

# Factorial of a number

I/p: n = 4

O/p: 24

I/p: n = 6

O/p: 720

I/p: n = 0

O/p: 1

$x \geq 0$

## Iterative Implementation

```
def fact(n):
```

```
    res = 1
```

```
    for i in range(2, n + 1):
```

```
        res = res * i
```

```
    return res
```

```
number = 5
```

```
print(fact(number))
```

## Recursive Implementation

```
def fact(n):
```

```
    if n == 0:
```

```
        return 1
```

```
    return n * fact(n - 1)
```

```
number = 5
```

```
print(fact(number))
```