

ite code in **Python 3.6** ✓

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```
1 x = 'mango' ✓ Global name  
2  
3 def show_magic():  
4     ✓ Local name  
5     x = 'rainbow'  
6     print(x)  
7  
8     show_magic()  
9     print(x)
```

local name

function

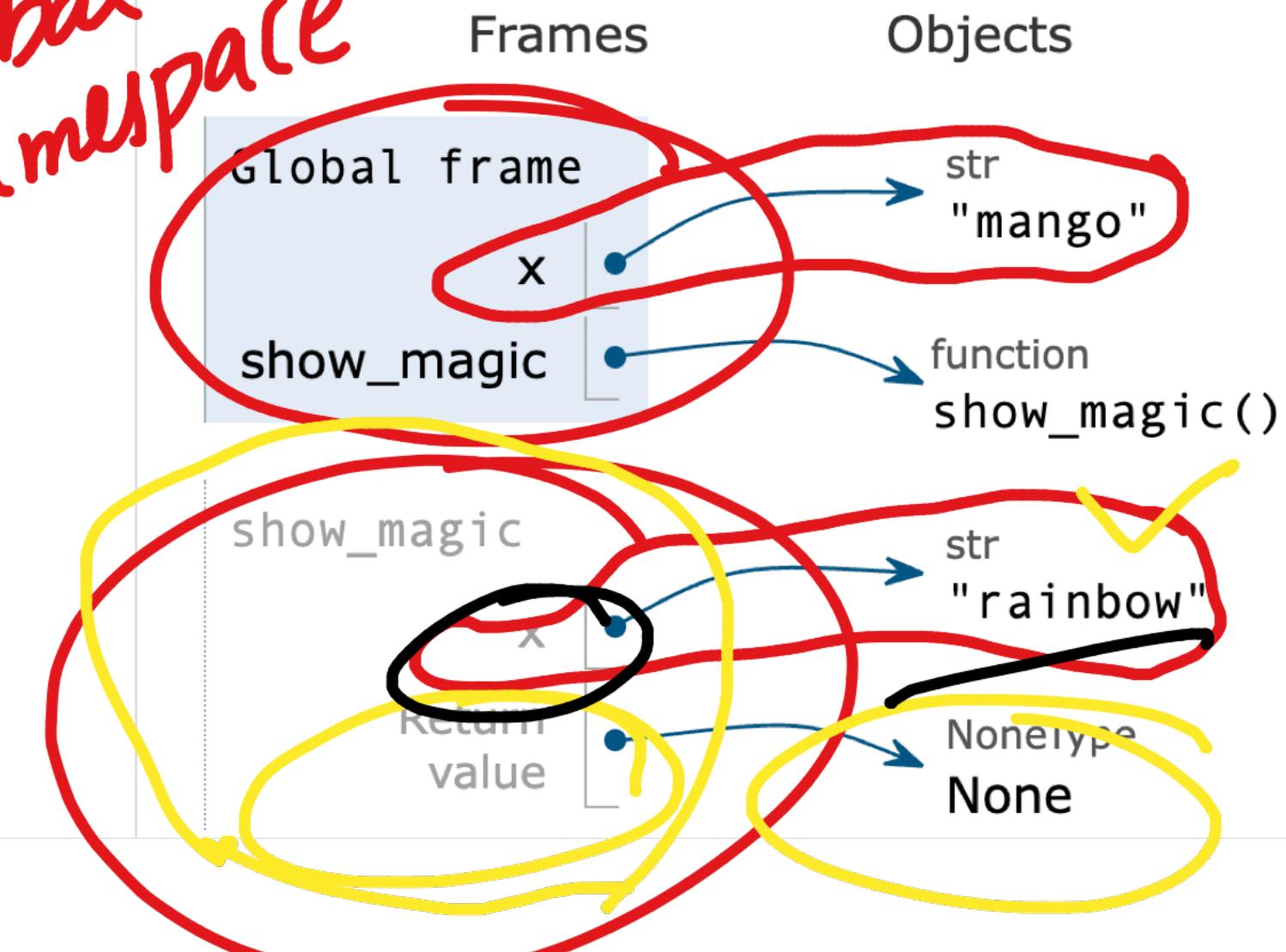
Namespace global names

```
graph TD; L1[local Namespace] --> L2[Global Namespace]; L1 --> L3[Built-in Namespace]; L2 --> L4[Local Namespace]; L3 --> L4; L2 --> L5[Local Namespace]; L5 --- N["names"]
