Exercise 47:

### 1. ****Function Docstring:****

def add(a, b):

"""

This function takes two numbers as input and returns their sum.

Parameters:

a (int or float): First number

b (int or float): Second number

Returns:

int or float: The sum of the two numbers

"""

return a + b

# Accessing the docstring using help()

help(add)

# Accessing the docstring using the \_\_doc\_\_ attribute

print(add.\_\_doc\_\_)

**Output:**

Help on function add in module \_\_main\_\_:

add(a, b)

This function takes two numbers as input and returns their sum.

Parameters:

a (int or float): First number

b (int or float): Second number

Returns:

int or float: The sum of the two numbers

### 2. ****Class Docstring:****

class Calculator:

"""

A simple calculator class to perform basic arithmetic operations.

Methods:

add(a, b): Returns the sum of two numbers.

subtract(a, b): Returns the difference of two numbers.

"""

def add(self, a, b):

"""Returns the sum of two numbers."""

return a + b

def subtract(self, a, b):

"""Returns the difference between two numbers."""

return a - b

# Accessing the class docstring

help(Calculator)

# Accessing method docstrings

help(Calculator.add)

help(Calculator.subtract)

**Output:**

Help on class Calculator in module \_\_main\_\_:

class Calculator(builtins.object)

| A simple calculator class to perform basic arithmetic operations.

|

| Methods defined here:

|

| add(self, a, b)

| Returns the sum of two numbers.

|

| subtract(self, a, b)

| Returns the difference between two numbers.

### 3. ****Module-Level Docstring:****

You can also provide a docstring at the top of a Python module to describe what the entire module does. This is useful for larger codebases.

"""

This module contains utility functions for basic arithmetic operations.

Functions:

- add(a, b): Returns the sum of two numbers.

- subtract(a, b): Returns the difference of two numbers.

"""

def add(a, b):

"""Returns the sum of two numbers."""

return a + b

def subtract(a, b):

"""Returns the difference between two numbers."""

return a - b

### 4. ****Multiline Docstring:****

If the documentation is short, you can have a one-line docstring. For more detailed explanations, use multiline docstrings.

def multiply(a, b):

"""

Multiply two numbers and return the result.

This function takes two numeric inputs, multiplies them, and returns the result.

It works with both integers and floats.

Parameters:

a (int or float): First number

b (int or float): Second number

Returns:

int or float: The product of a and b

"""

return a \* b

help(multiply)