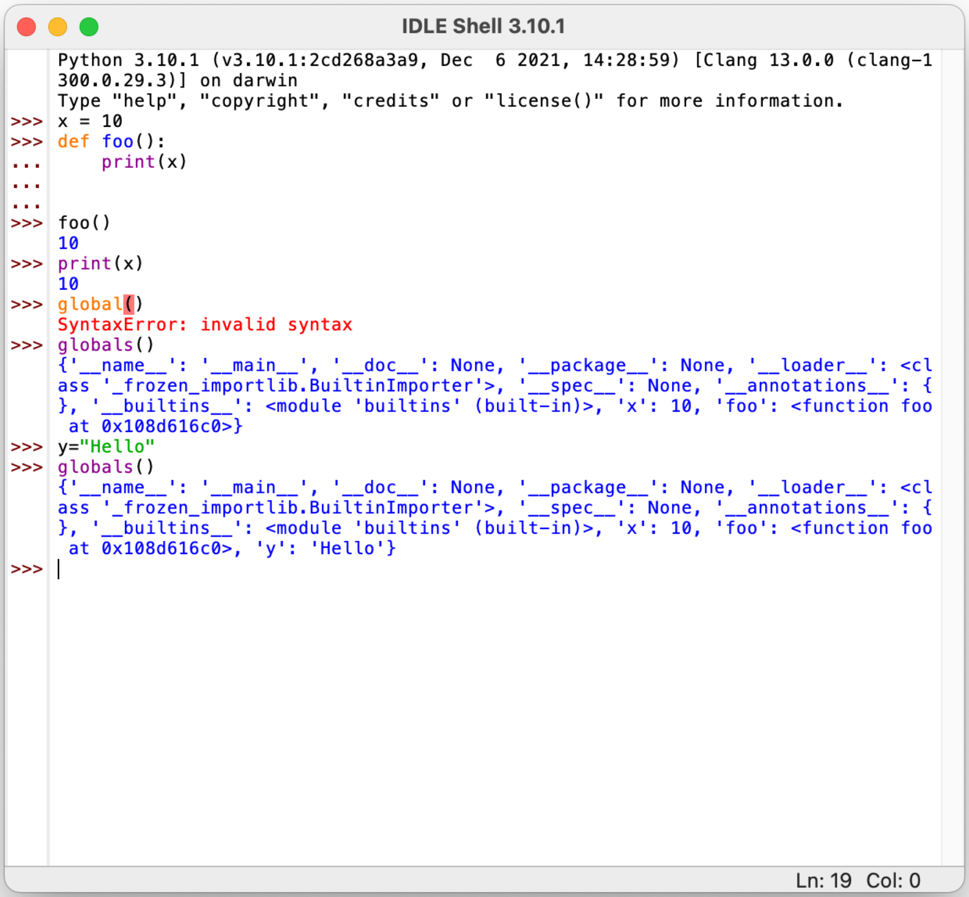
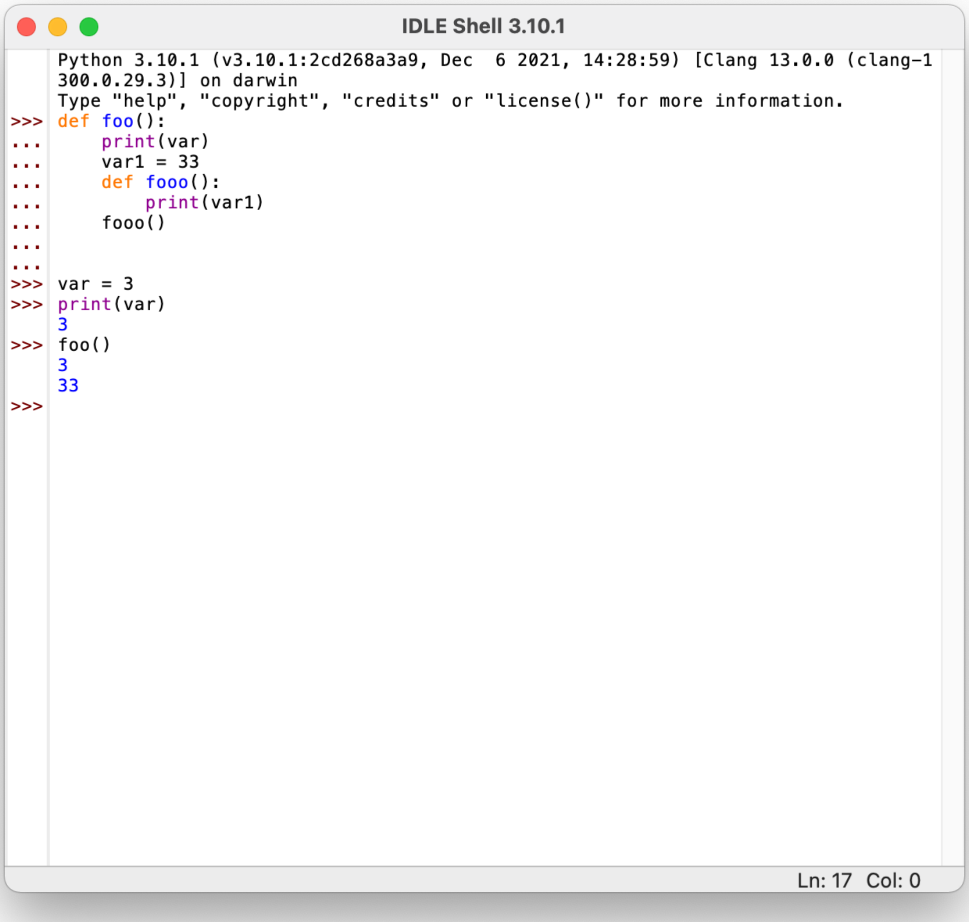
코딩입문(Python)(0301) 13주차 강의노트 실습 보고서

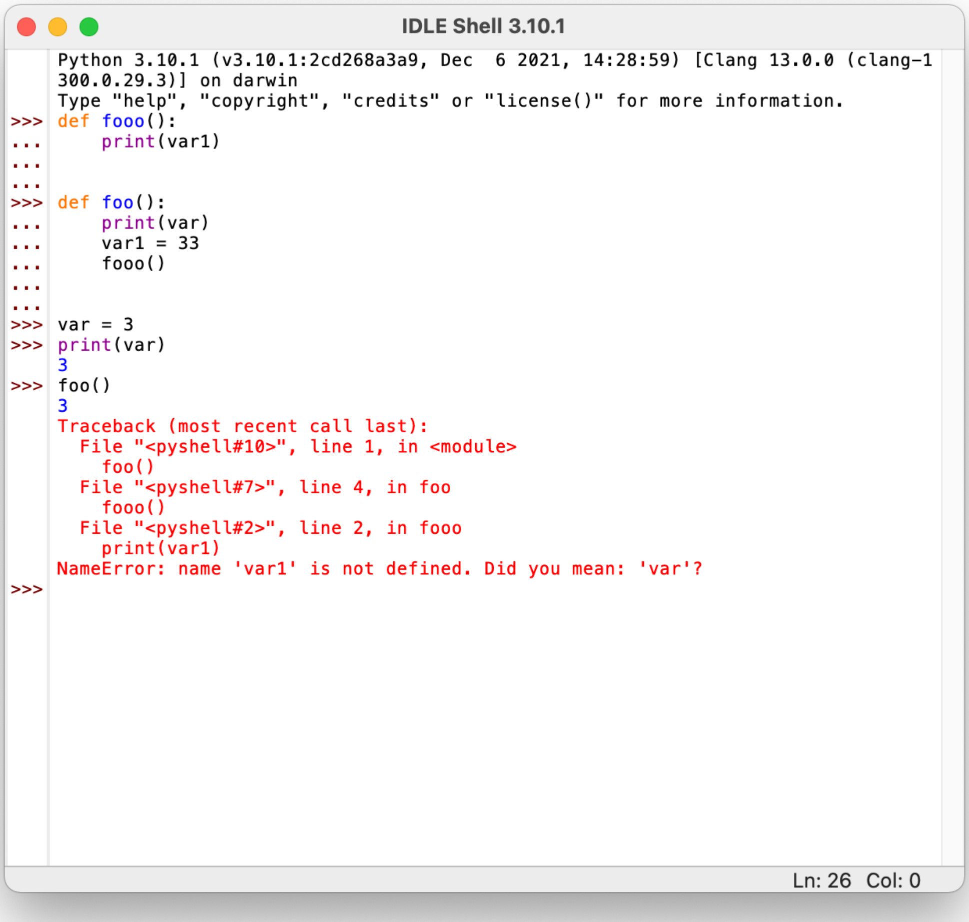
2022125028 안기겸



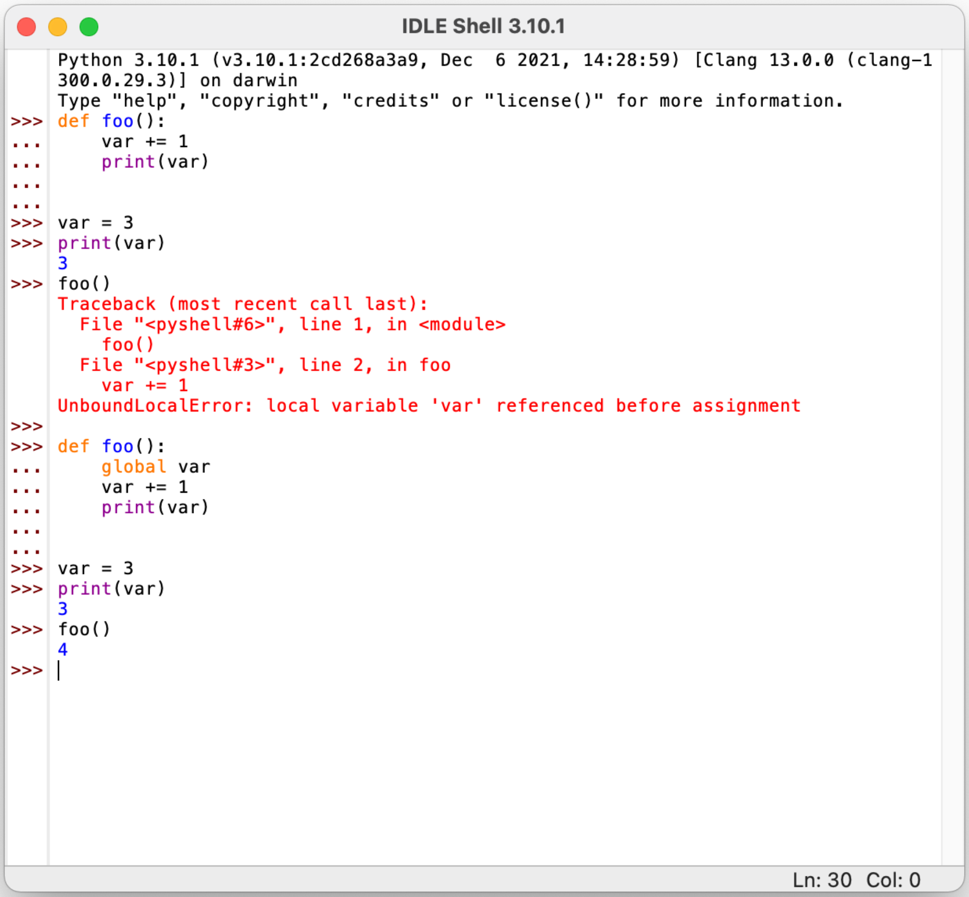
```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> x = 10
>>> def foo():
...     print(x)
...
...
>>> foo()
10
>>> print(x)
10
>>> global()
SyntaxError: invalid syntax
