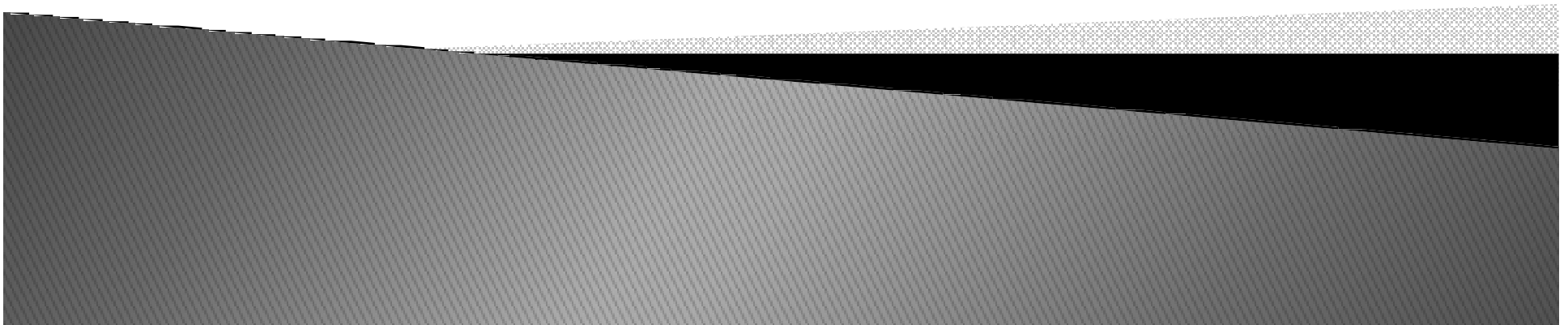


Escopo

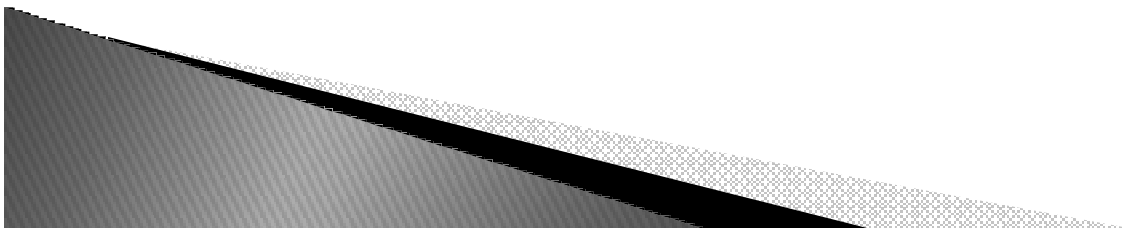
BSI – UFRPE

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Escopo

- ▶ O escopo de uma variável é o alcance que ela tem, de onde pode ser acessada.
- ▶ Variáveis Globais
- ▶ Variáveis Locais



Escopo

```
# Global scope
```

```
X = 99
```

```
# X and func assigned in module: global
```

```
def func(Y):
```

```
# Y and Z assigned in function: locals
```

```
    # Local scope
```

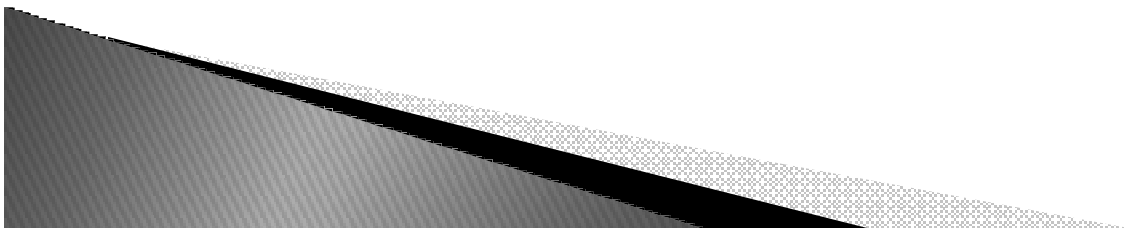
```
    Z = X + Y
```

```
# X is a global
```

```
    return Z
```

```
func(1)
```

