



TOPSTechnologies

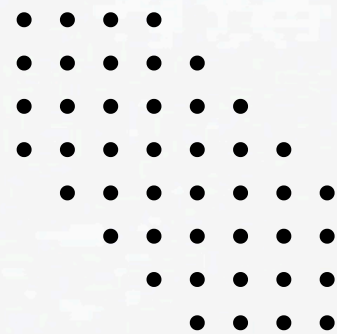
Programming Style

Presented for :

TOPs Technologies

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Basic Structure of a C++ Program

Que 1

PEP 8 is the style guide for Python code. It provides conventions for writing readable and maintainable code, covering aspects like indentation, spacing, naming conventions, and more.

1. Indentation

- *Use 4 spaces per indentation level.*
- *Continuation lines should align wrapped elements either vertically using Python's implicit line joining inside parentheses, brackets, and braces, or using a hanging indent.*

2. Line Length

- *Limit all lines to a maximum of 79 characters.*
- *For long blocks of text (docstrings or comments), limit lines to 72 characters.*

3. Blank Lines

- *Surround top-level function and class definitions with two blank lines.*
- *Method definitions inside a class are surrounded by a single blank line*

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Comments

- *Use comments to explain why a piece of code does something, not how.*
- *Block comments generally apply to some (or all) code that follows them, and are indented to the same level as that code. Each line of a block comment starts with a # and a single space.*
- *Use docstrings to describe all public modules, functions, classes, and methods.*

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Indentation

Proper indentation is crucial in Python as it defines the structure and flow of the code

Comments

Comments help explain what the code does and why it was written in a certain way.

Block Comments: Used to explain a block of code. Each line of a block comment starts with a # and a single space.

Inline Comments: Should be used sparingly and must be separated by at least two spaces from the statement.



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Naming Conventions

Consistent naming conventions improve code readability and maintenance.

Function and Variable Names: Use lowercase words separated by underscores

Class Names: Use the CapWords (CamelCase) convention.

Constants: Use all uppercase letters with underscores separating words.

Modules and Packages: Use short, all-lowercase names. Underscores can be used if it improves readability.

Instance Variables: Use lowercase words separated by underscores. This is the same as for functions and variables.

Global Variables: Follow the same convention as constants but use them sparingly and document them well.

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Writing readable and maintainable code is crucial for collaboration, debugging, and future development.

1. Follow Style Guidelines

Adhering to style guidelines like PEP 8 for Python ensures consistency across your codebase, making it easier for others (and your future self) to read and understand your code.

2. Use Meaningful Names

Choose clear, descriptive names for variables, functions, classes, and modules:

Variables: Use names that describe the data they hold.

3. Functions: Use names that describe the action or task performed

4. Classes: Use Cap Words (CamelCase) for class names

3. Write Clear and Concise Comments

Comments should explain why the code does something, not what it does:

5. Keep Functions and Classes Small

Break down large functions and classes into smaller, single-responsibility units

6. Avoid Deep Nesting

Deeply nested code is harder to read and maintain.