>>> globals()
{'__name__': '__main__', '__doc__': None, '__package__': None, '__loader__': <cl
ass '_frozen_importlib.BuiltinImporter'>, '__spec__': None, '__annotations__': {
}, '__builtins__': <module 'builtins' (built-in)>, 'x': 10, 'foo': <function foo
 at 0x108d616c0>}
>>> y="Hello"
>>> globals()
{'__name__': '__main__', '__doc__': None, '__package__': None, '__loader__': <cl
ass '_frozen_importlib.BuiltinImporter'>, '__spec__': None, '__annotations__': {
}, '__builtins__': <module 'builtins' (built-in)>, 'x': 10, 'foo': <function foo
 at 0x108d616c0>, 'y': 'Hello'}
>>> 
```



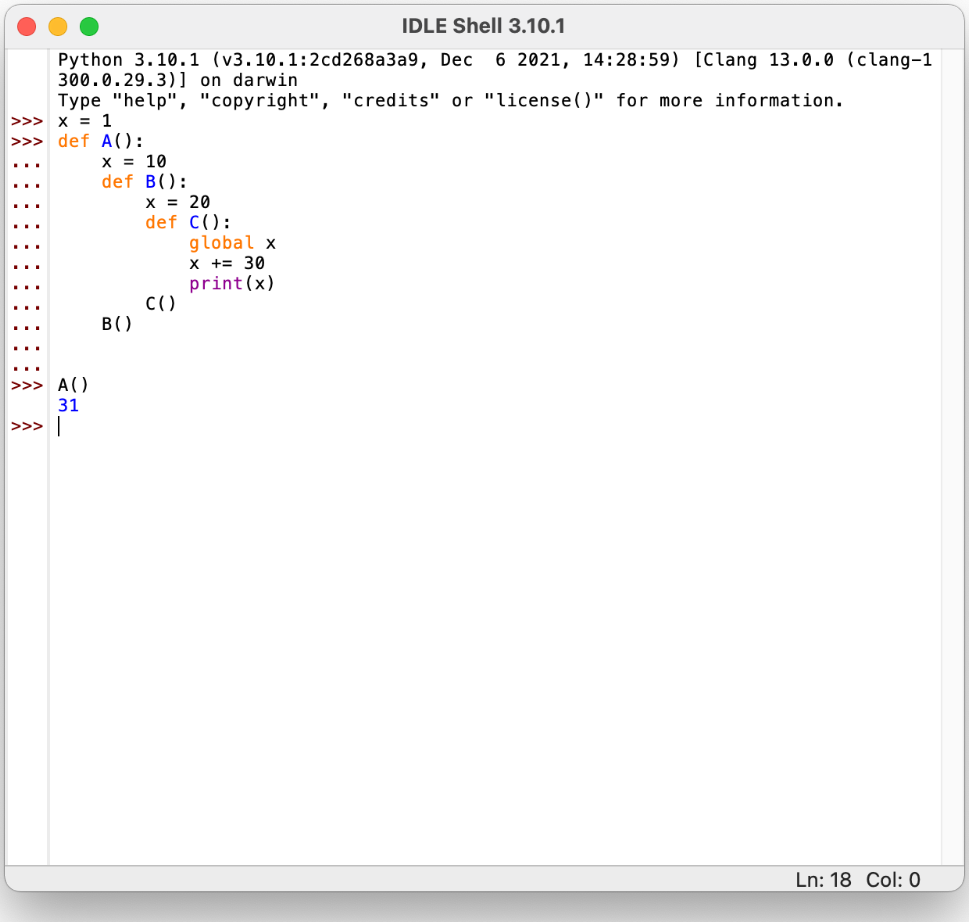
```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def foo():
...     print(var)
...     var1 = 33
...     def fooo():
...         print(var1)
...     fooo()
...
