

Python Programming

Recursive Functions

Practice 2

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Teaching, Training and Coaching since more than a decade!

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Print a Triangle (v2)

```
3 def print_triangle(levels):
4     if levels == 0:
5         return
6
7     print_triangle(levels - 1)
8
9     for i in range(0, levels):
10        print("*", end='')
11    print("")
12
13
14 print_triangle(5)
```

```
*
**
***
****
*****
|
```

Let's trace it

```
print_triangle(5)  
    print_triangle(4)
```

Let's trace it

```
print_triangle(4)  
    print_triangle(3)
```

```
print_triangle(5)  
    print_triangle(4)
```

Let's trace it

```
print_triangle(3)  
    print_triangle(2)
```

```
print_triangle(4)  
    print_triangle(3)
```

```
print_triangle(5)  
    print_triangle(4)
```

Let's trace it

```
print_triangle(2)  
    print_triangle(1)
```

```
print_triangle(3)  
    print_triangle(2)
```

```
print_triangle(4)  
    print_triangle(3)
```

```
print_triangle(5)  
    print_triangle(4)
```

Let's trace it

```
print_triangle(2)  
    print_triangle(1)
```

```
print_triangle(3)  
    print_triangle(2)
```

```
print_triangle(4)  
    print_triangle(3)
```

```
print_triangle(5)  
    print_triangle(4)
```

```
print_triangle(1)  
    print_triangle(0)
```

Let's trace it

```
print_triangle(2)  
  print_triangle(1)
```

```
print_triangle(3)  
  print_triangle(2)
```

```
print_triangle(4)  
  print_triangle(3)
```

```
print_triangle(5)  
  print_triangle(4)
```

```
print_triangle(0)  
  Return
```

```
print_triangle(1)  
  print_triangle(0)
```


Let's trace it

```
print_triangle(2)  
  print_triangle(1)
```

```
print_triangle(3)  
  print_triangle(2)
```

```
print_triangle(4)  
  print_triangle(3)
```

```
print_triangle(5)  
  print_triangle(4)
```

*

```
print_triangle(1)  
  print_triangle(0)  
    print 1 star
```

Let's trace it

```
print_triangle(2)
  print_triangle(1)
    print 2 stars
```

```
print_triangle(3)
  print_triangle(2)
```

```
print_triangle(4)
  print_triangle(3)
```

```
print_triangle(5)
  print_triangle(4)
```

```
*
**
```

Let's trace it

```
*  
**  
***
```

```
print_triangle(3)  
    print_triangle(2)  
        print 3 stars
```

```
print_triangle(4)  
    print_triangle(3)
```

```
print_triangle(5)  
    print_triangle(4)
```

Let's trace it

```
*  
**  
***  
****
```

```
print_triangle(4)  
    print_triangle(3)  
        print 4 stars
```

```
print_triangle(5)  
    print_triangle(4)
```

Let's trace it

```
*  
**  
***  
****  
*****
```

```
print_triangle(5)  
    print_triangle(4)  
        print 5 stars
```

“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”