

CS 209

Data Structures and Mathematical  
Foundations

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# Today's Topics

- Questions/Comments?
- Continue Python review
  - Examples of private / public instance variables and methods in a class
  - Implement some of the special methods in Card class

# Class private vs. public

- Instance variables and method names that start with `__` (two underscores) are private otherwise they are public.
- The effect of private instance variable are they cannot be referenced via an object. Public instance variables may be referenced via an object.

# Special methods / operator overloading

- Some special methods in classes
  - `__str__` --- gets called by `str(__)`
  - `__eq__` --- overloads the `==` operator
  - `__gt__`
  - `__lt__`
  - `__ge__`
  - `__le__`

# class

- For the Card class, let's overload the  $<$ ,  $>$  and  $==$  operators.

# class

- Let's compare two Card objects using `<`, `>`, and `==` in a program.

# class

- Instance variables are usually nouns and methods are usually verbs.
- Let's think of some reasonable instance variables and methods for the following classes:
  - Rectangle
  - TextBook
  - Fraction