Introduction to Python| Data, types, values, variables, and names | Pragmatic Agility

DATA OBJECTS

- Python data are objects
- Objects are made of bits
- Data Types effect how bits are interpreted
- Objects contain the following. A Type, a unique ID, a value , a count of how often the object is used
- Types indicate what the data can do

TYPES

- Boolean
  - bool - True/False
- Integer
  - int - 5
- Floating Point
  - float - 3.25
- Complex
  - complex - 3+5j
- String
  - str - 'Hello'
- List
  - list - ['1','2']

VARIABLES

- Names for values in computer memory
- Names can contain the following
  - aA through zZ
  - 0 through 9
  - underscore _
- Case sensitive
  - thing vs Thing
- Can not begin with a number
- Can not use reserved words
  - e.g. import

KEY CONCEPTS

Mutability

Data that can be changed. Determined by data type

Literal Values

Raw data given in a variable or constant

Variables

Names for values in your program

Assignment

use '=' to assign a value to a variable name

Not Algebra

'=' handles assignment, it does not indicate a equality test as you might solve in an Algebra course

Variables are Names

A variable is a name not a place. Assignment does not copy a value, it simply attaches a name. A reference