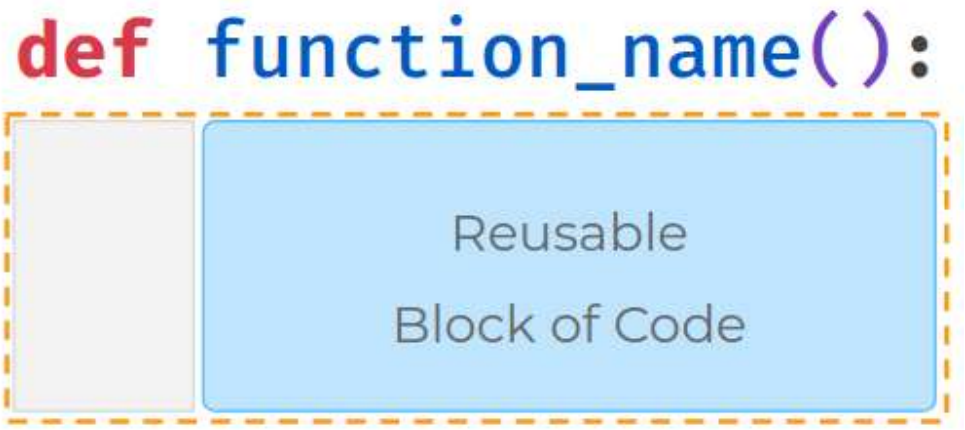
Cheat Sheet

Functions

Block of reusable code to perform a specific action.

Reusing Code

Using an existing code without writing it every time we need.



Code

PYTHON

```
def greet():
    print("Hello")

name = input()
print(name)
```

Input

```
Teja
```

Output

```
Teja
```

Defining a Function

Function is uniquely identified by the

function_name

Code

PYTHON

```python
def greet():
    print("Hello")

name = input()
print(name)
```

Input

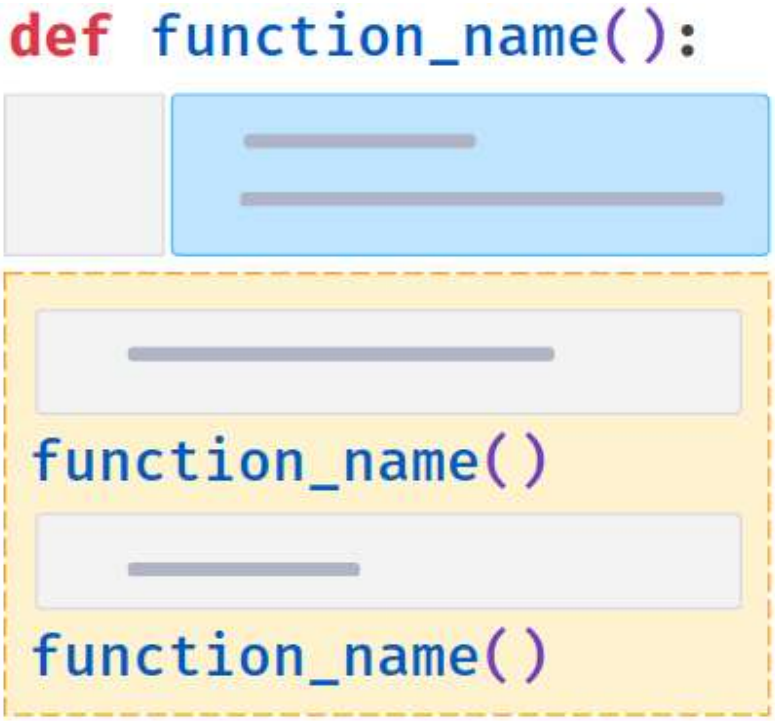
```
Teja
```

Output

```
Teja
```

Calling a Function

The functional block of code is executed only when the function is called.



Code

PYTHON

```python
def greet():
    print("Hello")

name = input()
greet()
print(name)
```

Input

```
Teja
```

Output

```
Hello
Teja
```

Defining & Calling a Function

A function should be defined before it is called.

Code

PYTHON

```python
name = input()
greet()
print(name)

def greet():
    print("Hello")
```

Input

```
Teja
```

Output

```
NameError: name 'greet' is not defined
```

Printing a Message

Consider the following scenario, we want to create a function, that prints a custom message, based on some variable that is defined outside the function. In the below code snippet, we want to access the value in the variable

`name` at line 2 in place of the `?` .

Code

PYTHON

```
def greet():
    msg = "Hello " + ?
    print(msg)

name = input()
greet()
```

Input

```
Teja
```

Desired Output

```
Hello Teja
```

We use the concept of Function Arguments for these types of scenarios.

Function With Arguments

We can pass values to a function using an Argument.

Code

PYTHON

```
def greet(word):
    msg = "Hello " + word
    print(msg)
```

```
4
5  name = input()
6  greet(word=name)
```

Input

```
Teja
```

Output

```
Hello Teja
```

Variables Inside a Function

A variable created inside a function can only be used in it.

Code

PYTHON

```
1  def greet(word):
2      msg = "Hello " + word
3
4  name = input()
5  greet(word=name)
6  print(msg)
```

Input

```
Teja
```

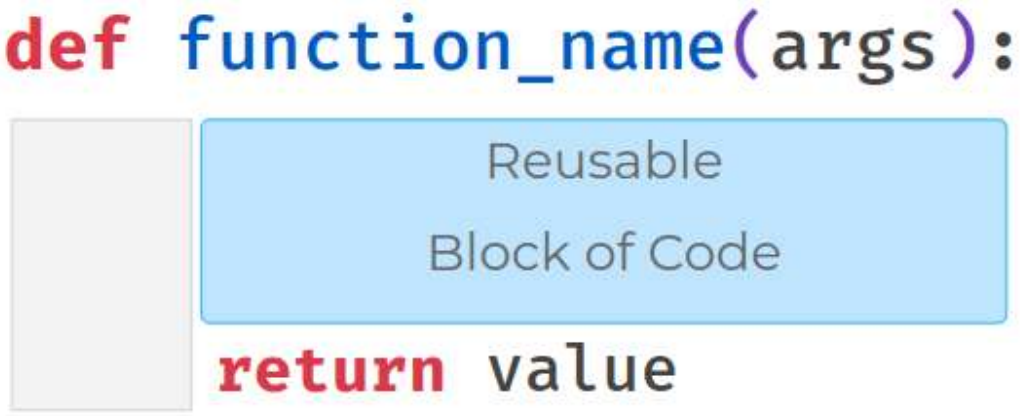
Output

```
NameError: name 'msg' is not defined
```

Returning a Value

To return a value from the function use

`return` keyword.



Exits from the function when return statement is executed.

Code

PYTHON

```python
def greet(word):
    msg = "Hello " + word
    return msg

name = input()
greeting = greet(word=name)
print(greeting)
```

Input

```
Teja
```

Output

```
Hello Teja
```

Code written after

`return` statement will not be executed.

Code

PYTHON

```python
def greet(word):
    msg = "Hello "+word
    return msg
    print(msg)

name = input()
greeting = greet(word=name)
print(greeting)
```

Input

```
Teja
```

Output

```
Hello Teja
```

Built-in Functions

We are already using functions which are pre-defined in Python.
Built-in functions are readily available for reuse

- print()
- int()

- str()
- len()

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