Class vs Instance variable

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Two difference Variable

- Class Variable
    - Declared inside the class definition
    - Not tied to any particular object of the class
    - Shared across all the objects of the class
- Instance Variable
    - Declared inside the constructor method of class(the __init__ method)

Two difference Variable

```
class Car:
    wheels = 4     # <- Class variable
    def __init__(self, name):
        self.name = name     # <- Instance variable
>>> jag = Car('jaguar')
>>> fer = Car('ferrari')
>>> jag.name, fer.name
('jaguar', 'ferrari')
>>> jag.wheels, fer.wheels
(4, 4)
>>> Car.wheels
4
```

Two difference Variable

>>> Car.name

AttributeError: type object 'Car' has no attribute ‘name'

>>> Car.wheels = 3

>>> jag.wheels = 3

>>> jag.wheels, fer.wheels

(3, 3)

>>> Car.wheels = 4

>>> jag.wheels, jag.__class__.wheels

(3, 4)

Summary

- Class variables are shared across all objects
- Instance variables are for data unique to each instance
- Instance variable overrides the Class variables