



# Announcements

- **Take Home Assessment 2: Networks** will be released later today and will be due on Gradescope Thursday, April 23rd at 11:59pm!
- **THA1 Peer Review** assignments will be sent out tonight and due Wednesday, April 15th at 11:59pm!
- **Lesson 5 Canvas Quiz** due tonight at 11:59pm!
- **Reading Assignment 2** due Monday April 13th at 11:59pm
- **Section Assignment 2** is due tonight at 11:59pm!
- **Resubmissions for THA 1** now open!

# Announcements (cont.)

- Can (re)submit THA 1
  - Open from April 10th - April 14th
  - Only technical component will be graded
  - Refer to Ed posts for resubmission guidelines and form
  - **MUST COMPLETE AND SUBMIT FORM FOR RESUB TO BE COUNTED!**
- THA 1 Peer Reviews will be released later today!
  - Gradescope submission!
  - 8 / 10 points are for completing the review
  - 2 / 10 points are for being thoughtful and thorough

# Peer Reviews

- To find your assigned reviews
  - Navigate to your section
  - Find your name
  - You will see a row with two ID numbers and two links
  - **Enter the ID in Gradescope and review the notebook in the link!**
- Giving feedback
  - ***I Like***: Praise and positive comments
  - ***I Wish***: Constructive feedback
  - ***What If***: Suggestions (can be wacky, but be respectful)

# Enter the Spider-verse!



# Lesson Recap

- An **object** stores state and provides behaviors that operates on a state.
- Each object has its own state, but objects of the same class can have the same behaviors.



**State:**  
`self.name`

**Behavior:**  
`.thwip()`

# Objects

```
spider_man = SpiderMan('Peter Parker')  
amazing_sm = SpiderMan('Peter Parker')
```



**State:**  
self.name

**Behavior:**  
.thwip()

# Objects

```
spider_man = SpiderMan('Peter Parker')  
amazing_sm = SpiderMan('Peter Parker')
```

spider\_man



**State:**

'Peter Parker'

**Behavior:**

.thwip()

amazing\_sm



**State:**

'Peter Parker'

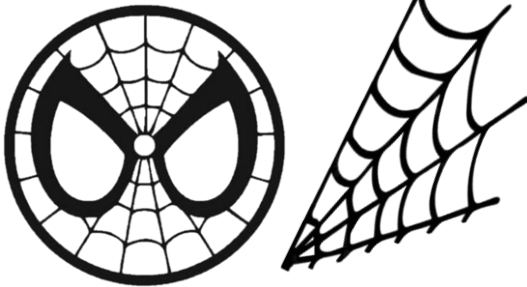
**Behavior:**

.thwip()

# Objects

```
spider_man = SpiderMan('Peter Parker')  
amazing_sm = SpiderMan('Peter Parker')  
spider_man.thwip()
```

spider\_man



**State:**

'Peter Parker'

**Behavior:**

.thwip()

amazing\_sm



**State:**

'Peter Parker'

**Behavior:**

.thwip()

# References

```
spider_man = SpiderMan('Peter Parker')  
amazing_sm = spider_man  
spider_man.thwip()
```

spider\_man



**State:**

'Peter Parker'

**Behavior:**

.thwip()

amazing\_sm



**State:**

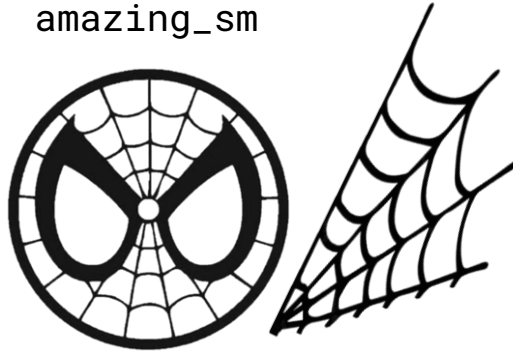
'Peter Parker'

**Behavior:**

.thwip()

```
spider_man = SpiderMan('Peter Parker')  
amazing_sm = spider_man = SpiderMan('Peter Parker')  
spider_man.thwip()
```

spider\_man  
amazing\_sm



**State:**  
'Peter Parker'

**Behavior:**  
.thwip()

# Multiple References!



# Class

- A **class** lets you define a new object by specifying what state and behaviors it has
- A class is a **blueprint** that we use to construct **instances** of the object

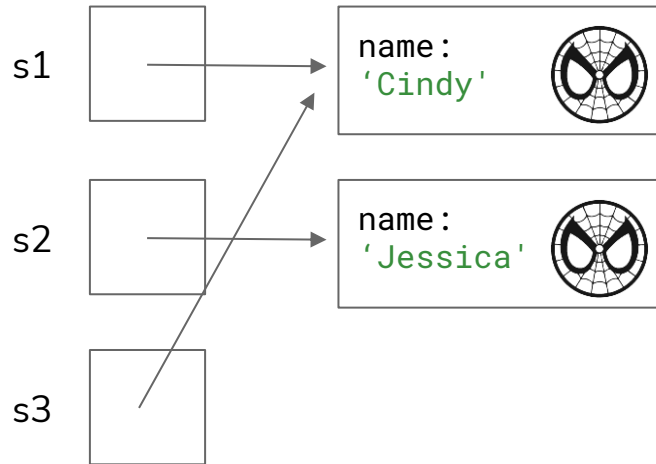
```
class SpiderFolk:  
  
    def __init__(self, name: str) -> None:  
        self.name: str = name  
  
    def thwip(self) -> None:  
        print(self.name + ': Thwip!')
```

A class definition

An initializer that sets  
fields (**state**)

A method (**behavior**)

```
s1 = SpiderFolk('Cindy')  
s2 = SpiderFolk('Jessica')  
s3 = s1  
s1.thwip()  
s2.thwip()  
s3.thwip()
```



# What is self?

- In the SpiderFolk example, every method (initializer or instance method) takes a parameter called *“self”*
- This indicates which instance of the method is being called on

```
class SpiderFolk:  
    def __init__(self, name):  
        self.name = name  
  
    def thwip(self):  
        print(self.name + ' : Thwip!')
```

```
s1 = SpiderFolk('Cindy')  
s2 = SpiderFolk('Jessica')  
s3 = s1  
  
s1.thwip()  
s2.thwip()  
s3.thwip()
```

Who is *self* referring to for each call to *thwip()*?

# Group Work: Best Practices

- When working with a new group for the first time:
  - Introduce yourself!
  - If possible, angle one of your screens so that everyone can see and discuss together
  - Be respectful of each other and allow everyone to speak
- Tips:
  - Start with making sure that everyone agrees to work on the same problem
  - Allow everyone to contribute or a chance to ask questions.
  - Ask if everyone agrees and periodically ask each other questions.
  - Call TAs or Adrian over if you need any help.
  - Don't sit in silence.