

# BEST CODING PRACTICES

A brief guide to improve your coding skills in any language

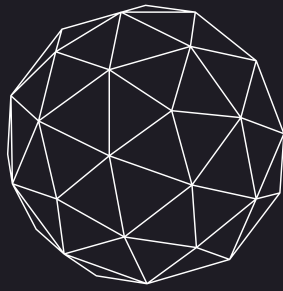
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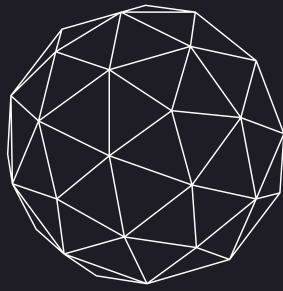
## *Using descriptive and meaningful variable names*

When you define a new variable, use a name that precisely describes its nature, it does not matter if it's too long. Using descriptive variable names will allow you to quickly remember its purpose next time you review the code. Otherwise, you might forget its purpose.

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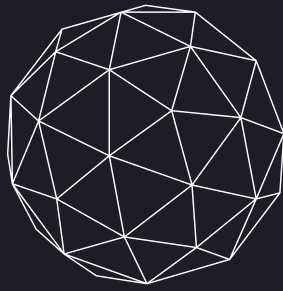
## *Writing modular code*

If your codebase gets excessively large, you could try breaking it into smaller components. It will significantly improve readability and code maintenance if you ever find an issue in the near future. It will also allow you to test it in a more efficient way.

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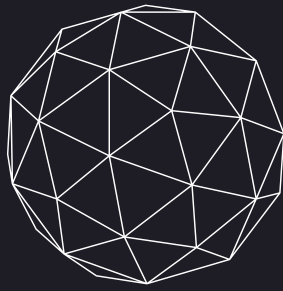
## *Writing documentation and commenting your code*

Whether you're working alone or in a group project, proper documentation will allow all parties involved to get a better understanding of how the code works. Adding comments also allows for a quick reference during code writing.

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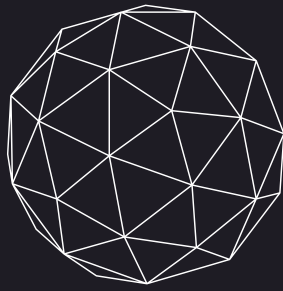
## *Using version control systems to keep track of the progress*

Sometimes you will need to revert changes to your current project. Version control systems, like git, allow for a quick roll back. Sharing code in zip files is not a good coding practice, and there are several inconveniences related to it.

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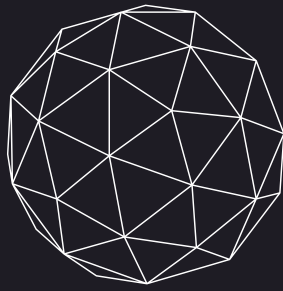
## *Writing readable code*

Use indentation, spacing and proper formatting to make your code readable and easy to understand. Check the current best coding practices for the specific language you're working with, and encourage your team to comply with them. It will pay off in the long run.

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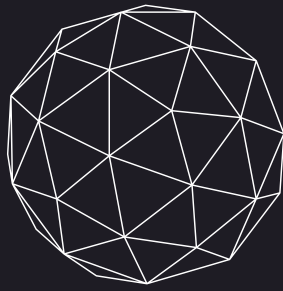
## *Writing unit test cases for your code*

Writing unit tests will help ensuring your code is working as you want it to work, and help you catch potential bugs and refactor the code. Remember that unit tests must not impact performance significately.

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## *Handling errors in an informative way*

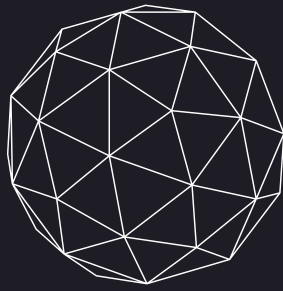
Catch exceptions in a way that lets the user (and the developer) understand what went wrong during execution. You can do this by designing informative error messages.

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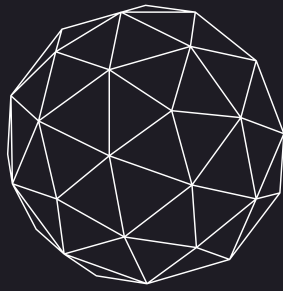
## *Use constants and variables instead of hard-coded values*

Defining a While loop as "while (1)" is a bad coding practice. Use constants and variables instead of hard-coded values in the code. It will significantly improve readability and flexibility in case you need to refactor the code in the future.

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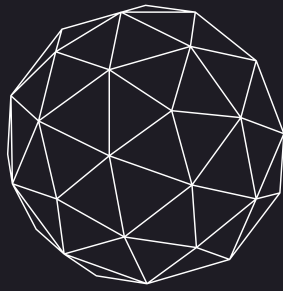
## *Following naming conventions for your specific language*

Every programming language has specific naming conventions. For instance, Python's library NumPy is imported as "np". Naming conventions will help other developers understand your code and provide useful feedback faster.

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## *Refactoring the code periodically*

Periodic code refactoring improves its quality and maintainability. You will get a better and more efficient code over time by constant refactoring.

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*Thank you for reading!*

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