```

local Namespace
↓
Global Namespace
↓
Built-in Namespace
Namespaces
names
Local Namespace
Local Namespace

Print output (drag lower right corner to resize)

rainbow ✓
mango ✓



te code in Python 3.6

```
1 y = 78
2
3 def show_value():
4     print(y)
5
6 show_value()
7
```

When I make a function call with
a local function be made

global name

global name

global frame

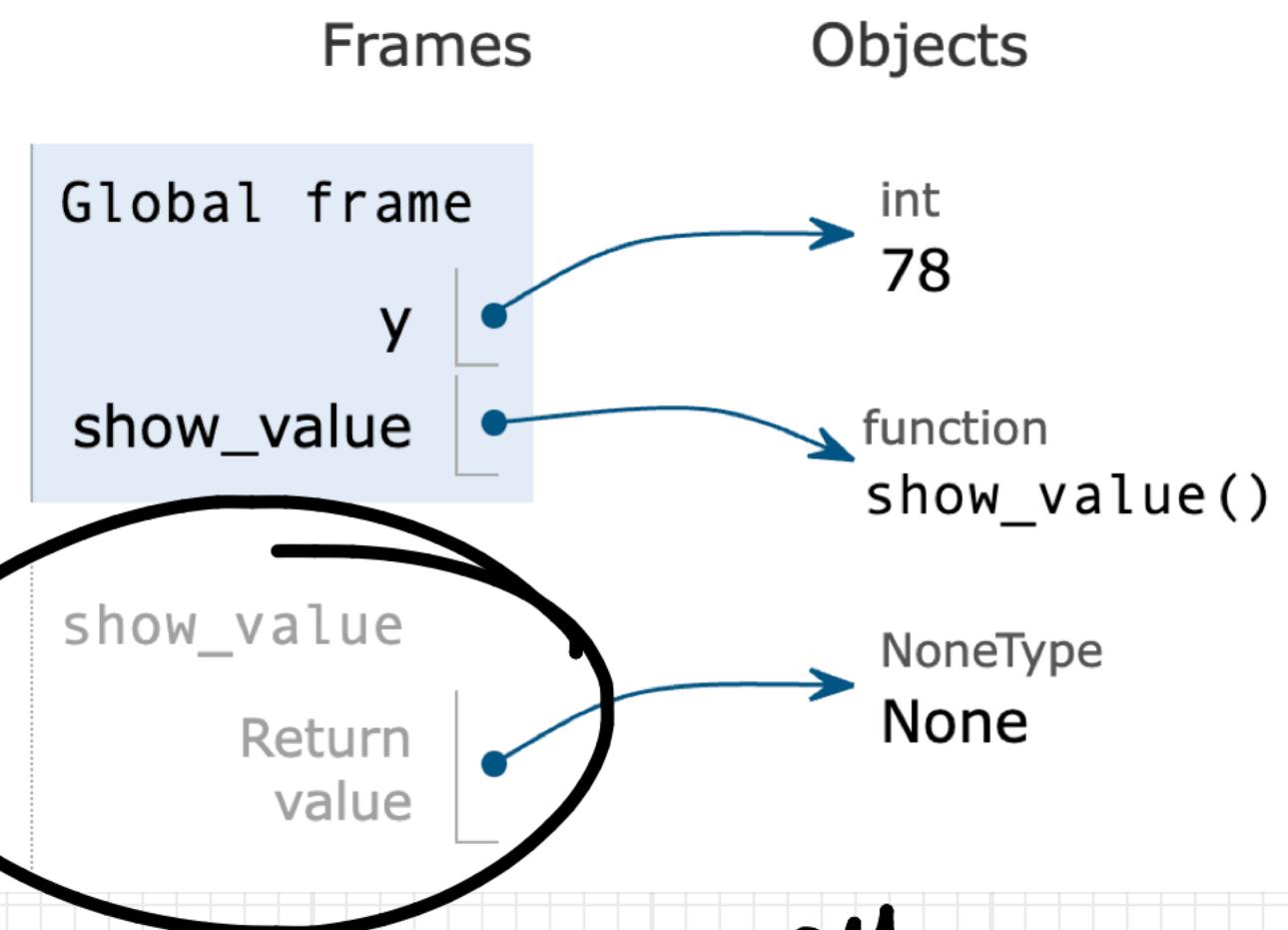
show_value

Return value

This namespace exists when you call the function.

