

Mini-Review: Numpy Notes and Class Objects



11/3/2016

Class Objects



What is a class and what are its components?

What are the components of a class?

- **A Class is a new abstract data type that we can define.**
 - **Each instance of a Class is called an Object of type Class.**
- **Each Class has two types of components: attributes and methods**

**What is the difference between an attribute
and a method?**

What is the difference between an attribute and a method?

Attributes indicate what a class has and Methods indicate what a class can do.

What is the difference between a private and a public method?

What is the purpose of the special method `__init__()`?

**What is the purpose of the special method
repr()?**

Numpy Arrays



Why should I care about numpy arrays?

- **NumPy arrays facilitate advanced mathematical and other types of operations on large numbers of data.**
 - Typically, such operations are executed more efficiently and with less code than is possible using Python's built-in sequences.
- **A growing plethora of scientific and mathematical Python-based packages are using NumPy arrays; though these typically support Python-sequence input, they convert such input to NumPy arrays prior to processing, and they often output NumPy arrays.**
 - In other words, in order to efficiently use much (perhaps even most) of today's scientific/mathematical Python-based software, just knowing how to use Python's built-in sequence types is insufficient - one also needs to know how to use NumPy arrays.

**Product of reshape arguments should be equal to length of array which you changing.
What does this mean?**