



15-112  
Lecture 2

Week 10 Thu

OOP &  
Animation Part 4

Instructor: Pat Virtue

# Announcements

Midterm 2 next Thu

TP

- Sat: last day for tech demos
- Mon: TPO
- No grace days
- Extensions extremely rare
- Cite everything!
- Mentor role

# Poll 1



Which option(s) describe how you're feeling about TP season?

- A: Excited to make something technically cool
- B: Nervous that my workload will go up
- C: Excited to do something with my creativity
- D: Nervous that I won't get as far as I want
- E: Excited to see what other students create
- F: Nervous that my project won't be as good as others
- G: Confident that I can create the idea on my head
- H: Nervous about not getting the grade I want
- I: No particularly strong feelings at the moment

OOP – next level

# Special methods

`__str__(self):`

`__repr__(self):`

`__eq__(self, other):`

# Poll 2

What will be the type of `self` in the `__eq__` method?

- A. Object
- B. Class
- C. Pet
- D. String
- E. Boolean
- F. Not enough information

```
class Pet:
    def __init__(self, name):
        self.name = name

    def __eq__(self, other):
        # WHAT IS self HERE?
        # TODO
```

# Poll 3

What will be the type of `other` in the `__eq__` method?

- A. Object
- B. Class
- C. Pet
- D. String
- E. Boolean
- F. Not enough information

```
class Pet:
    def __init__(self, name):
        self.name = name

    def __eq__(self, other):
        # WHAT IS other HERE?
        # TODO
```

# Special Methods

Color class example

Similar to notes: OOP2: [Using in sets and dictionaries](#)

stage1



# Special methods

`__str__(self):`

`__repr__(self):`

`__eq__(self, other):`

`__hash__(self):`

# OOP: Inheritance

# Poll 4

What will be the type of `self` in the `sayHello` method when calling `d.sayHello()`?

- A. Object
- B. Class
- C. Pet
- D. Dino
- E. String
- F. Not enough information

```
class Pet:
    def __init__(self, name):
        self.name = name

    def sayHello(self):
        # WHAT IS self HERE?
        print(f"Hi my name is {self.name}" +
              f" and I am a {type(self)} object")

class Dino(Pet):
    def __init__(self, name, species):
        super().__init__(name)
        self.species = species
        self.title = f"{name} the {species}"

d = Dino('Trixie', 'Triceratops')
d.sayHello()
```

# A few more OOP details

Class attributes

Static methods

# Special Methods

Color class example

Similar to notes: OOP2: [Playing Card Demo](#)

stage2



# Animations Part 4: More Events, Images, Sound, Modes, etc

<https://www.cs.cmu.edu/~112/notes/notes-animations-part4.html>

# Building a Project

Events

OOP Animation

Images:

- load
- scale
- modify pixels
- flip
- sprites

Modes

Sidescrollers

(Sound)