...
>>> var = 3
>>> print(var)
    3
>>> foo()
    3
    33
>>>
```



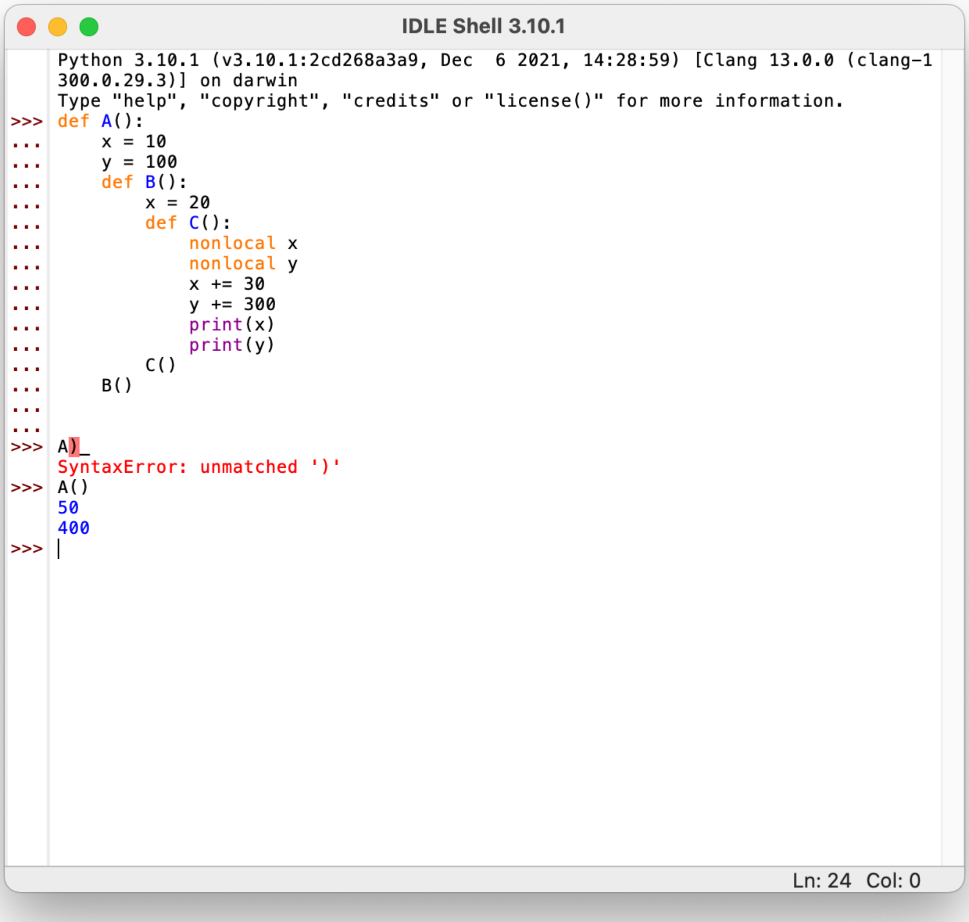
```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def fooo():
...     print(var1)
...
...
>>> def foo():
...     print(var)
...     var1 = 33
...     fooo()
...
...
>>> var = 3
>>> print(var)
    3
>>> foo()
    3
    Traceback (most recent call last):
      File "<pyshell#10>", line 1, in <module>
        foo()
      File "<pyshell#7>", line 4, in foo
        fooo()
      File "<pyshell#2>", line 2, in fooo
        print(var1)
    NameError: name 'var1' is not defined. Did you mean: 'var'?
