Chapter 7: Recycling Your Code with Functions and Modules

Wednesday, March 7, 2018 11:34 AM

Give the following examples a try, to experiment with creat- ing your own functions. The answers can be found at *http:// python-for-kids.com/*.

#1: Basic Moon

Weight function

In Chapter 6, one programming puzzle was to create a for loop to determine your weight on the moon over a period of 15 years. That for loop could easily be turned into a function. Try creating a function that takes a starting weight and increases the weight amount each year. You might call the new func- tion using code like this:

```
>>> moon_weight(30, 0.25)
```

#2: Moon Weight function and Years

Take the function you've just created, and change it to work out the weight over different periods, such as 5 years or 20 years. Be sure to change the function so that it takes three arguments: ini- tial weight, weight gained each year, and number of years:

```
>>> moon_weight(90, 0.25, 5)
```

#3: Moon Weight Program

#3: Moon Weight Program

Instead of a simple function, where you pass in the values as parameters, you can make a mini-program that prompts for the values using sys.stdin.readline(). In this case, you call the function without any parameters at all:

```
        >>> moon_weight()
```

The function will display a message asking for the starting weight, then a second message asking for the amount the weight will increase each year, and finally a message asking for the num- ber of years. You would see something like the following:

```
Please enter your current Earth weight
45
Please enter the amount your weight might increase each year
0.4
Please enter the number of years
12
```

Remember to import the sys module first before creating your function:

```
>>> import sys
```