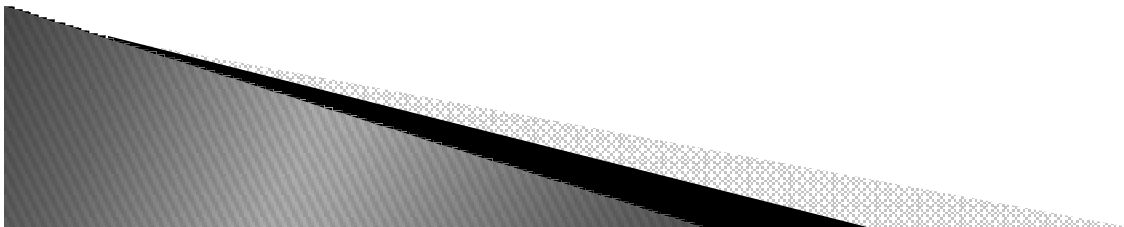
```
# func in module: result=100
```



Escopo

```
X = 'Spam'  
def func():  
    X = 'NI'  
    print(X)
```

```
func()  
print(X)
```



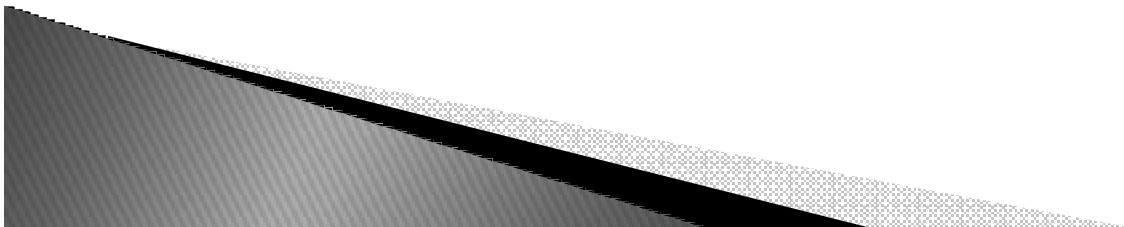
Escopo

```
X = 'Spam'  
def func():  
    X = 'NI'  
    print(X)
```

```
func()  
print(X)
```

Saídas:

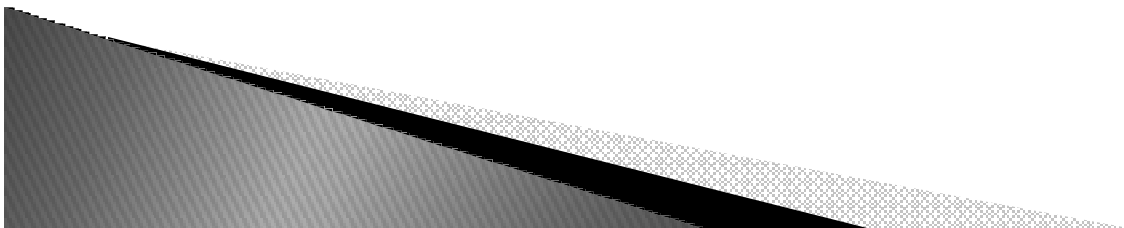
NI
Spam



Escopo

- ▶ Palavras reservadas:

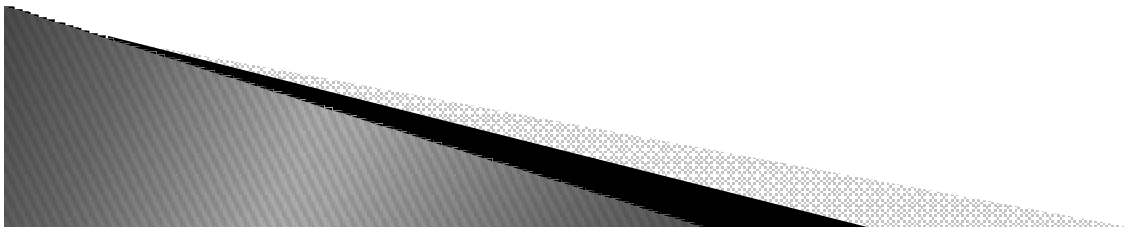
- `global` → permite que a variável local assim definida, altera o conteúdo da variável global.
- `nonlocal` → restringe que a variável local tenha escopo local.