>>>
```



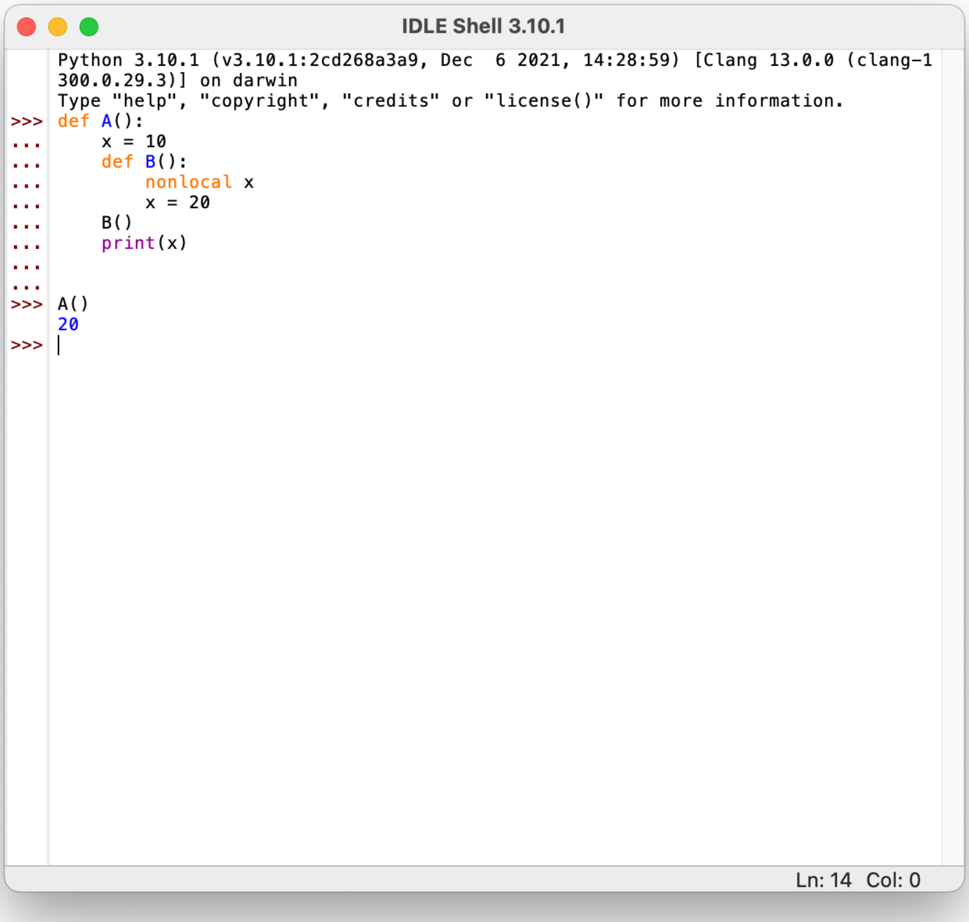
```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def foo():
...     var += 1
...     print(var)
...
...
>>> var = 3
>>> print(var)
    3
>>> foo()
    Traceback (most recent call last):
      File "<pyshell#6>", line 1, in <module>
        foo()
      File "<pyshell#3>", line 2, in foo
        var += 1
    UnboundLocalError: local variable 'var' referenced before assignment
>>>
>>> def foo():
...     global var
...     var += 1
...     print(var)
...
...
>>> var = 3
>>> print(var)
    3
>>> foo()
    4
>>> 
```



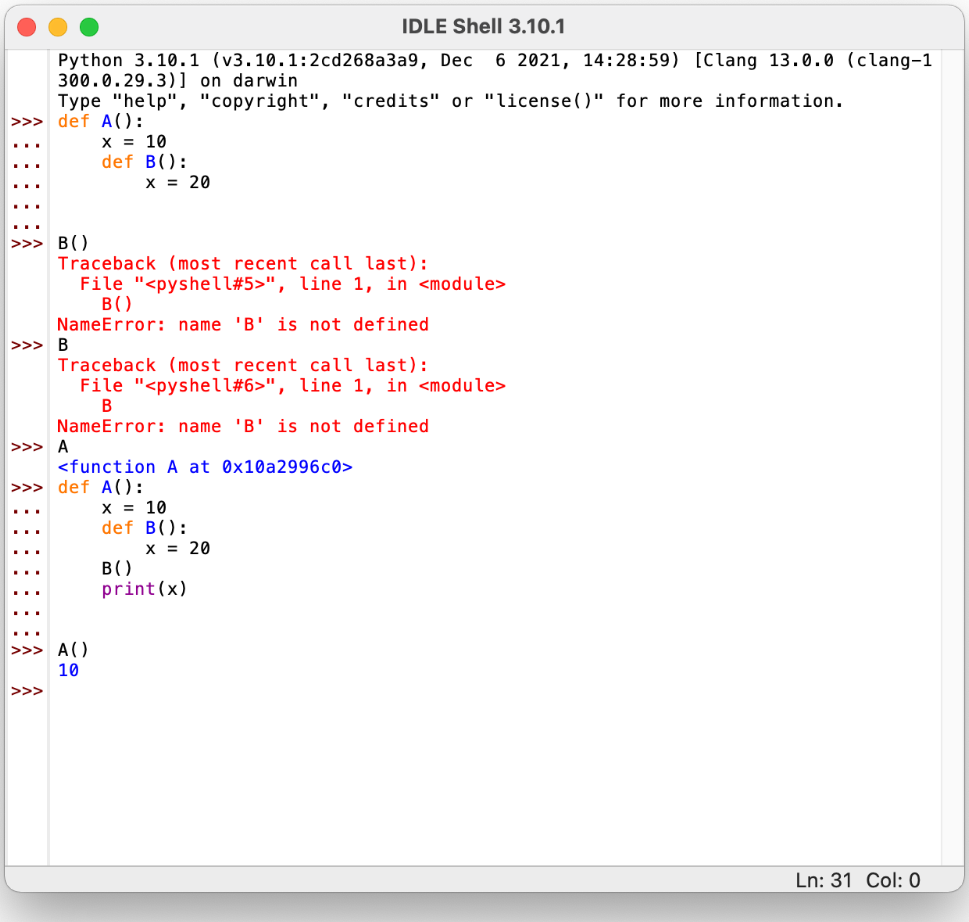
```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> x = 1
>>> def A():
...     x = 10
...     def B():
...         x = 20
...         def C():
...             global x
...             x += 30
...             print(x)
...         C()
...     B()
...
