**Exercise 1**

Write a shutting down program:

First, def a function, shut\_down, that takes one argument s. Then, if the shut\_down function receives an s equal to "yes", it should return "Shutting down" Alternatively, elif s is equal to "no", then the function should return "Shutdown aborted". Finally, if shut\_down gets anything other than those inputs, the function should return "Sorry".

**Exercise 2**

Import the math module in whatever way you prefer. Call its sqrt function on the number 13689 and print that value to the console.

**Exercise 3**

First, def a function called distance\_from\_zero, with one argument (choose any argument name you like). If the type of the argument is either int or float, the function should return the absolute value of the function input. Otherwise, the function should return "Nope". Check if it works calling the function with -5.6 and "what?".

**Exercise 4**

Rewrite your pay computation program (previus chapter) with time-and-a-half for overtime and create a function called computepay which takes two parameters (hours and rate).

Enter Hours: 45

Enter Rate: 10

Pay: 475.0

**Exercise 5**

Let's use functions to calculate your trip's costs:

* Define a function called hotel\_cost with one argument nights as input. The hotel costs $140 per night. So, the function hotel\_cost should return 140 \* nights.
* Define a function called plane\_ride\_cost that takes a string, city, as input. The function should return a different price depending on the location, similar to the code example above. Below are the valid destinations and their corresponding round-trip prices.
* "Charlotte": 183
* "Tampa": 220
* "Pittsburgh": 222
* "Los Angeles": 475

-Below your existing code, define a function called rental\_car\_cost with an argument called days. Calculate the cost of renting the car: Every day you rent the car costs $40.(cost=40\*days) if you rent the car for 7 or more days, you get $50 off your total(cost-=50). Alternatively (elif), if you rent the car for 3 or more days, you get $20 off your total. You cannot get both of the above discounts. Return that cost. -Then, define a function called trip\_cost that takes two arguments, city and days. Like the example above, have your function return the sum of calling the rental\_car\_cost(days), hotel\_cost(days), and plane\_ride\_cost(city) functions.

* Modify your trip\_cost function definion. Add a third argument, spending\_money. Modify what the trip\_cost function does. Add the variable `spending\_money to the sum that it returns.

**Exercise 6**

Follow the stpes:

* First, def a function called cube that takes an argument called number.
* Make that function return the cube of that number (i.e. that number multiplied by itself and multiplied by itself once again).
* Define a second function called by\_three that takes an argument called number. if that number is divisible by 3,by\_threeshould call cube(number) and return its result. Otherwise, by\_three should return False. -Check if it works.