

\* Recursion :- Recursion is a function that call itself and we need to write a base case.

```
def recursion():  
    print("Hello World")  
    recursion()
```

\* Base case is the final stop point where loop need to stop calling itself. It help us to stop our infinite loop.

function calling  
it self.

```
def run(n):  
    if n == 0:  
        return,
```

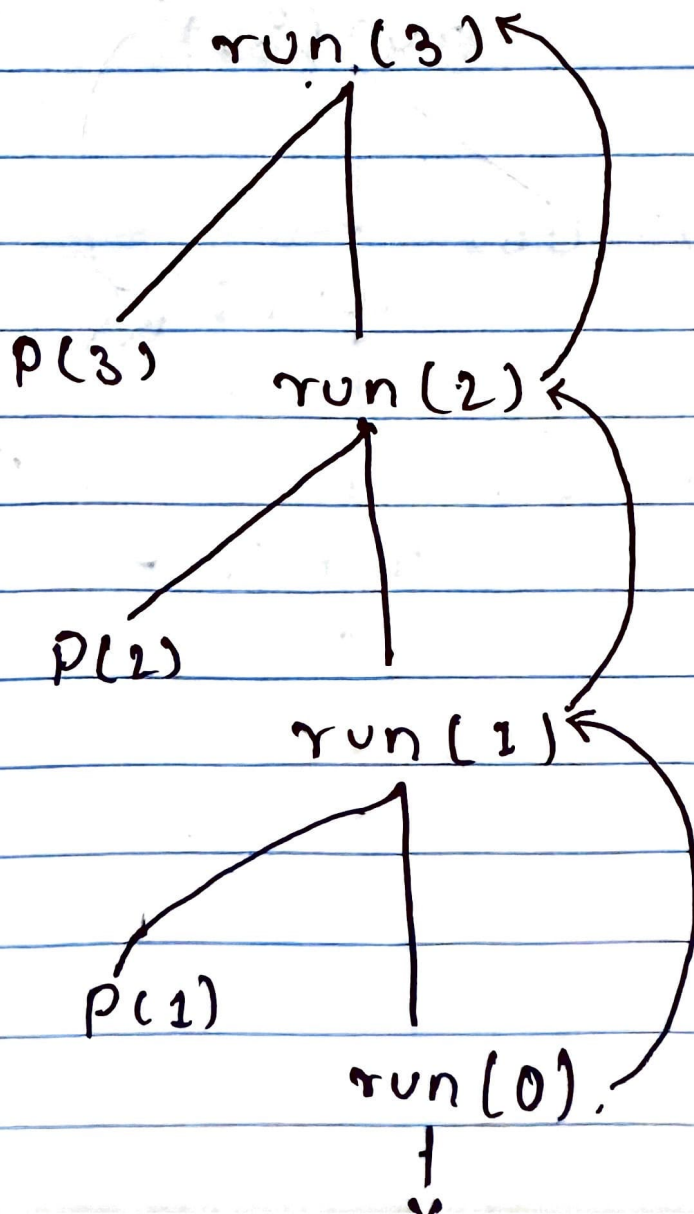
} This is a  
base case.

```
    print(n)  
    run(n-1).
```

} Updating the  
value of parameter

$n = 3$

run(n).



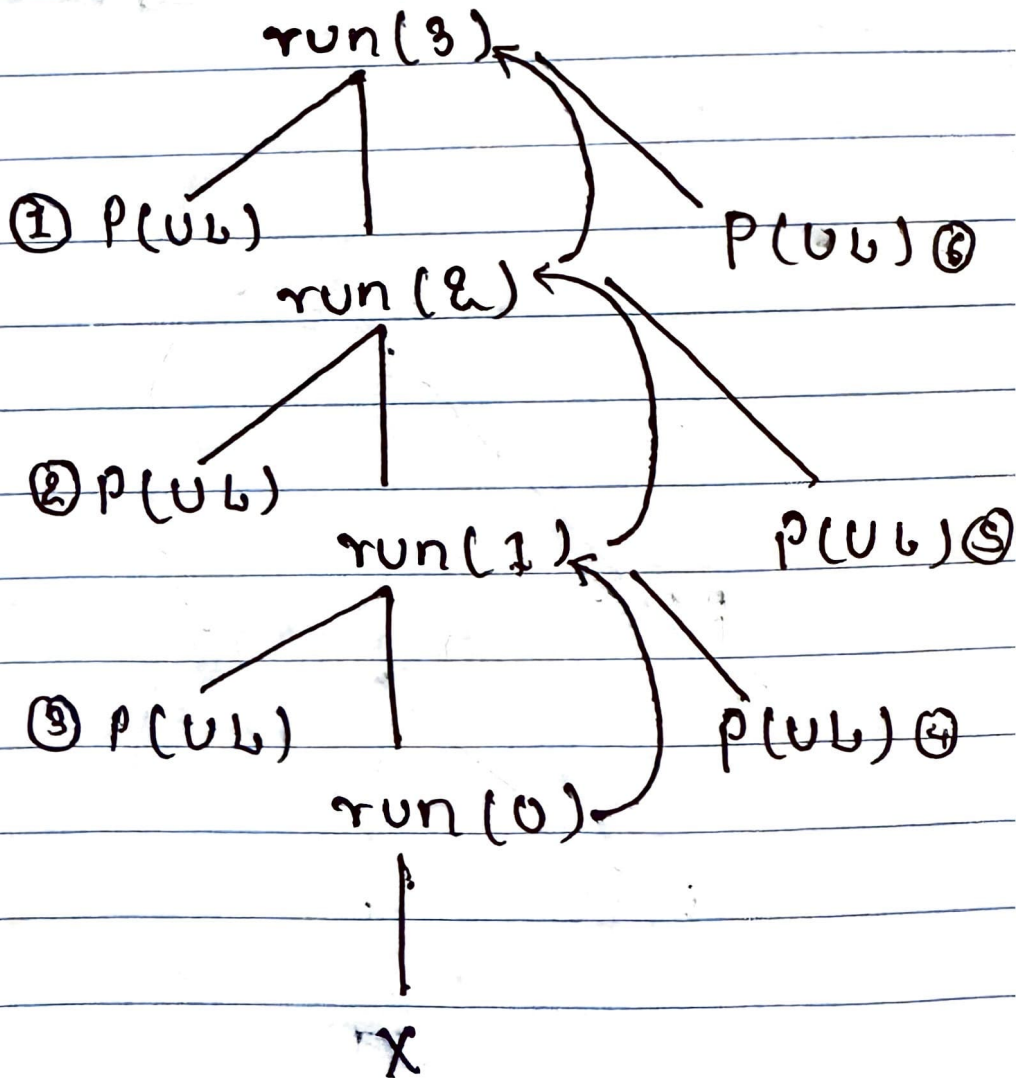
```

def run(n):
    if n == 0:
        return
    print("UL")
    run(n-1)
    print("UL").