...
>>> A()
31
>>> 
```



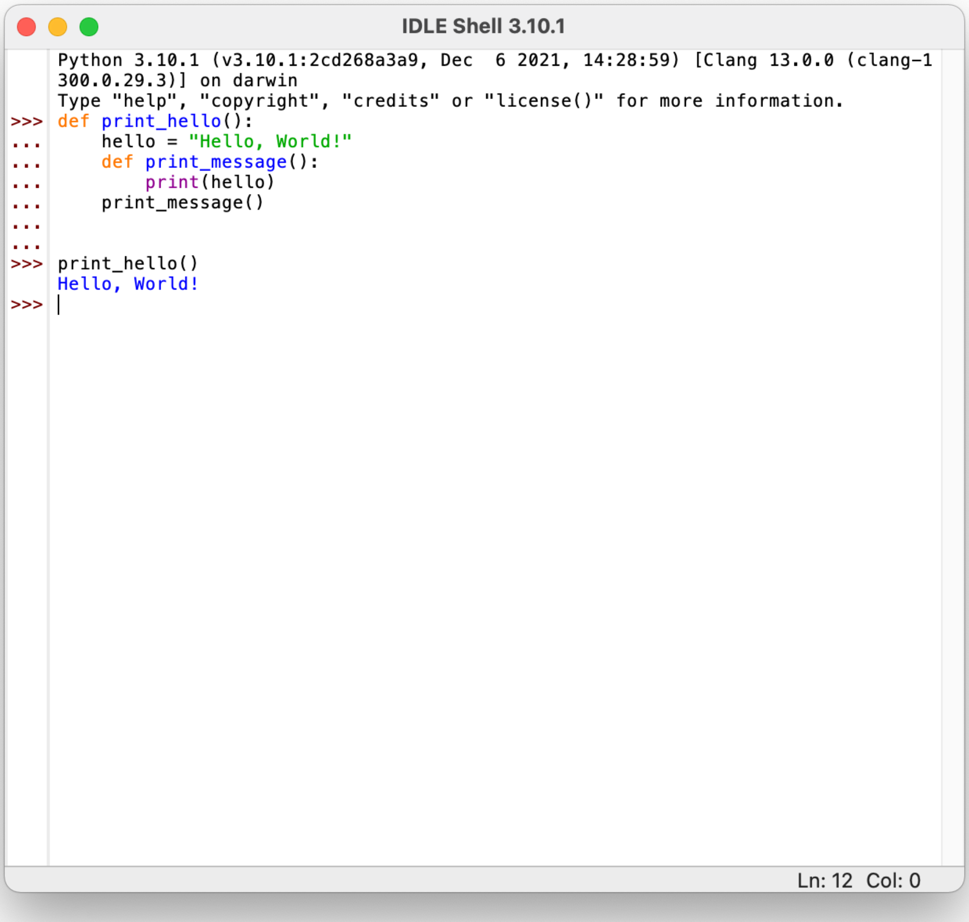
```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def A():
...     x = 10
...     y = 100
...     def B():
...         x = 20
...         def C():
...             nonlocal x
...             nonlocal y
...             x += 30
...             y += 300
...             print(x)
...             print(y)
...         C()
...     B()
...
...
>>> A)_
SyntaxError: unmatched ')'
>>> A()
50
400
>>> 
```



```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def A():
...     x = 10
...     def B():
...         nonlocal x
...         x = 20
...     B()
...     print(x)
...
...
