# Contributing to Lisk SDK

First off, thanks for taking the time to contribute! :raised\_hands:

The following is a set of guidelines for contributing to Lisk SDK, which are hosted in the [LiskHQ Organization](https://github.com/LiskHQ) on GitHub. These are mostly guidelines, not rules. Use your best judgment, and feel free to propose changes to this document in a pull request.

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## Code of Conduct

This project and everyone participating in it is governed by the [Lisk SDK Code of Conduct](CODE\_OF\_CONDUCT.md). By participating, you are expected to uphold this code. Please report unacceptable behavior to [info@lisk.io](mailto:info@lisk.io).

## Project License

Every repository within LiskHQ comes with a LICENSE file. Please read it carefully before commiting your code to one of the repositories.

## Help! I don't want to read this whole thing, I just have a question. :mag\_right:

Lisk is an open-source decentralized project, there are many ways and platforms to get help. These are some of them:

\* [Discuss and Ask on Reddit](https://www.reddit.com/r/Lisk/)

\* [Lisk FAQ](https://docs.lisk.io/docs/faq)

If you prefer to chat with LiskHQ and other developers directly:

\* [Join the LiskHQ Discord](https://discordapp.com/invite/7EKWJ7b)

\* Even though Discord is a chat service, sometimes it takes several hours for community members to respond &mdash; please be patient!

## How Can I Contribute?

LiskHQ uses GitHub as its sole source of truth. Everything happens here. Lightcurve employees who contribute to Lisk are expected to do so in the same way as everyone else. In other words, this document applies equally to all contributors.

### `master` is unsafe for production use

We will do our best to keep `master` in good shape, with tests passing at all times. But in order to move fast, we will make API changes that your application might not be compatible with. We will do our best to communicate these changes and always version appropriately so you can lock into a specific, stable version.

### Pull Requests

Broadly speaking, we conform to the git flow branching model. For a description of this model, see [this introduction](https://datasift.github.io/gitflow/IntroducingGitFlow.html).

In case you've never submitted a pull request (PR) via GitHub before, please read [this short tutorial](https://help.github.com/articles/creating-a-pull-request). If you've submitted a PR before, there should be nothing surprising about our procedures for Lisk.

\*Before\* submitting a pull request, please make sure the following is done:

1. Fork the repo.

1. If you are creating a pull request that addresses a specific issue, take a look at the projects that issue is a part of (in the right-hand sidebar). Most issues will be a part of a project for a specific version, such as "Version 1.0.0". If this is the case, create your branch from the relevant version branch, e.g. `1.0.0`, and submit your pull request against that branch as a base. Otherwise, create your branch from master.

1. Add tests to the code you have contributed! All new code must come with complete test coverage. End all files with a newline. In general, your code should conform to the rules listed in the .editorconfig file. There are plugins for most editors/IDEs to do this for you automatically. Update the README for the changes that adhere to your new code.

1. Ensure the test and linting suite passes. Follow the JavaScript styleguide from Airbnb with the lisk extension.

1. Submit a pull request via GitHub. Include issue numbers in the PR title, at the end with: Description - Closes #IssueNumber. Also mention the #IssueNumber in the Comment, to easier browse to the issue.

1. Check that Jenkins CI tests pass (pull request turns green). First time contributors will need to wait for a trusted team member to start Jenkins CI on a Pull Request.

### Reporting Bugs

This section guides you through submitting a bug report for Lisk SDK. Following these guidelines helps maintainers and the community understand your report :pencil:, reproduce the behavior :computer: :computer:, and find related reports :mag\_right:.

Before creating bug reports, please check [this list](#before-submitting-a-bug-report) as you might find out that you don't need to create one. When you are creating a bug report, please [include as many details as possible](#how-do-i-submit-a-good-bug-report). Fill out [the required template](../.github/ISSUE\_TEMPLATE/bug-report.md), the information it asks for helps us resolve issues faster.

> \*\*Note:\*\* If you find a \*\*Closed\*\* issue that seems like it is the same thing that you're experiencing, open a new issue and include a link to the original issue in the body of your new one.

#### Before Submitting A Bug Report

\* \*\*Check the [FAQs](https://docs.lisk.io/docs/faq)\*\* for a list of common questions and problems.

\* \*\*Determine [which repository the problem should be reported in](https://github.com/LiskHQ)\*\*.

\* \*\*Perform a [cursory search](https://github.com/search?utf8=%E2%9C%93&q=+is%3Aissue+org%3ALiskHQ&type=)\*\* to see if the problem has already been reported. If it has \*\*and the issue is still open\*\*, add a comment to the existing issue instead of opening a new one.

#### How Do I Submit A (Good) Bug Report?

Bugs are tracked as [GitHub issues](https://guides.github.com/features/issues/). After you've determined [which repository](https://github.com/LiskHQ) your bug is related to, create an issue on that repository and provide the following information by filling in [the template](../.github/ISSUE\_TEMPLATE/bug-report.md).

Explain the problem and include additional details to help maintainers reproduce the problem:

\* \*\*Use a clear and descriptive title\*\* for the issue to identify the problem.

\* \*\*Describe the exact steps which reproduce the problem\*\* in as many details as possible. For example, start by explaining how you started Lisk SDK, e.g. with Node.js or in the Browser (which one? which version?), or how you started Lisk SDK otherwise. When listing steps, \*\*don't just say what you did, but explain how you did it\*\*. For example, if you have used an API model provide the configuration you have chosen and the functions you have executed. \*\*Make sure to erase sensitive information from the configuration or details you are passing - NEVER SHARE YOUR SECRET PASSPHRASES OR PRIVATE KEYS\*\*.