```

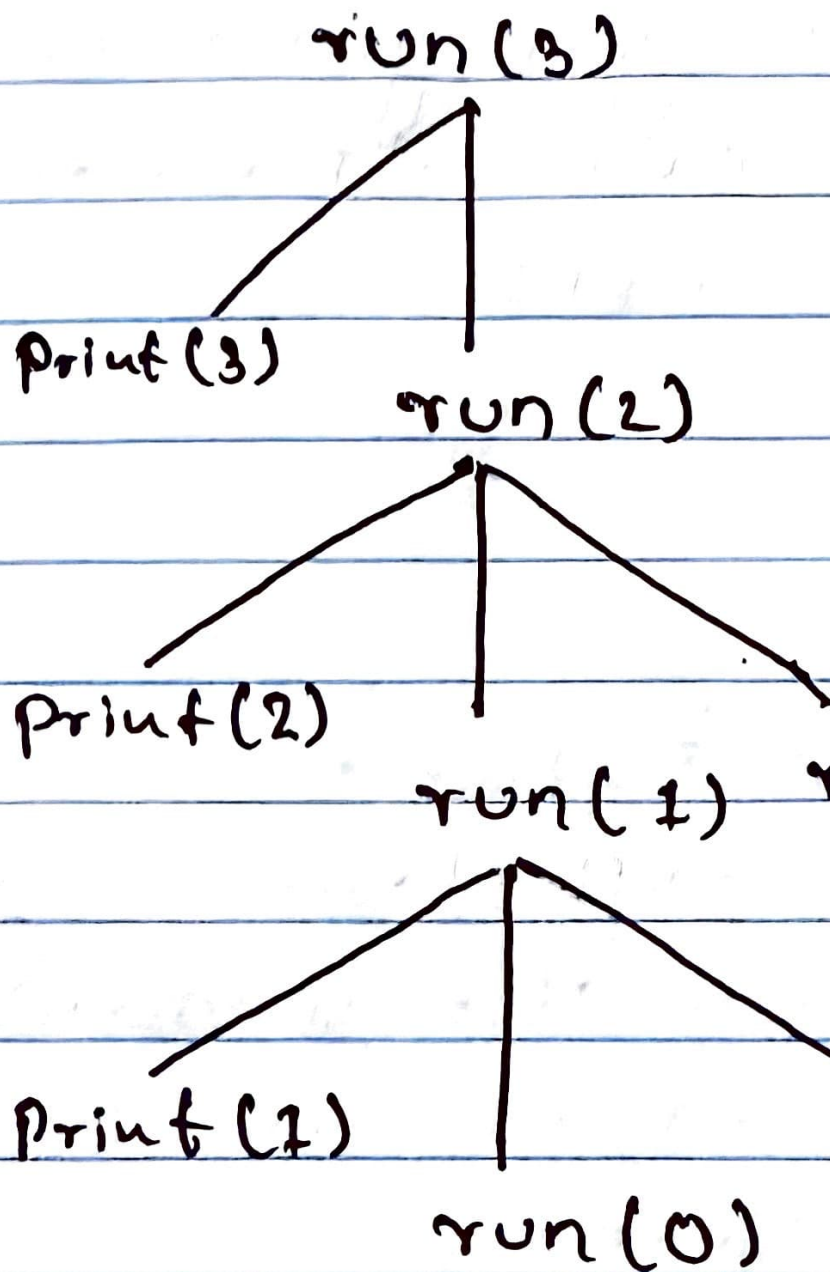
Let's call

$n = 3$   
 $\text{run}(n)$



output: UL  
 UL  
 UL  
 UL  
 UL  
 UL.





```

def run(n):
    if n == 0:
        return

```

```

    Print(n)
    run(n-1)
    run(n-1)

```

run(1) output : 3  
2  
1  
1  
0 2