CS 160
CS Orientation

More Functions
Decomposition

- What is decomposition?
- What are functions?
- Examples of daily life functions???
As a class, let’s define functions...

• For all the employees in our company, calculate their gross pay based on their hours and pay rate.

• Create a function to get number of employees.
• What if you want to make sure this function only returns a valid integer?
• Create function called gross_pay that takes the number of employees and calculates gross pay for each.
• Create a main function where the program begins.
Designing Functions...
```python
1 def main():
2     num = getEmployees()  # can call getEmployees and return to local variable
3     print(id(num))      # print id of local num
4     calculate(num)      # calculate(getEmployees())  # can pass number returned directly to calculate

5 def getEmployees():
6     employeeNum = int(input("what is the number of employees: "))
7     calculate(employeeNum) # maybe not good to have getEmployees() also calculate
8     return employeeNum

9 def calculate(num):
10    print(id(num))      # print id of local num
11    for x in range(num):
12        num1 = float(input("for employee number " + str(x+1)+" how much do they get payed: "))
13        num2 = float(input("for employee number " + str(x+1)+" what is there hours: "))
14    print("the pay for employee number " + str(x+1)+" is " + str(num2*num1))

15 main()
```