Functions 1

9:05

Oct 22 Mon-2

Oct 22 Mon-3 → Nischel

Agenda

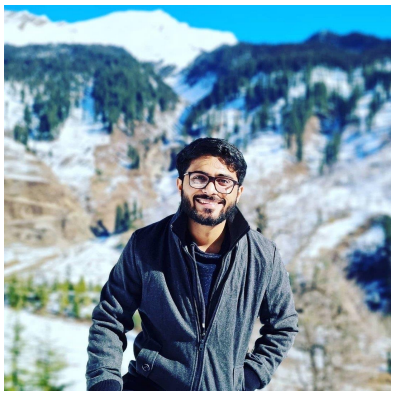
- Concept
- Syntax
- Arguments / Parameters
- Returning values
- Docstrings

To be covered in Functions 2

- Default arguments
- Keyword arguments
- Scope - local, global

Instructor

Tarun Luthra



- Software Engineer & Instructor @ Scaler
- Fullstack Developer @ LevelAI (USA based startup)
- Fullstack Developer @ Coding Minutes
- Instructor @ Coding Blocks

Dota | GR
Animes | Mangas

Chai-Coffee

```
print("Boil some water")
print("Add sugar & tea leaves")
print("Add some milk")
print("Heat it for a few mins")
```

& ginger

```
print("Boil some water")
print("Add sugar & tea leaves")
print("Add some milk")
print("Heat it for a few mins")
```

→ Repetition → Redundancy

→ Not maintainable

```
print("Heat some milk")
print("Put coffee & sugar in the cup")
print("Pour hot milk into the cup")
```

```
print("Boil some water")
print("Add sugar & tea leaves")
print("Add some milk")
print("Heat it for a few mins")
```

```
print("Heat some milk")
print("Put coffee & sugar in the cup")
print("Pour hot milk into the cup")
```

---

tea()
tea()

coffee()

tea()
coffee()

```
print("Boil some water")
print("Add sugar & tea leaves")
print("Add some milk")
print("Heat it for a few mins")
```

tea()

```
print("Heat some milk")
print("Put coffee & sugar in the cup")
print("Pour hot milk into the cup")
```

coffee()

File Edit View Insert Cell Kernel Help

Trusted | Python 3 (ipykernel)


```
In [10]: def sheldon_knock(person):
             print("Knock knock knock", person)

In [11]: sheldon_knock("Penny")

         Knock knock knock Penny

In [12]: sheldon_knock("Leonard")

         Knock knock knock Leonard

In [13]: sheldon_knock("Amy")

         Knock knock knock Amy

In [ ]:

In [ ]:
```

internally

person = "Penny"

person = "Leonard"

person = "Amy"

Quiz!

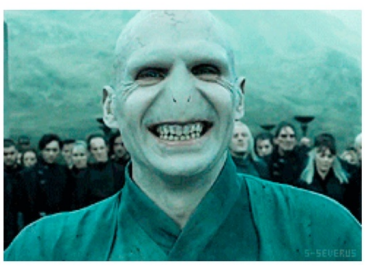
File Edit View Insert Cell Kernel Help Trusted Python 3 (ipykernel)

Quiz 1

```
def voldy(horcrux1, horcrux2, horcrux3, horcrux4):
    print(horcrux3)
    print(horcrux1)
    print(horcrux4)
    print(horcrux2)

voldy("Hufflepuff's Cup", "Harry Potter", "Tom Riddle's Diary", "Ravenclaw's Diadem")
```

Tom
Huff
Raven
Harry



Break till 10:05 PM

```
def multiply(a, b):
    return a * b
```

15

Return 15 back to where the function was called

```
ans = multiply(3, 5)
print(ans)
```

ans = 15

15

y = multiply(2, 10)

↑

internally

y = 20

print(y) → 20

Output ?

Quiz 2

x=3 ↙ x=4

```
def square(x):
    return x * x

def pythagoras(x, y):
    return square(x) + square(y)

print(pythagoras(3, 4))
```

x=3
y=4

↓

print (25)

9 16

return square(3) + square(4)

return 9 + 16

↓

25

Quiz 4

```
def foo_bar():
    print('Foo')
    return 1
    print('Bar')

res = foo_bar()
print(res)
```

Redundant / Unreachable

1

→ res = 1

```
Foo
1
```

return is the last statement to get executed.

Anything after return is not executed

Doubts

Thank You

```
def square(x):
    print(x * x)

def pythagoras(x, y):
    print(square(x) + square(y))
                  None      None

ans = pythagoras(1, 1)
print(ans)
```

```
def square(x=1):
    print(1*1)
```

what does above call return? → None

Output:

1

1

None + None

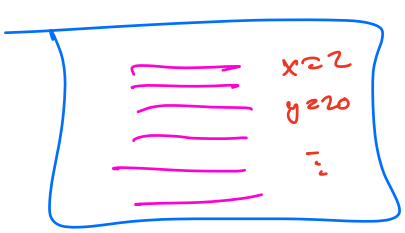
↓

Error

```
def square():
    x = 2
    y = 20
    z = "hello"
    a = 9.2
    return "hi"
```

square

↓




Good
Night


Thank
You


Wednesday