Print output (drag lower right corner to resize)

78



Write code in Python 3.6

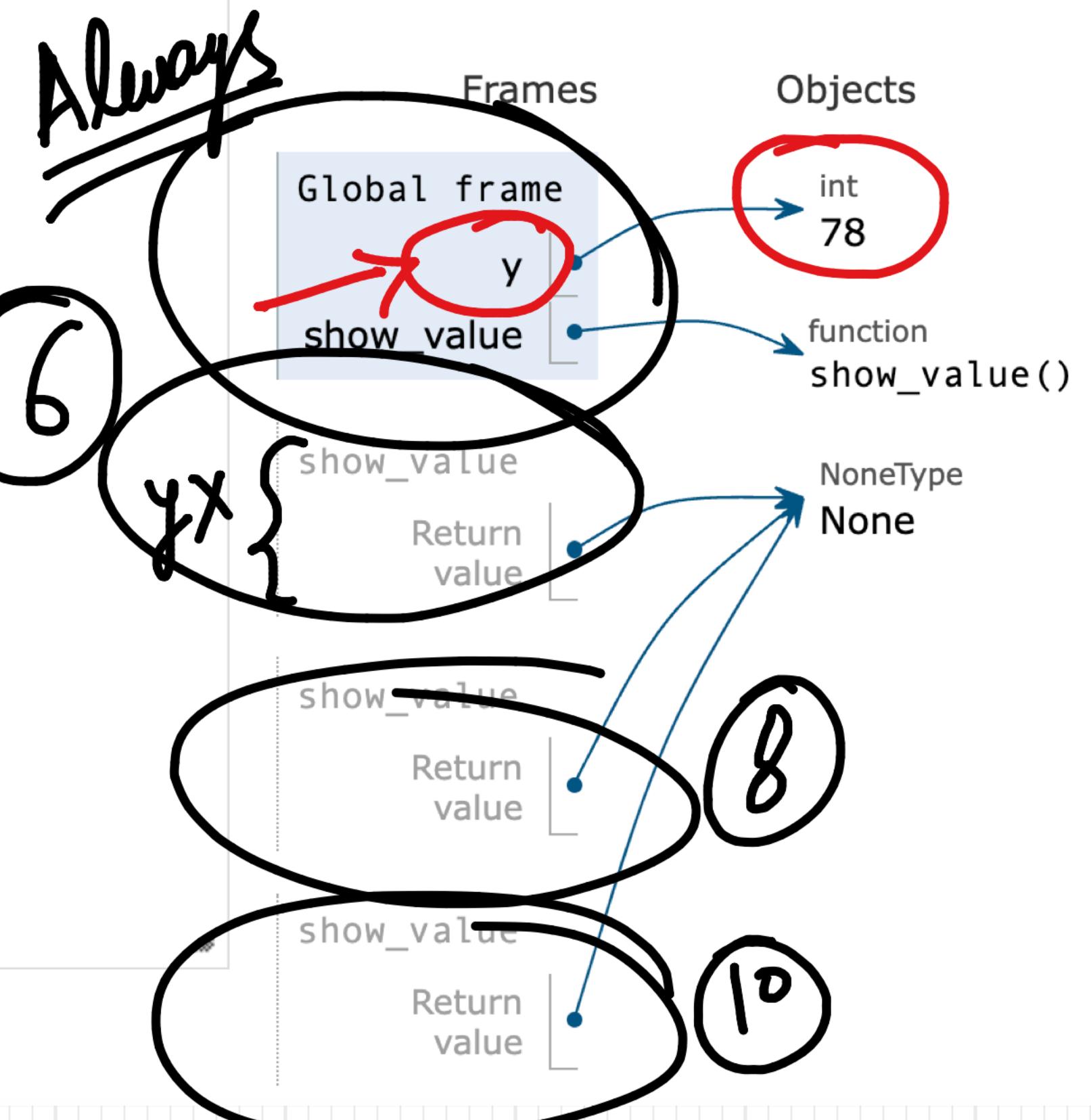
(drag lower right corner to resize code editor)

Print output (drag lower right corner to resize)

```
1 y = 78
2
3 def show_value():
4     print(y)
5
6 show_value()
7
8 show_value()
9
10 show_value()
11 |
```

Access
what is y?
