* raw\_input(‘What is your age?’)
* If a conditional is empty the keyword ‘pass’ must be used
* If statements use a colon rather than parenthesis
  + i.e
    - if self.request.GET:
      * fish.request.GET[‘fish’]
* Else if statements are written ‘elif’
* Functions are created with the keyword ‘def’
  + i.e
    - def print\_name:
      * print ‘Samantha’
    - print\_name()
* Casting
  + str = String int = integer float = decimals
* Dictionaries in python are similar to objects and arrays. Set a variable equivalent to ‘dickt()’ then set the variable equal to an object
  + i.e
    - ice\_cream = dict()
    - ice\_cream = {‘Ben and Jerrys’: ‘Cookie Dough’, ‘Perrys’:’Chocolate’, ‘Bryars’:’Strawberry’}
* Loops
  + Range
    - i.e
      * for I in range (1,100):
  + Loop through array
    - i.e
      * names = [Sam, Tina, Tom]
      * for I in names:
        + print i
* Format methods or big strings
  + i.e
    - your\_state = ‘Florida’
    - your\_name = ‘Samantha’
    - message = ‘’’ {your\_name} lives in {your\_state}.’’’
    - Message = message.format(\*\*locals())
* Booleans are capitalized
  + i.e
    - on = True
    - if on:
      * on = False
    - else:
      * on = True
* app.yaml
  + Adding css in app.yaml
    - i.e
      * - url: /css/main\.css
      * static\_files: css/main.css
      * upload: css/main\.css
* Access modifiers
  + Public – all variables and methods are by default
  + Protected – only accessable within the class and its subclasses
    - i.e class Place(object):
      * def\_ \_ init \_ \_ (self):
        + self.\_content = ‘ ‘
      * plate = Plate()
      * plate.\_content = ‘Salmon’
  + Private – nobody should gain access to it from outside the class
    - Class Plate(object):
      * def \_ \_ init \_ \_(self):
        + self.\_ \_ content = ‘ ‘
      * plate = Plate()
      * plate. \_ \_ content = ‘Salmon’
      * \*\*\* Will product error, cannot be accessed
* Object Oriented programming concepts
  + Encapsulation – hiding pieces of code from other people or your future self
    - Getters – Read only, looking at a variable
      * i.e
        + class Average(object):

def \_ \_ init \_ \_ (self):

self.hw1 = 70

self.hw2 = 80

self.hw3 = 90

self.\_\_average = 0

@property

def average(self):

return self.\_\_average

* + - * + average = Average()
        + print average.average
    - Setter – Write only, changing variable
      * i.e
        + class Average(object):

def \_ \_ init \_ \_ (self):

self.hw1 = 70

self.hw2 = 80

self.hw3 = 90

self.\_\_average = 0

@property

def average(self):

return self.\_\_average

@average.setter

def average(self, new\_average):

self.\_\_average = new\_average

* + - * + average = Average()
  + Abstraction – Classes created to hold attributes and methods to be used as a blueprint
    - i.e
      * class Social\_media(object):
        + def \_ \_ init \_ \_ (self):

self.messaging = True

self.photos = True

self.friends = True

* + Inheritance – Subclasses inherit attributes and methods from super class
    - i.e
      * class Social\_media(object):
        + def \_ \_ init \_ \_ (self):

self.messaging = True

self.photos = True

self.friends = True

* + - * class Facebook(Social\_media):
        + def \_ \_ init \_ \_(self):

super(Facebook, self).\_ \_ init \_ \_ ()

self.messaging = True

self.photos = True

self.friends = True

* + - * class Instagram(Social\_media):
        + def \_ \_ init \_ \_(self):

super(Instagram, self).\_ \_ init \_ \_ ()

self.messaging = True

self.photos = True

self.friends = True

* + - * class Twitter(Social\_media):
        + def \_ \_ init \_ \_(self):

super(Twitter, self).\_ \_ init \_ \_ ()

self.messaging = True

self.photos = True

* + - * self.friends = True
  + Polymorphism – Sub classes can override/repurpose a method that was set up in the super class
    - i.e
      * class Room(object):
        + def \_ \_ init \_ \_(self):

self.doors = 0

self.outlets = 0

self.furniture = ‘ ’

* + - * + def printInfo(self):

print self.doors + self.outlets + self.furniture

* + - * class Bedroom(Room):
        + def \_ \_ init \_ \_(self):

super(Bedroom, self). \_ \_init \_ \_()

self.doors = 2

self.outlets = 8

self.furniture = ‘Bed, dresser’

self.closet = True

* + - * + def printInfo(self):

print self.doors + self.outlets + self.furniture + self.closet

* Aggregation – Implies a relationship where the child can exist independently of the parent.
  + Example: Class(parent) and Student(child). Delete the class and the Students still exist
* Composition - implies a relationship where the child cannot exist independent of the parent
  + Example: House (parent) and Room (child). Rooms don't exist separate to a House.
* MVC – Model View Controller. Used to organize code. Separation of presentation makes it easier to edit, develop, and, collaborate.
  + Model – Data
    - Requesting, receiving, validating and sorting data
      * class ConcertModel(object):
        + def \_ \_ init \_ \_ (self, concert):

self.\_ \_url = ‘http://xml.concertInfo/?q=’

self.\_ \_ request = urllib2.Request(self.\_ \_url + concert)

self. \_ \_opener = urllib2.buildopener()

* + - * + def send(self):

self.\_ \_ result = self.\_ \_opener.open(self.\_ \_request)

self.sort()

* + - * + def sort(self):

self.\_ \_xmldoc = minidom.parse(self.\_ \_result)

self.\_ \_populate = []

for i in self.\_ \_xmldoc[‘results’]:

do = ConcertData()

do.state = i[‘state’]

do.time = i[‘time’]

do.artist = i[‘artist’]

do.venue = i[‘venue’]

self.\_ \_populare.append(do)

@property

def populate(self):

return self.\_ \_populate

* + - * class ConcertData(object):
        + def \_ \_ init \_ \_ (self):

self.state = ‘ ‘

self.time = ‘ ‘

self.artist = ‘ ‘

self.venue = ‘ ‘

* + - * class ConcertView(object):
        + def \_ \_ init \_ \_(self):

self.\_ \_populate = ConcertData()

* + - * + def update(self, np):

self.\_ \_content = ‘ ‘

for i in np:

self.\_ \_populate = i

self.\_ \_content += "<div class='container sixteen columns results'>"

self.\_ \_content += '<p>State: ' + i.state + '</p>'

self.\_ \_content += '<p>Time: ' + i.time + '</p>'

self.\_ \_content += '<p>Artist: ' + i.artist + '</p>'

self.\_ \_content += '<p>Venue: ' + i.venue + '</p>'

self.\_ \_content += ‘</div>’

* + - * + @property
        + def populate(self):

return self.\_ \_populate

* + - * + @populate.setter
        + def populate(self, new\_populate):

self.update(new\_populate)

* + - * + @property
        + def concent(self)

return self.\_ \_content

* + - Forms, gets info from user and sends it to the controller and/or model
  + Controller – Master
    - Managing how model and view work together, manages changes
      * if self.request.GET:
        + concert = self.request.GET[‘concert’]
        + cm = ConcertModel(concert)
        + cm.send()
        + cv = ConcertView()
        + cv.do = cm.do
        + self.response.write(cv.content)