument
  - An argument with a default value.
- “Calling” a function/”callable”
  - Referencing a class or function and adding parentheses to RUN the function.

Vocabulary

- Class
  - Blueprint/template for a specific type of variable/object.
- Instance:
  - The individual variable that was created using the template class.
- Method:
  - A function that is attached to an object.
- Attribute
  - A variable that is stored in an object
- Private Attributes/Methods:
  - Attributes/methods with names that start with a “_”
- Special Methods
  - Important methods used by python to store critical info and processes. All special method’s names start with a dunder “_ _”

CodeAlong Solution

- Repo: https://github.com/coding-dojo-data-science/bonus-deep-dive-into-oop
  - Solution: https://github.com/coding-dojo-data-science/bonus-deep-dive-into-oop/blob/main/Instructor/SOLUTION_PreClass-object-oriented-playing-cards.ipynb