local Namespace
if you don't find
Global Namespace

78
78
78



→ line that just executed

→ next line to execute

Write code in Python 3.6

(drag lower right corner to resize code editor)

Print output (drag lower right corner to resize)

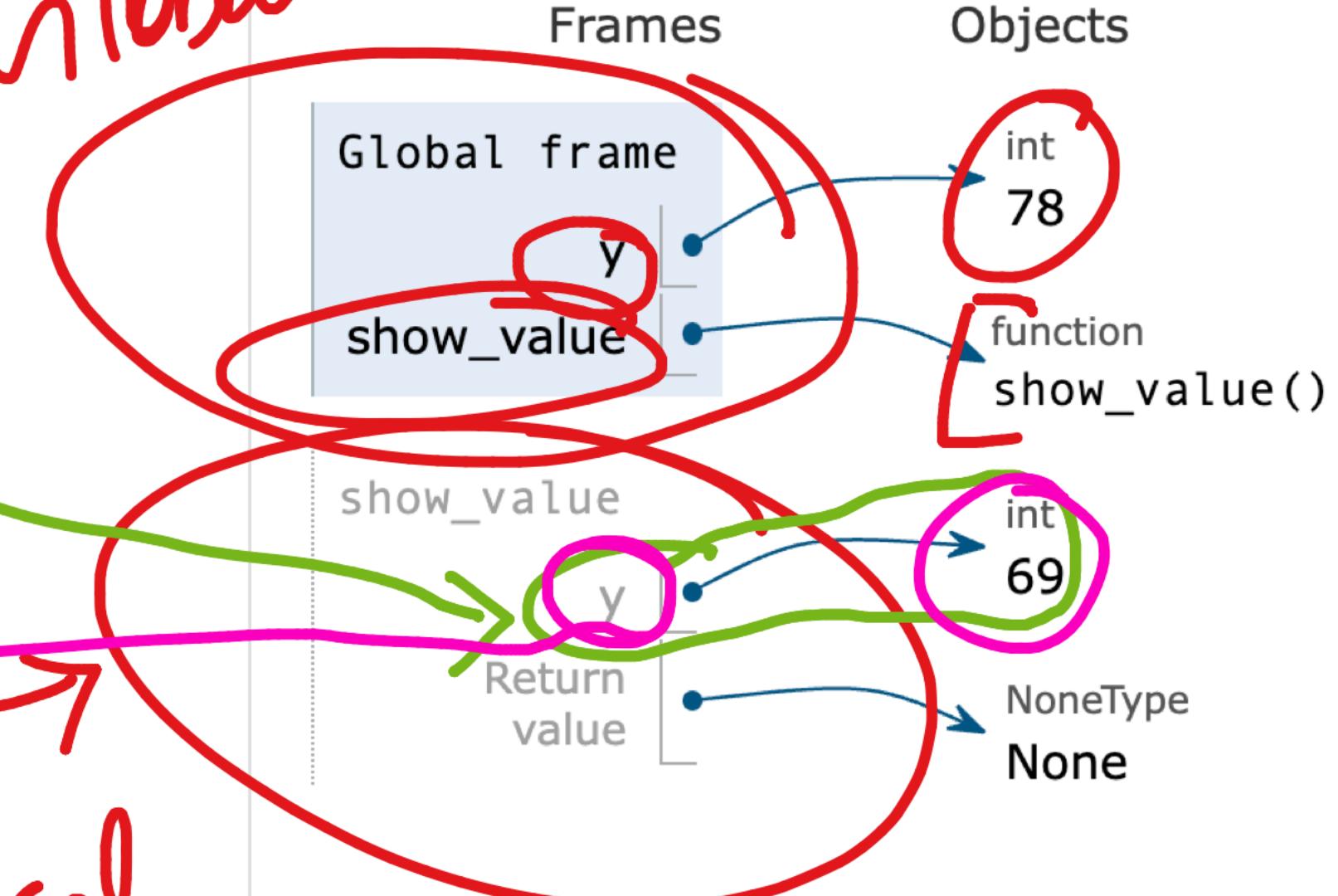
69

```
1 y = 78
2
3 def show_value():
