How to write Python docstrings

1 Placement:

Place the docstring immediately after the function or class declaration, indented at the same level.

2 Format:

Use triple double quotes """Docstring""".

For multi-line docstrings, start and end with a line containing only triple quotes.

3 Content:

Description: Start with a concise summary of the function's purpose.

Parameters: List parameter's, followed by its expected type in parentheses and a brief description.

Returns: Describe the type and purpose of the return value.

Raises: List any exceptions that can be raised.

Examples: Optionally include a simple usage example.

Style: For docstring conventions follow PEP 257: https://peps.python.org/pep-0257/

```python
# Example docstring
def calculate_area(length, width):
    """
    Calculate and return the area of a rectangle.

    Parameters:
    length (float): The length of the rectangle.
    width (float): The width of the rectangle.

    Returns:
    float: The area of the rectangle calculated
    as length multiplied by width.

    Examples:
    >>> calculate_area(10, 5)
    50

    Raises:
    ValueError: If either length or width is negative.
    """
    if length < 0 or width < 0:
        raise ValueError(
            "Length and width must be non-negative.")
    return length * width
```

"A universal convention supplies all of maintainability, clarity, consistency, and a foundation for good programming habits too. What it doesn't do is insist that you follow it against your will. That's Python!" —Tim Peters on comp.lang.python, 2001-06-16

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