

## Day 17



### Docstrings in Python:

#### What is a Docstring?

A docstring (documentation string) is a string written inside a function, class, or module to explain what it does.

It helps:

- Other programmers
- Future you
- Tools & IDEs understand the code easily.

#### Why do we use Docstrings?

- To document code
- To explain purpose, parameters, and return value
- To make code professional & readable
- Used by help() function

#### How to Write a Docstring?

- Written using triple quotes (""" """ or ''' ''')
- Placed just below the function/class definition

Example: square of a number, without any docstring.

```
1 def square(n):
2     print(n*n)
3     square(5)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PC

```
● PS E:\Python\Day11-20\Day17> python .\main.py
25
```

Example: we had added docstring.

```
1 def square(n):
2     '''Prints the square of a number n.'''
3     print(n*n)
4     square(5)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS E:\Python\Day11-20\Day17> python .\main.py
25
```

Example: printing the content of docstring. Using “\_\_doc\_\_”.

```
1 def square(n):
2     '''Prints the square of a number n.'''
3     print(n*n)
4     square(5)
5     print(square.__doc__)
```

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```
PS E:\Python\Day11-20\Day17> python .\main.py
25
Prints the square of a number n.
```

Example: we can also use Help() to print the content of the docstring.

```
1 def square(n):
2     '''Prints the square of a number n.'''
3     print(n*n)
4     square(5)
5     print(square.__doc__)
6     help(square)
```

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```
PS E:\Python\Day11-20\Day17> python .\main.py
25
Prints the square of a number n.
Help on function square in module __main__:

square(n)
    Prints the square of a number n.
```

Example: invalid docstring, as we write the code of the function before the docstring.

```
8 def square(n):
9     print(n*n)
10     '''Prints the square of a number n.'''
11 square(5)
12 help(square)
```

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PS E:\Python\Day11-20\Day17> python .\main.py  
25  
Help on function square in module \_\_main\_\_:  
  
square(n)

### Docstring vs Comment:

Docstring	Comment
Used for documentation	Used for explanation
Written with triple quotes	Written with #
Accessible using help()	Not accessible
Stored in __doc__	Ignored at runtime

### Summary:

- Written using triple quotes
- Placed just below definition
- Accessible using \_\_doc\_\_ and help()
- Better than comments for documentation

--The End--