

We will be adding this function beneath the code already found on the Repl.it

```
def howOldIsLucy():  
    ageDifference = int(lucyAge) - int(yourAge)  
  
    print("Lucy is " + str(ageDifference) + " year(s) from your age")  
  
    response = input("How old is Lucy? ")  
  
    if int(response) == int(lucyAge):  
        print("Nice work! Lucy is", lucyAge)  
    else:  
        print("HMMMMM...try again")  
        howOldIsLucy()  
  
howOldIsLucy()
```

# Step 1: Define the Function

First we begin by defining our function. In Python you use the keyword **def** followed by the *name of your function* a set of parentheses **()** which would contain any *parameters* your function requires and finally a colon **:** to signify the beginning of the body of your function

```
def howOldIsLucy():
```

Now we need to set up a few *variables*. These *variables* are known as **local variables** and their values can only be accessed inside this function! The use of the keyword **global** would allow access outside of the *scope* of this function, but we won't be doing that today.

When declaring `ageDifference` we will need to use `int()` around both `lucyAge` and `yourAge` as the `input()` function takes in *strings* not *integers*. In order to subtract and get the age difference we need to use *integers*.

Inside the `print()` make note of the `str()` around `ageDifference`. We use this because concatenation in Python, the use of `+`, only works for type *string*. You could however avoid that with the use of `,` like this for *integer* type variables:

```
print("Lucy is", ageDifference, "year(s) from your age")
```

```
def howOldIsLucy():  
    ageDifference = int(lucyAge) - int(yourAge)  
  
    print("Lucy is " + str(ageDifference) + " year(s) from your age")  
  
    response = input("How old is Lucy? ")
```


```
def howOldIsLucy():
    ageDifference = int(lucyAge) - int(yourAge)

    print("Lucy is " + str(ageDifference) + " year(s) from your age")

    response = input("How old is Lucy? ")

    if int(response) == int(lucyAge):
        print("Nice work! Lucy is", lucyAge)
    else:
        print("HMMMMM...try again")
        howOldIsLucy()

howOldIsLucy()
```



The final snippet of code is the **if statement**. Again we must convert to *integers* to compare the values of **response** and **lucyAge**; we are checking to see if the user correctly identified the age of Lucy.

If they did, we say “Nice work” and print her age.

else, we print a message informing them as such and call the function again, giving them another shot at it.

Finally outside the function (notice the indentation) we need to call our function `howOldIsLucy()`