\* \*\*Provide specific examples to demonstrate the steps\*\*. Include links to files or GitHub projects, or copy/pasteable snippets, which you use in those examples. If you're providing snippets in the issue, use [Markdown code blocks](https://help.github.com/articles/markdown-basics/#multiple-lines).

\* \*\*Describe the behavior you observed after following the steps\*\* and point out what exactly is the problem with that behavior.

\* \*\*Explain which behavior you expected to see instead and why.\*\*

\* \*\*Include screenshots and animated GIFs\*\* which show you following the described steps and clearly demonstrate the problem. You can use [this tool](http://www.cockos.com/licecap/) to record GIFs on macOS and Windows, and [this tool](https://github.com/colinkeenan/silentcast) or [this tool](https://github.com/cgoodrich/byzanz) on Linux.

\* \*\*If the problem wasn't triggered by a specific action\*\*, describe what you were doing before the problem happened and share more information using the guidelines below.

Provide more context by answering these questions:

\* \*\*Did the problem start happening recently\*\* (e.g. after updating to a new version of Lisk SDK, Lisk or any other repository) or was this always a problem?

\* If the problem started happening recently, \*\*can you reproduce the problem in an older version of Lisk SDK?\*\* What's the most recent version in which the problem doesn't happen? You can download older versions of Lisk SDK from [the releases page](https://github.com/LiskHQ/lisk-elements/releases).

\* \*\*Can you reliably reproduce the issue?\*\* If not, provide details about how often the problem happens and under which conditions it normally happens.

### Suggesting Enhancements

This section guides you through submitting an enhancement suggestion for Lisk SDK, including completely new features and minor improvements to existing functionality. Following these guidelines helps maintainers and the community understand your suggestion :pencil: and find related suggestions :mag\_right:.

When you are creating an enhancement suggestion, please include as many details as possible. Fill in [the template](../.github/ISSUE\_TEMPLATE/feature-request.md), including the steps that you imagine you would take if the feature you're requesting existed.

#### How Do I Submit A (Good) Enhancement Suggestion?

Enhancement suggestions are tracked as [GitHub issues](https://guides.github.com/features/issues/). After you've determined [which repository](https://github.com/LiskHQ) your enhancement suggestion is related to, create an issue on that repository and provide the following information:

\* \*\*Use a clear and descriptive title\*\* for the issue to identify the suggestion.

\* \*\*Provide a step-by-step description of the suggested enhancement\*\* in as many details as possible.

\* \*\*Provide specific examples to demonstrate the steps\*\*. Include copy/pasteable snippets which you use in those examples, as [Markdown code blocks](https://help.github.com/articles/markdown-basics/#multiple-lines).

\* \*\*Describe the current behavior\*\* and \*\*explain which behavior you expected to see instead\*\* and why.

\* \*\*Include screenshots and animated GIFs\*\* which help you demonstrate the steps or point out the part of Lisk SDK which the suggestion is related to. You can use [this tool](http://www.cockos.com/licecap/) to record GIFs on macOS and Windows, and [this tool](https://github.com/colinkeenan/silentcast) or [this tool](https://github.com/cgoodrich/byzanz) on Linux.

\* \*\*Explain why this enhancement would be useful\*\* to most Lisk and Lisk SDK users.

\* \*\*Specify which version of Lisk and Lisk SDK you're using.\*\*

\* \*\*Specify the name and version of the OS you're using.\*\*

## Styleguides

### Git Commit Messages

\* Use the present tense ("Add feature" not "Added feature")

\* Use the imperative mood ("Move cursor to..." not "Moves cursor to...")

\* Limit the first line to 72 characters or less

\* Reference issues and pull requests liberally after the first line

\* Consider starting the commit message with an applicable emoji:

\* :seedling: `:seedling:` when adding a new feature

\* :bug: `:bug:` when fixing a bug

\* :books: `:books:` when adding or updating documentation

\* :nail\_care: `:nail\_care:` when making changes to code style (e.g. lint settings)

\* :recycle: `:recycle:` when refactoring code

\* :fire: `:fire:` when removing code or files (including dependencies)

\* :racehorse: `:racehorse:` when improving performance

\* :white\_check\_mark: `:white\_check\_mark:` when adding or updating tests

\* :construction\_worker: `:construction\_worker:` when updating the build process

\* :bowtie: `:bowtie:` when updating CI

\* :house: `:house:` when performing chores

\* :new: `:new:` when adding a new dependency

\* :arrow\_up: `:arrow\_up:` when upgrading a dependency

\* :arrow\_down: `:arrow\_down:` when downgrading a dependency

\* :back: `:back:` when reverting changes

### JavaScript Styleguide

On Lisk SDK we are using [ESLint](https://eslint.org/).

Our JavaScript style expands [Airbnb's](https://github.com/airbnb/javascript) style. You can get more details here: https://github.com/LiskHQ/eslint-config-lisk-base

These contribution guidelines were inspired by and are based on Atom's contribution guidelines. They were modified for the purposes of this repository. https://github.com/atom/atom/blob/master/CONTRIBUTING.md - Copyright (c) 2011-2017 GitHub Inc. (MIT)