4     y = 69
5     print(y)
6
7 show_value()
```

Creates a local variable in global Namespace
y

what is y
Local Namespace

local
Namespace



Write code in Python 3.6

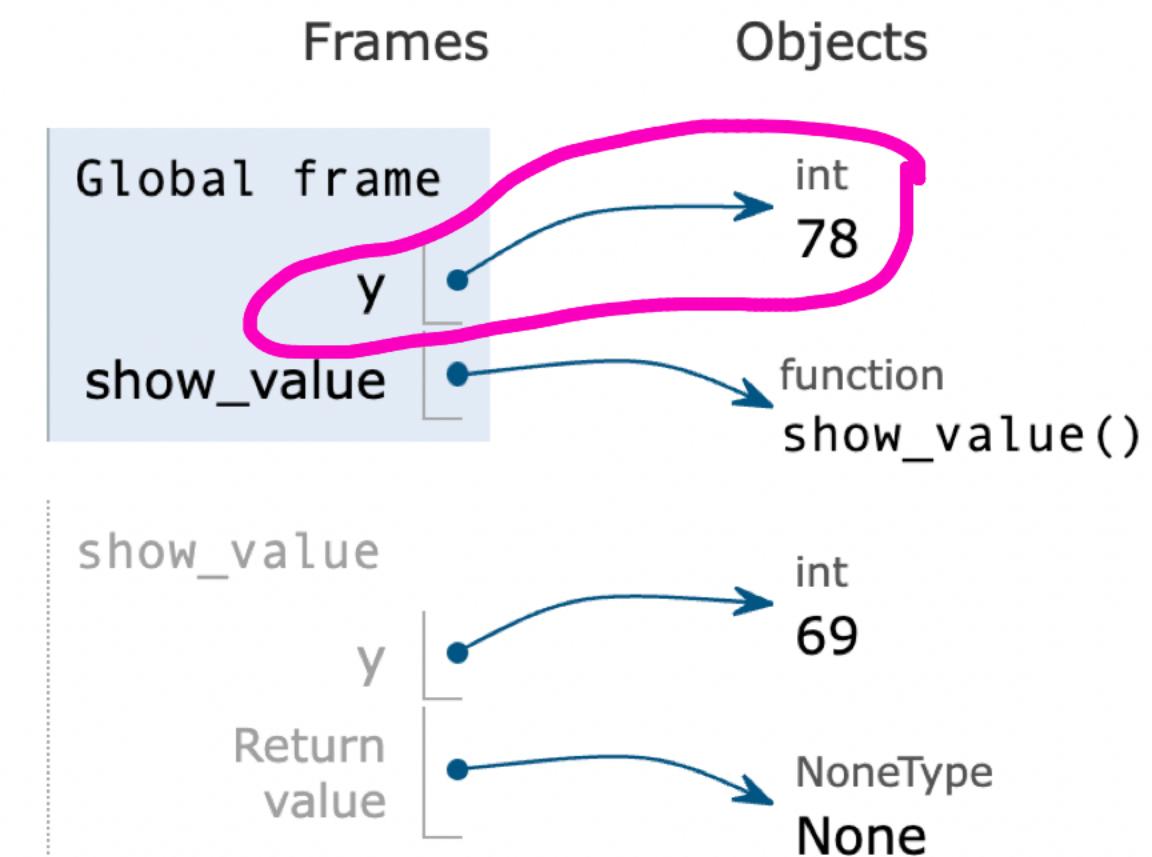
(drag lower right corner to resize code editor)

```
1 y = 78
2
3 def show_value():
4     y = 69
