CS 160
CS Orientation

Finish Repetition and Strings
Begin Functions
Odds and Ends

• Demo Assignment #5 this week!!

• Videos:
  – [https://code.org/educate/resources/videos](https://code.org/educate/resources/videos)

• Visualize your Code:
  [http://pythontutor.com/visualize.html#mode=edit](http://pythontutor.com/visualize.html#mode=edit)
In-class Exercise #4

• Get into groups of 4-5.

• Explain what each of line in this code does and tell me what the output is:

```python
y=0;
for x in range(10):
    if(x%2):
        y=y+1;
print(y);
```
What happens when you enter bad data?

• Where/when does the error occur?
Strings

• Create a string
  my_string="hello";
• Access a character
  my_string[0] #gives you first character
• Length
  len(my_string)
Demo...
In-class Exercise #4 cont...

- Without using a built-in function to do the checking for you...
  
  – How will you make sure you get a good positive integer from the user?

  – How will you make sure you get a good integer from the user?

  – How will you make sure you get a good floating point number from the user?
Demo...
More practice with loops...

• Write a nested loop that displays 10 rows of ‘#’. There should be 15 ‘#’ on each row.

• Ask the user for the speed of a vehicle and how many hours it has been travelling. Print out how far the vehicle has gone each hour. Ask the user if they want to perform another calculation.
Decomposition

• What is it?

• What are functions?

• Examples of daily life functions???
Pre-Defined Functions

• May need to import a library
• Use the function from library/object
• Example:
  import math
  math.sqrt(4)
Programming Demo/Functions