Escopo

```
X = 'Spam'  
def func():  
    global X  
    X = 'NI'  
    print(X)
```

```
func()  
print(X)
```



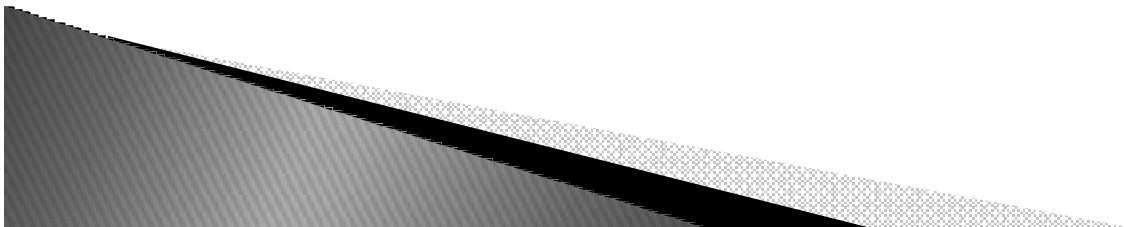
Escopo

```
X = 'Spam'  
def func():  
    global X  
    X = 'NI'  
    print(X)
```

```
func()  
print(X)
```

Saídas:

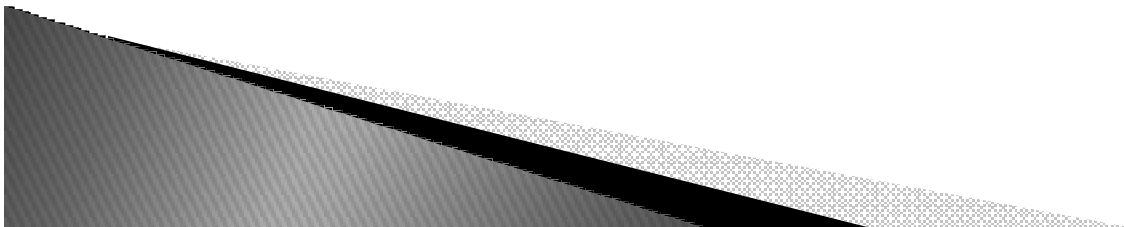
NI
NI



Escopo

```
X = 'Spam'  
def func():  
    X = 'NI'  
    def nested():  
        print(X)  
    nested()
```

```
func()  
print(X)
```



Escopo

```
X = 'Spam'  
def func():  
    X = 'NI'  
    def nested():  
        print(X)  
    nested()
```

```
func()  
print(X)
```

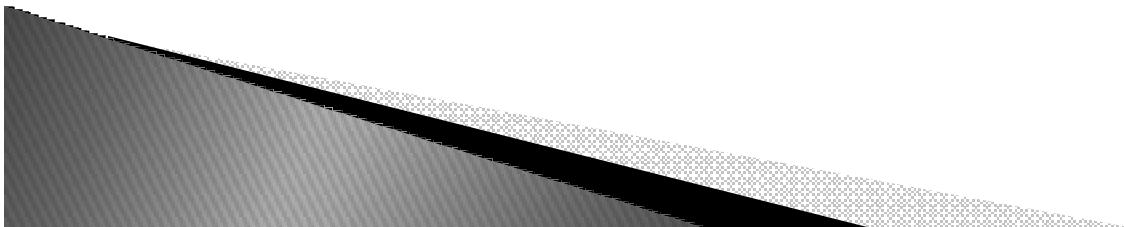
Saídas:

NI
Spam

Escopo

```
X="teste"  
def func():  
    X = 'NI'  
    def nested():  
        X = 'Spam'  
        print(X)  
    nested()  
    print(X)
```

```
func()  
print (X)
```



Escopo

```
X="teste"  
def func():  
    X = 'NI'  
    def nested():  
        X = 'Spam'  
        print(X)  
    nested()  
    print(X)
```

```
func()  
print (X)
```

Saídas:

Spam

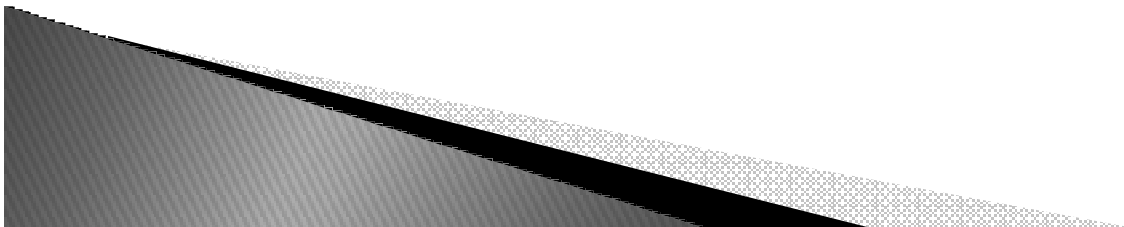
NI

teste

Escopo

```
X="teste"  
def func():  
    X = 'NI'  
    def nested():  
        nonlocal X  
        X = 'Spam'  
        print(X)  
    nested()  
    print(X)
```

```
func()  
print (X)
```



