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: TP0
- 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

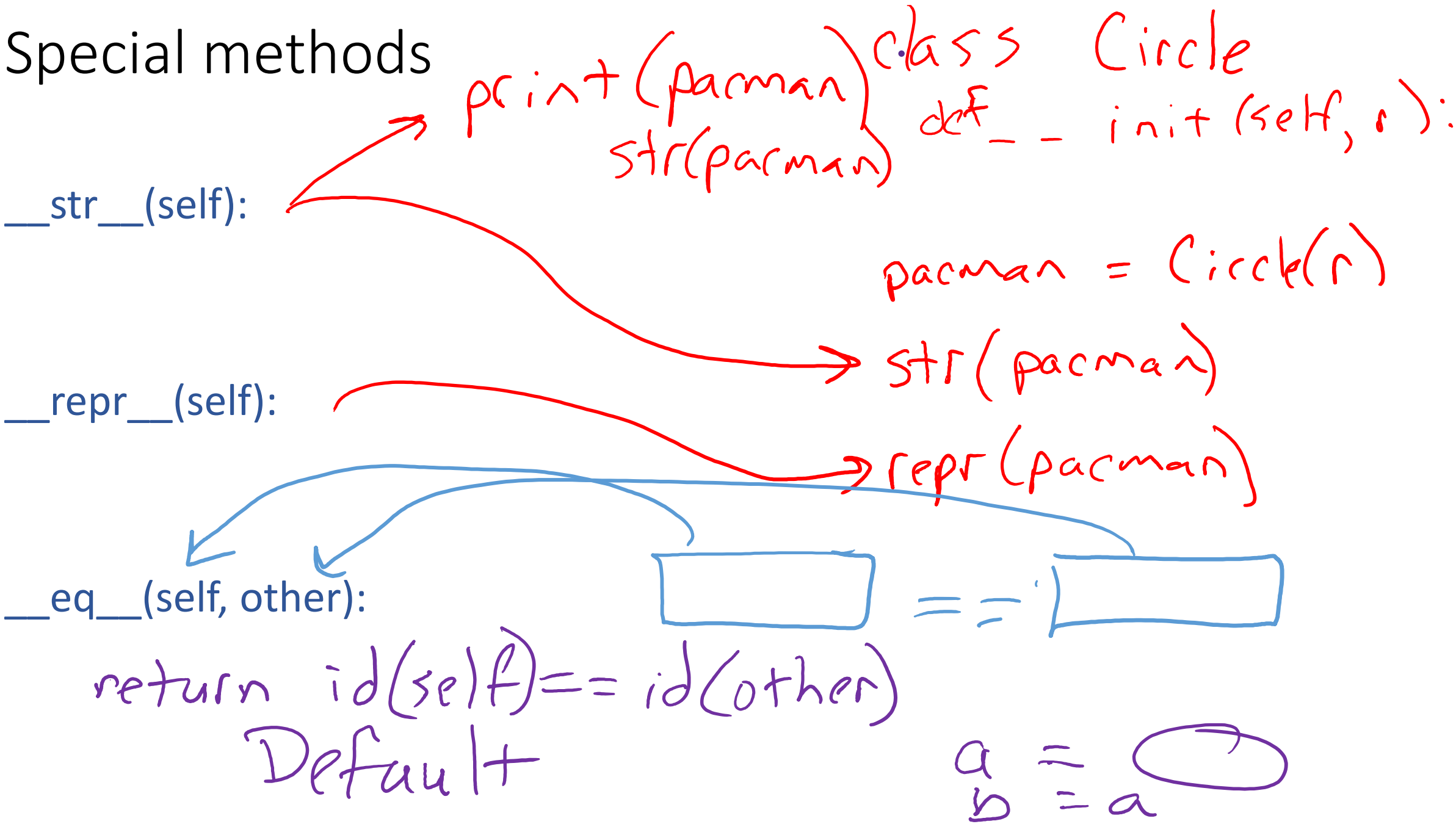
G: Confident that I can create the idea on my head

H: Nervous about not getting the grade I want

I: No particularly strong feelings at the moment

OOP – next level

Special methods



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
```

print(type(self))

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
```

print(type(other))

=Pet('Linus')

dog = Pet('Mike Hat')

== 7

7 == dog

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)