5     print('at line no 5 inside fun y is',y)
6
7 show_value()
8
9 → print('line no 9 y is',y)
```

what is y?
Global Namespace

Print output (drag lower right corner to resize)

at line no 5 inside fun y is 69
line no 9 y is 78



Write code in Python 3.6

(drag lower right corner to resize code editor)

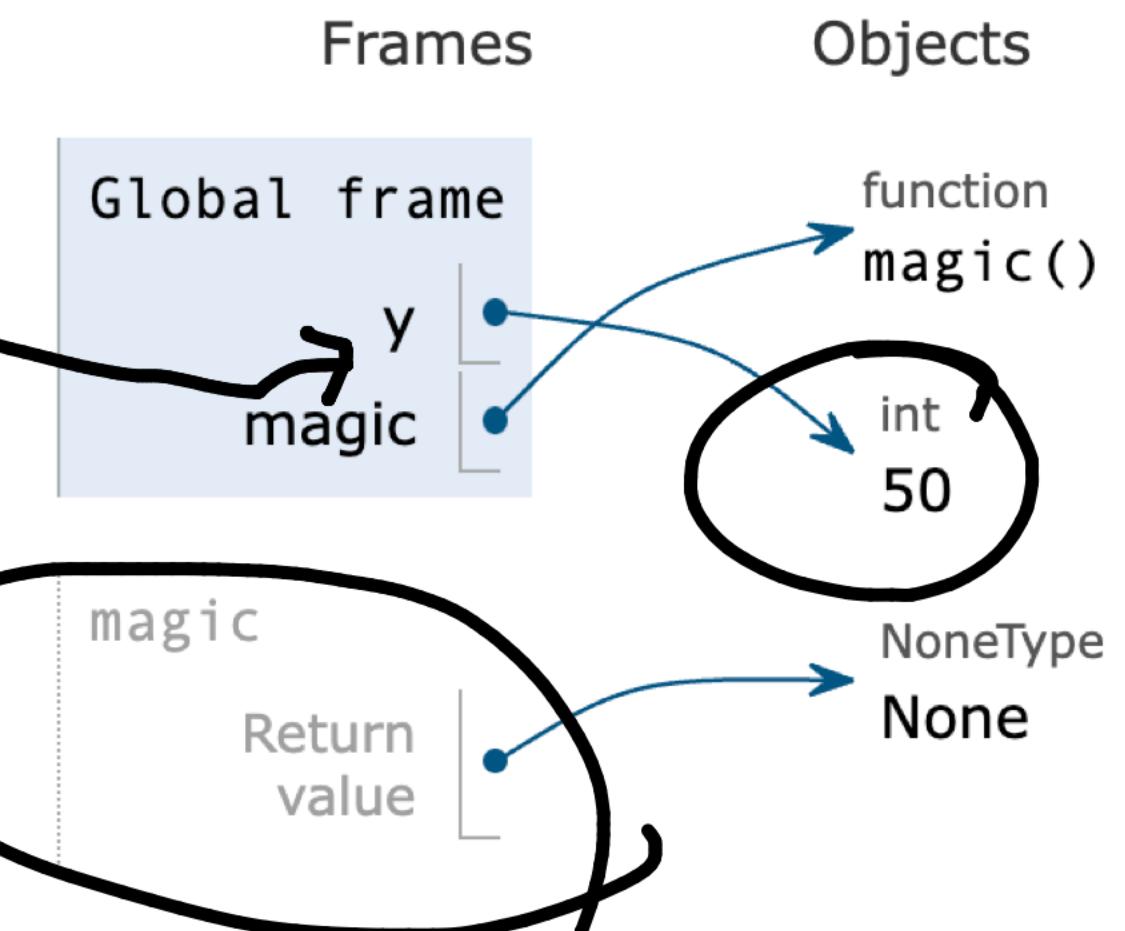