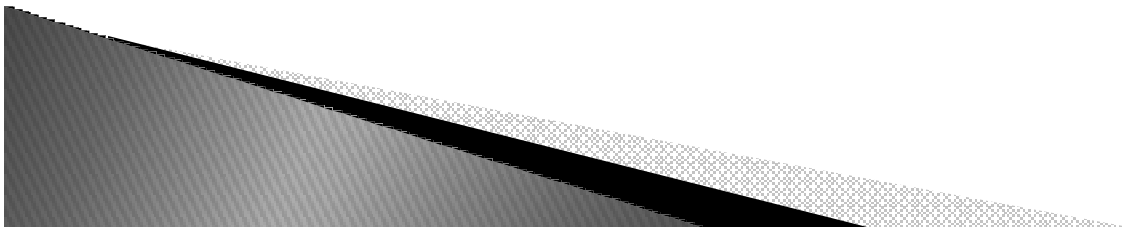
Escopo

```
X="teste"  
def func():  
    X = 'NI'  
    def nested():  
        nonlocal X  
        X = 'Spam'  
        print(X)  
    nested()  
    print(X)
```

```
func()  
print (X)
```

Saídas:

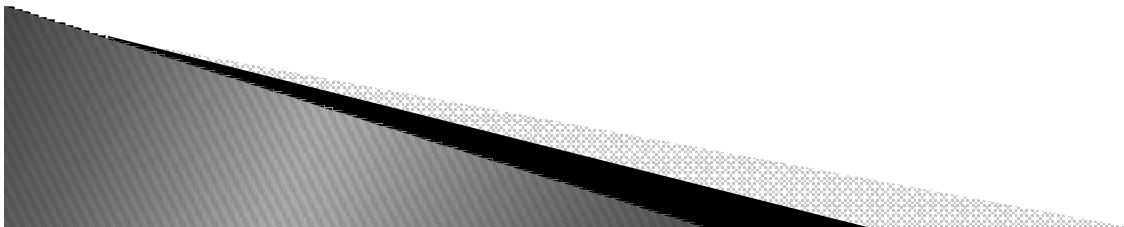
```
Spam  
Spam  
teste
```



Escopo

```
X="teste"  
def func():  
    X = 'NI'  
    def nested():  
        global X  
        X = 'Spam'  
        print(X)  
    nested()  
    print(X)
```

```
func()  
print (X)
```



Escopo

```
X="teste"  
def func():  
    X = 'NI'  
    def nested():  
        global X  
        X = 'Spam'  
        print(X)  
    nested()  
    print(X)
```

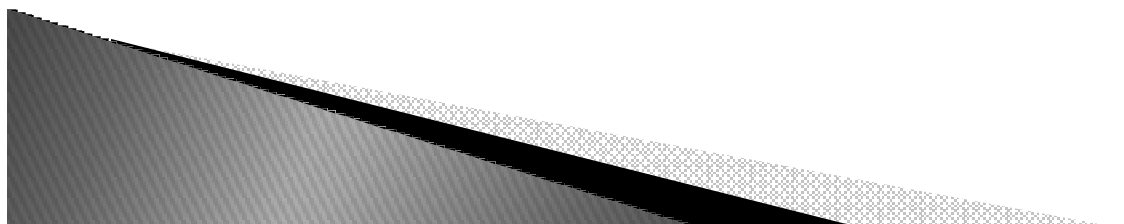
```
func()  
print (X)
```

Saídas:

Spam

NI

Spam



Escopo

```
class first:
    X="teste"
    def func(self):
        X = 'NI'
        def nested():
            global X
            X = 'Spam'
            print(X)
        nested()
        print(X)

    def getX(self):
        return X

a=first()
a.func()
print (a.getX())
```



Escopo

```
class first:
    X="teste"
    def func(self):
        X = 'NI'
        def nested():
            global X
            X = 'Spam'
            print(X)
        nested()
        print(X)

    def getX(self):
        return X

a=first()
a.func()
print (a.getX())
```

Saídas:

Spam

NI

Spam