>>> A()
20
>>> 
```

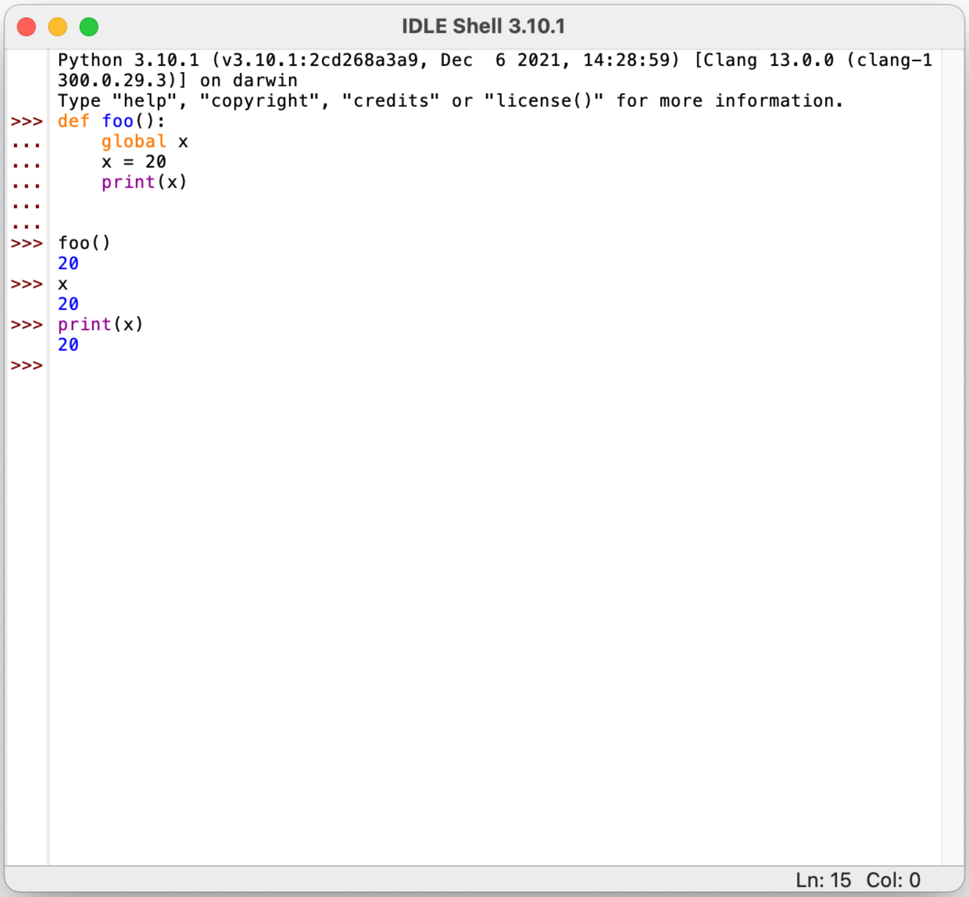


```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def A():
...     x = 10
...     def B():
...         x = 20
...
...
>>> B()
Traceback (most recent call last):
  File "<pyshell#5>", line 1, in <module>
    B()
NameError: name 'B' is not defined
>>> B
Traceback (most recent call last):
  File "<pyshell#6>", line 1, in <module>
    B
NameError: name 'B' is not defined
>>> A
<function A at 0x10a2996c0>
>>> def A():
...     x = 10
...     def B():
...         x = 20
...     B()
...     print(x)
...
...
>>> A()
10
>>>
```

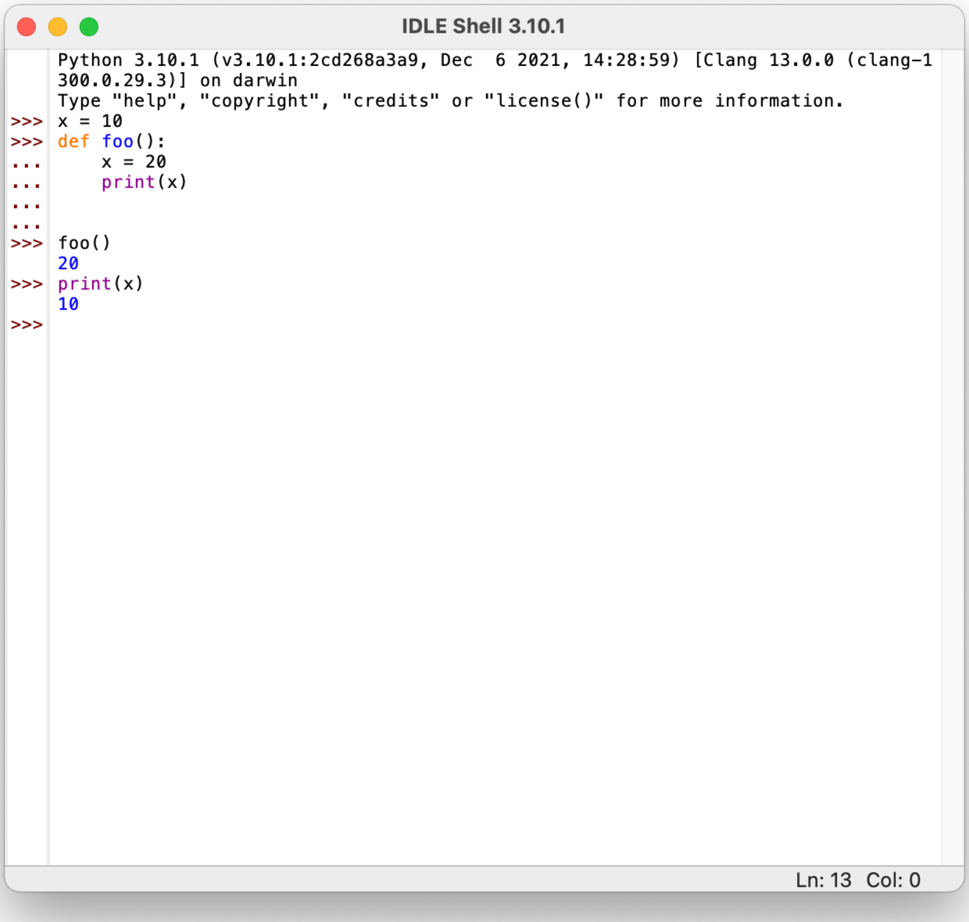


IDLE Shell 3.10.1

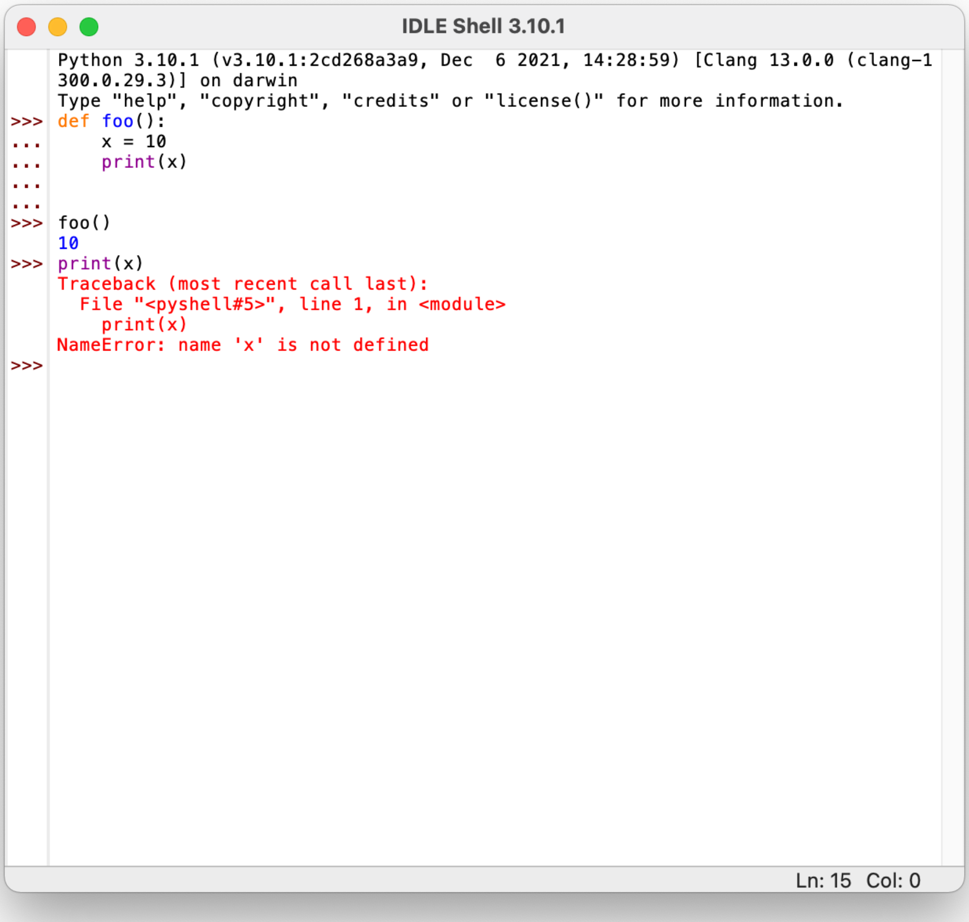
```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def print_hello():
...     hello = "Hello, World!"
...     def print_message():
...         print(hello)
...     print_message()
...
...
>>> print_hello()
    Hello, World!
>>> 
```



```
Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def foo():
...     global x
...     x = 20
...     print(x)
...
...
>>> foo()
    20
>>> x
    20
>>> print(x)
    20
>>>
```



```
    Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
    300.0.29.3)] on darwin
    Type "help", "copyright", "credits" or "license()" for more information.
>>> x = 10
>>> def foo():
...     x = 20
...     print(x)
...
...
>>> foo()
    20
>>> print(x)
    10
>>>
```



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Python 3.10.1 (v3.10.1:2cd268a3a9, Dec  6 2021, 14:28:59) [Clang 13.0.0 (clang-1
300.0.29.3)] on darwin
Type "help", "copyright", "credits" or "license()" for more information.
>>> def foo():
...     x = 10
...     print(x)
...
...
>>> foo()
10
>>> print(x)
Traceback (most recent call last):
  File "<pyshell#5>", line 1, in <module>
    print(x)
NameError: name 'x' is not defined
>>>
```