

COMP 1012

Objects intro

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Objects

How do we add methods to objects?

Data, and method to work with that data

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- We know how to give it data
- How do we add functions (now methods) to it?

`__init__`

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- must have the `self` parameter as the first parameter
- What's the error message if we don't?

def more things

Let's create a 'math' object, with 2 numbers, and functions we can call on those 2 numbers

```
class Math:
    def __init__(self, a, b):
        self.a = a
        self.b = b

    def add(self):
        return self.a + self.b
```

Another magic method

`__str__` is called if we call `print` on an object.

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- Let's see it

Demo

Add a `__str__` method that prints out information about the university class

Encapsulation

“Data, and methods to work with that data”

We want a cohesive place to put all the data

Example: Stats keeper

Create an object that:

- Keeps a sum total
- Tracks # of even and odd

Encapsulation

Now, everything we need to know about this object is
in one place.

We don't need to copy / paste code everywhere!

Objects of objects

How can we represent something more advanced?

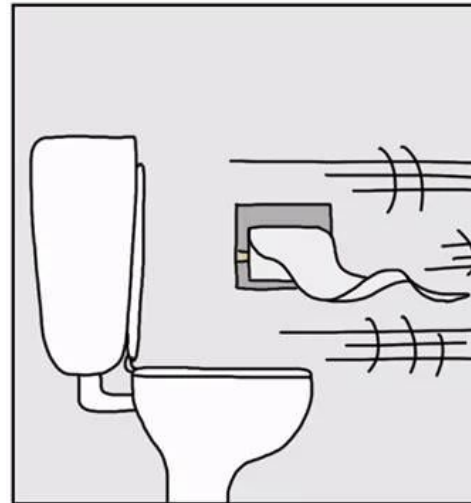
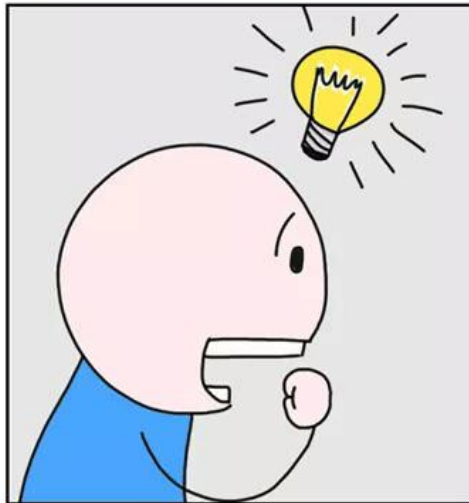
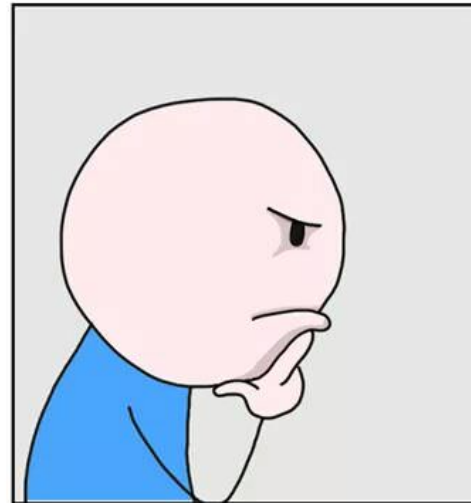
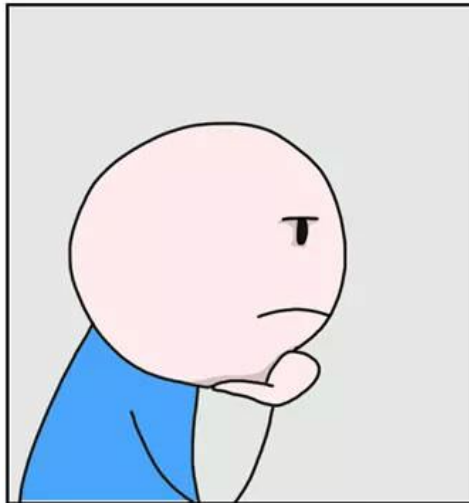
A human has pets, but any number of them.

- How do we represent this?
- What methods would each object have?

Summary

Objects have methods, methods work with our data

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