In [1]:
```
#Functions with Different Numbers of Parameters and Return Types:

name = "Siddhant"
print("Hello, " + name)
```

```
Hello, Siddhant
```

In [2]:
```
num1 = 3
num2 = 4
result = num1 + num2
print(result)
```

```
7
```

In [3]:
```
length = 5
width = 10
area = length * width
print(area)
```

```
50
```

In [4]:
```
#Function Scope and Variable Accessibility:

x = 10
y = 20
print("Inside the function:", x, y)
```

```
Inside the function: 10 20
```

In [5]:
```
print("Outside the function:", x)
```

```
Outside the function: 10
```

In [6]:
```
#Functions with Default Argument Values:

name1 = "Siddhant"
greeting1 = "Hello"
print(greeting1 + ", " + name1 + "!")
```

```
Hello, Siddhant!
```

In [7]:
```
name2 = "Sid"
greeting2 = "Hi"
print(greeting2 + ", " + name2 + "!")
```

```
Hi, Sid!
```

In [8]:
```
# Recursive Functions:

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

result = factorial(5)
```

```
print(result)
```

```
120
```

In [9]:
```
# Docstrings:
def add_numbers(num1, num2):

    return num1 + num2

result = add_numbers(3, 4)
print(result)
```

```
7
```

In [ ]:
```

```