```
1 y = 78  
2  
3 def magic():  
4     global y  
5     y = 50  
6     print(y)  
7  
8 magic()
```

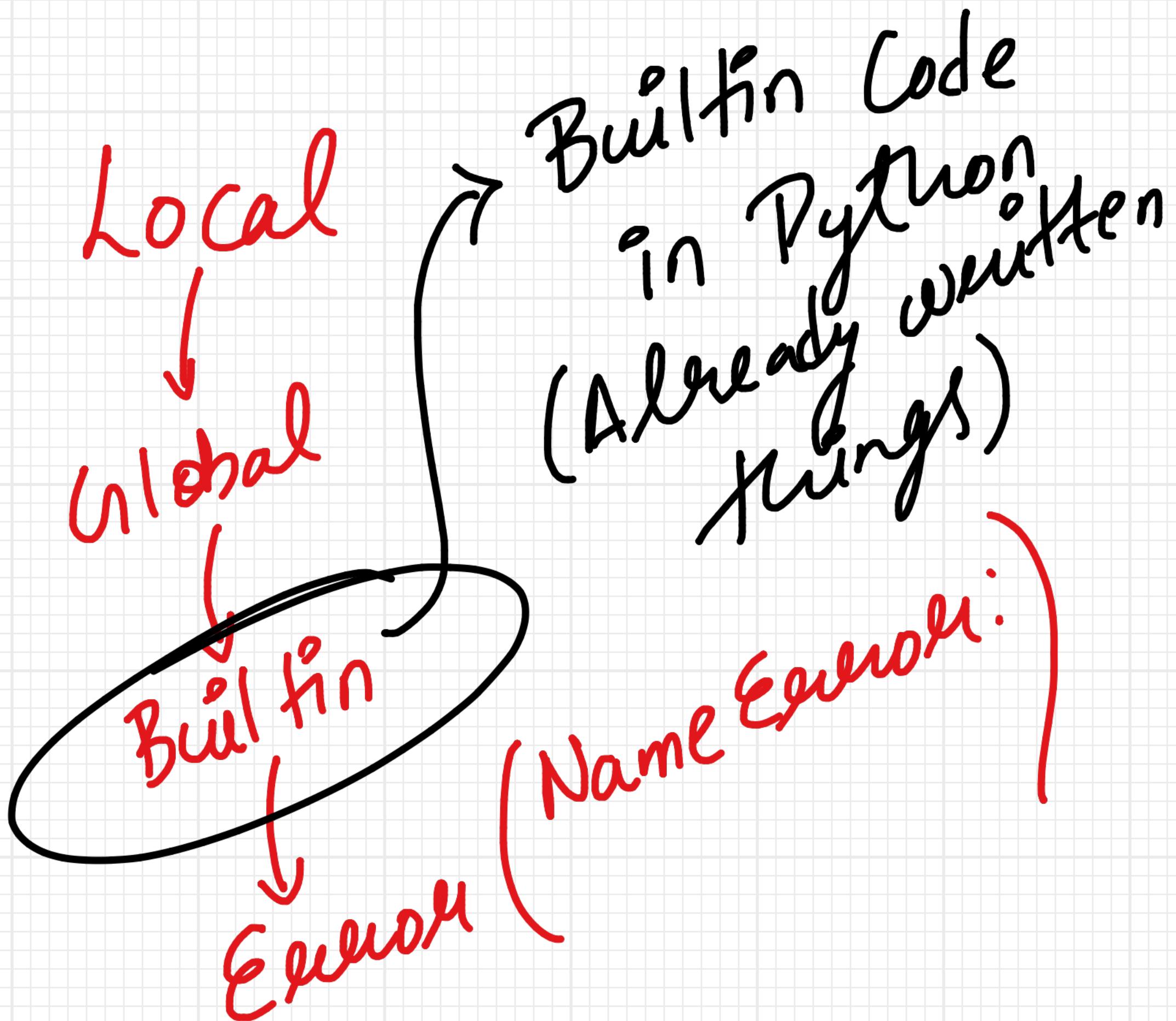
Access Global
Var in function

Print output (drag lower right corner to resize)

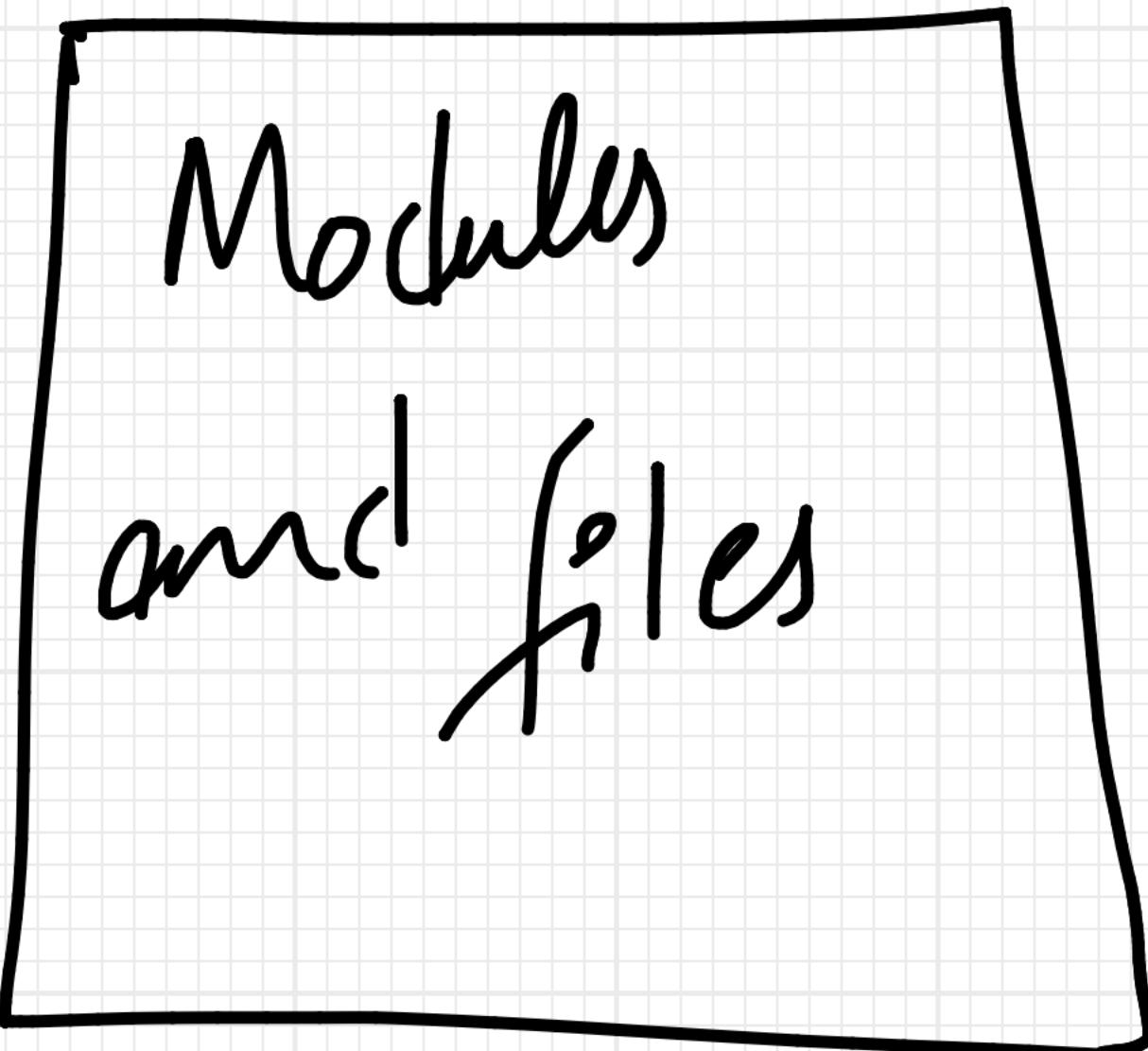
50

* * There is
No y in
local Namespace.





