Course web page: <https://ucsd-cse8a-w20.github.io>

TODO week 1:

* Attend your assigned lab section on Wednesday (look for it online if waitlisted)
* Complete PA0 (mostly form-filling, no programming) by Friday 5pm, link on course web page
* Complete your first programming practice/reading by Friday 5pm, link to Stepik on course web page
* Register your iClicker on Canvas

## Python as a Calculator (IDLE3)

Content in a Python interactive window

Python 3.7.6 (default, Dec 30 2019, 19:38:26)

[Clang 11.0.0 (clang-1100.0.33.16)] on darwin

>>>

>>> 4

4

>>> 5 + 6

11

>>> # lines after hash marks are called comments

>>> # they don't do anything but are useful for explanations with code!

>>> (4 + 5) \* 7

63

>>> x = 9

>>> (x + 3) \* 2

24

>>> x - 1

8

>>> x - 1

8

>>> a\_longer\_variable\_name = 7

>>> x + a\_longer\_variable\_name

16

If you want to try on your own ASAP:

Install Python 3 (not 2)

Run the program IDLE3

(Detailed instructions in lab 1)

## At a Python Shell After Run side-by-side with a Python file

### At Python Shell

Python 3.7.6 (default, Dec 30 2019, 19:38:26)

[Clang 11.0.0 (clang-1100.0.33.16)] on darwin

>>> number\_of\_students

350

>>> number\_of\_tas

3

>>> number\_of\_tutors

19

>>> number\_of\_staff

Traceback (most recent call last):

File "<pyshell#18>", line 1, in <module>

number\_of\_staff

NameError: name 'number\_of\_staff' is not defined

===== RESTART: /Users/joe/Documents/test.py ======

>>> number\_of\_staff

2

### In a Separate Python File (Using File -> New)

number\_of\_students = 350

number\_of\_tas = 3

number\_of\_tutors = 19

# then add later, after the error message

number\_of\_staff = number\_of\_tutors + number\_of\_tas

## Functions Example

Python 3.7.6 (default, Dec 30 2019, 19:38:26)

[Clang 11.0.0 (clang-1100.0.33.16)] on darwin

>>> max(4, 5)

5

>>> min(3, 7)

3

>>> abs(-2)

2

>>> max(5, 4)

5

### Function documentation

* max(n, m)

max takes two numbers n and m, and returns the larger one

* min(n, m)

min takes two numbers n and m, and returns the smaller one

* abs(n)

abs takes a number n and returns its absolute value

### Parts of a function call

>>> max(4, 5)

5

This entire **expression** is a **function call** ora **use of a function**.

The **arguments** can also be expressions.

Max is the function name

4 and 5 are the arguments

The 5 on the second line is **return value** or **result** or **answer** from max

### In-class Activity

>>> # Give an example of an expression that uses max and + in the same expression

>>>

>>> # Give an example of an expression that uses min, abs, and + in the same expression

>>>