**Example 1**: Define a function that takes an argument. Call the function. Identify what code is the argument and what code is the parameter.

def double\_print(content\_dp): # "content\_dp" inside parentheses is the argument #  
 print(content\_dp) # this "content\_dp" from argument is call parameters #  
 print(content\_dp) # this "content\_dp" from argument is call parameters #  
  
double\_print("hello world")

**Example 2**: Call your function from Example 1 three times with different kinds of arguments: a value, a variable, and an expression. Identify which kind of argument is which. 

def double\_print(content\_dp):  
 print(content\_dp)  
 print(content\_dp)  
  
double\_print("hello world") # this is a value #  
str1="hello python"  
double\_print(str1) # this is a variable #  
double\_print("hello world"+str1) # this is a expression #

**Example 3**: Construct a function with a local variable. Show what happens when you try to use that variable outside the function. Explain the results.

def double\_print(content\_dp):  
 a="end"  
 print(content\_dp)  
 print(content\_dp)  
  
double\_print("hello world")  
print(a)

Traceback (most recent call last):

File "/Users/shengchaoli/PycharmProjects/pythonProject3/main.py", line 7, in <module>

print(a)

NameError: name 'a' is not defined

Because variable a is not define in main function, variable a can only be used in local function.

**Example 4**: Construct a function that takes an argument. Give the function parameter a unique name. Show what happens when you try to use that parameter name outside the function. Explain the results.

def double\_print(content\_dp):  
 print(content\_dp)  
  
content\_dp="hello world"  
double\_print(content\_dp)

hello world

Process finished with exit code 0

The same parameter name(variable) inside function and parameter in main function is non-interacting. They could be the named same.  
  
**Example 5**: Show what happens when a variable defined outside a function has the same name as a local variable inside a function. Explain what happens to the value of each variable as the program runs.

def double\_print():  
 a=1+1  
 print("local funtion a value is: "+str(a))  
  
a=1+2  
double\_print()  
print("outside funtion a value is: "+str(a))

local funtion a value is: 2

outside funtion a value is: 3

Process finished with exit code 0

As the last sample said, the two-same-name variable and parameter in two function is non-interacting each other.