Package



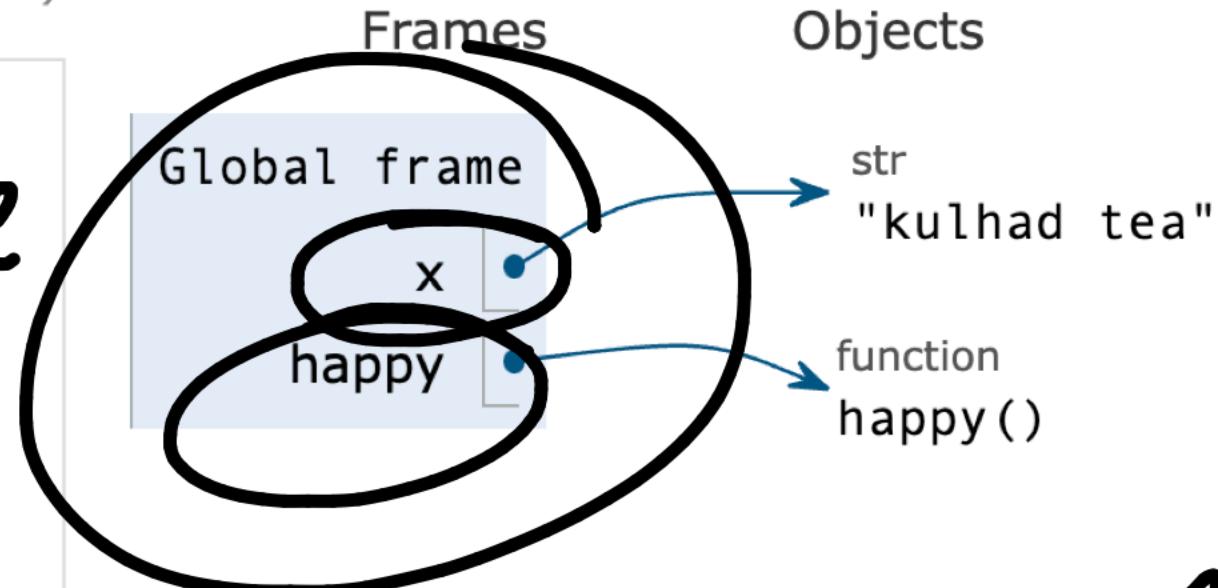
Write code in Python 3.6

```
1 x = 'kulhad tea'  
2 def happy():  
3     x = 'maggi'  
4     def sad():  
5         y = 'brownie'  
6         print(x)  
7
```

(drag lower right corner to resize code editor)

Note* Local Namespace exists only when you call the function.

Global Namespace



How many names in G.N?
⇒ 2

Write code in Python 3.6

(drag lower right corner to resize code editor)

```
1 x = 'kulhad tea'  
2 def happy():  
3     x = 'maggi'  
4     def sad():  
5         y = 'brownie'  
6         print(x)  
7 # What are the namespaces right now? global  
8  
9 happy()  
10 # What are the namespaces right now? {global, loca
```

Local
NameSpace

How many names
is L.N?

3!

Frames

Global frame

x

happy

f1: happy

sad

x

Return value

Objects

str

"kulhad tea"

function

happy()

str

"maggi"

function

sad() [parent=f1]

NoneType

None

```
In [6]: x = 'kulhad tea'  
def happy():  
    x = 'maggi'  
def sad():  
    y = 'brownie'  
    print(x)  
sad()
```

```
# What are the namespaces right now? global  
happy()  
# What are the namespaces right now? {global, local-happy}
```

maggi

what is x?
local Namespace of Sad

local Namespace of happy
↓
Global
↓
Built-in
Names