

## 1. structure and aggregate

- others and your future self
  - to understand the purpose and functionality
  - of different sections of the code.
- balance
  - Too many comments can make the code cluttered and harder to read,
  - Too few can leave readers confused.
- **Describe the purpose:**
  - Explain what the code is intended to do, rather than how it does it. The code itself shows the "how", so focus your comments on the "why".
- **Keep it concise:**
  - Long comments can be just as confusing as no comments at all. Try to be clear and concise in your explanations.
- **Update your comments:**
  - If you update your code, don't forget to update your comments as well. Outdated comments can be misleading.
- **Don't state the obvious:**
  - Comments should provide additional insight, not repeat what's already clear from the code.

Source(s)

1. [en.wikipedia.org](https://en.wikipedia.org)

## 2. why

- **Organization:**
  - Comments can help divide the code into logical sections,
    - making it easier to locate specific parts of the code<sup>12</sup>.
  - This is especially helpful in large codebases.
- **Context:**
  - Comments provide context about what the code is supposed to do<sup>123</sup>.
    - which can be particularly useful when the purpose of the code
    - is not immediately apparent from reading it.
- **Onboarding:**
  - For new team members or contributors, comments can serve as a guide to understanding the codebase<sup>12</sup>.
  - They can quickly grasp the purpose and functionality of different parts of the code.
- **Maintenance:**
  - When updating or debugging the code, comments can help developers understand the original intent of the code<sup>124</sup>.
  - making it easier to make changes without introducing bugs.
- **Collaboration:**
  - In a team setting, comments can facilitate better collaboration by providing a clear understanding of the code's functionality to all team members<sup>12</sup>.
- **Used judiciously:**
  - Over-commenting, or stating the obvious, can make the code more cluttered and harder to read<sup>12</sup>.
    - cluttered
    - harder to read.
  - The best comments provide insight and context that the code alone cannot<sup>12</sup>.
    - insight
    - context

Source(s)

1. [Best practices for writing code comments - Stack Overflow](#)
2. [Putting comments in code: the good, the bad, and the ugly.](#)
3. [Comments: Definition, Types, Uses, Syntax for Different Languages - Toppr](#)
4. [Programming - Commenting - University of Utah](#)