Results

Shang Xiao — 1st Attempt

100%

10
Out of 10 points

126:16:47
Time for this attempt

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Attempt History

Results	Points	Score	(Highest score is kept)
Attempt 1	10 of 10	100%	(Highest score)

Your Answers:

1 1 / 1 point

In your own words, define a function.

A function is like a design of our code, which provide high flexibility for us to write a creative block of codes to accomplish something. We can consider a function as a mini-program that can be invoked repeatedly, as described by professor Laney in Module 3. For each block of code written to accomplish something, we can treat that block of code as a function. We can write/develop/define new functions ourselves, or use/call existing functions using commands such as from...import...

Correct

2 3 / 3 points

What are the three things you need to know about a function?

1. Name. It is just like we have a name for variables too. It is a label or a unique identifier for functions. The name of functions is usually descriptive. A verb explains in plain English what the function does. For example, we know function print() is going to print out something in the terminal as soon as we see the name print, most people's instinct would be to treat the print() function the same meaning in plain English "print".

2. Parameters. It refers to the inputs to the function. For example, def triangle (x1, x2, x3) can mean we are referring to x1, x2, x3 as three numerical values. They can be type interger or type float. In this case, x1, x2, x3 are called the parameters of function triangle().

3 Return type. It refers to the kind of value the function hands back to us after its execution. For example, a function that has written to add two numbers together, two ints, or two floats, will return the sum of these two numbers, which is a number.

Correct

3 2 / 2 points

List 2 functions you have used in previous labs and what their results are:

The print() function. We use print() to communicate the final output to the terminal and reflect that output on our screen for whatever our expected result is.

For example, for the following code written by me:

```
def car():
    loss_t_pct = 100
    loss_a_pct = 23
    loss_a_value = 2162
    pct_side = loss_a_pct/loss_t_pct
    loss_t_value = loss_a_value/pct_side
    sell = loss_t_value-loss_a_value
    return sell
def main():
    print(car())
main()
```

In main(), we used print(), this function successfully report out our final calculation result processed in car(), and the result is 7238.0

The input() function. We use input() function to ask user to input the value that we are looking for in order to execute the codes followed by/rely on this input.

For example, for the following code written by me:

```
def triangle():
    a=int(input("a"))
    b=int(input("b"))
    c=int(input("c"))

    if a**2+b**2==c**2:
        print("this is a right triangle")
    else:
        print("this is not a right triangle")

triangle()
```

In triangle(), we used int(input()) as a prompt to ask the user to enter a value. The function automatically converts that value to integer for codes followed by/rely on the input of a to calculate the result. The result can be either these inputs are a right triangle if a**2+b**2==c**2, or are not a right triangle otherwise.

Correct

4 2 / 2 points

What are 2 kinds of scope? (Your explanation should show that you understand how they work)

Local scope means variables are defined in area local in a program. In python, scope could be referring to both veriables and functions. A local scope is local veriables that is defined within the body of a function along with the function's parameters. For example, if we assign veriable x to 6, in function math(), then veriable x can only be accessed within function math(). If we write another function, say science(), or main(), and we assign veriable x in any of these two functions again, to whatever value, (it can be 6 again if you wish because it will not matter), the x which is assigned in any of these two functions again does not equivalent to, or has no connection/has nothing to do with the first x we assigned in math(). In another word, although x assigned in math(), science(), or main() are all letter x, they are complete seperate and they are not the same. We can only access the x assigned to math() in math(), and we can only access the x assigned to science() in science(), and the same for main(). The x assigned in math() is not the same to the x assigned in science(), nor in main().

Built-in scope means variables or functions are built-in to Python. Functions such as print() or input() are pre-integrated/installed/built-in in python and are available to use/be called anytime anywhere in a proragm. We can use print() in function math(), science(), or main() seperately, two of these three functions, or in all of these three functions. It will always be callable and ready to execute and does one thing, print out the information to user.

Correct

5 2 / 2 points

Write a function isEven which has one parameter and returns true or false whether or not the parameter is an even number.

```
    def isEven():
        '''Function: isodd()
        Parameter: number xx
        Returns: a string true/false'''

        user= int(input("What is your number?"))
        if user % 2 == 0:
            return ("True")

        return ("False")
```

Correct