

# Python Functions - Examples

## 1. Simple Function

```
def greet():  
    print("Hello, World!")  
greet()
```

## 2. Function with Parameters

```
def add(a, b):  
    return a + b  
print(add(5, 3))
```

## 3. Function with Default Parameter

```
def greet(name="User"):  
    print("Hello,", name)  
greet()  
greet("Alice")
```

## 4. Function with Return Value

```
def square(x):  
    return x * x  
print(square(4))
```

## 5. Function with Variable Arguments

```
def sum_all(*numbers):  
    return sum(numbers)  
print(sum_all(1, 2, 3, 4, 5))
```

## 6. Recursive Function

```
def factorial(n):  
    if n == 0:  
        return 1  
    else:  
        return n * factorial(n-1)  
print(factorial(5))
```