## Contributing Issues

#### Bug Reports

Please provide a (\*\*simple\*\*) way to reproduce the problem.

A bug that can not be reproduced is less likely to be solved.

#### Feature Requests

Please also include the reasoning for the desired feature and not just its description.

Sometimes it is obvious, but other times a few sample use cases or an explanation

can come in handy.

## Contributing Code

There are two types of code contributions.

#### Contributing Sample Grammars and Examples

This is probably the \*\*easiest\*\* way to contribute as it does not require any knowledge of chevrotain's internals.

And each contribution is self contained and limited in scope.

[Sample Grammars][sample\_grammars] contributions are particularly encouraged.

See some [existing examples][examples] to get started.

Details:

- An Example \*\*must\*\* include some tests with a \*\*\\_spec.js\*\* suffix.

#### Contributing To Chevrotain's Runtime Source code.

This can be more complex as more in-depth knowledge of chevrotain internals may be needed.

Details:

- ~100% test coverage is \*\*required\*\*.

- It is possible to disable coverage for specific code, but there must be a very good reason to do so.

## Development Environment

Chevrotain is developed as a mono-repo with a single (temporary state) productive package

and multiple example packages.

Chevrotain uses \*\*yarn\*\* tasks for the development flows.

Examine the interal [packages/chevrotain/package.json][package] scripts for all the available tasks.

#### Initial Setup

In the root of this Repo:

- `yarn`

- `yarn build`

#### Some basic dev flows to get started

Chevrotain is written using Typescript, so compilation to JavaScript is needed.

- `cd packages/chevrotain`

- `yarn compile`

Alternatively during development one would want to recompile on file changes.

- `cd packages/chevrotain`

- `yarn compile:watch`

The compilation result will appear in the \*\*lib\*\* folder.

#### Code Formatting

Chevrotain uses \*\*prettier\*\* to avoid caring about code formatting...

To format your new code use:

`yarn format:fix`

#### Testing

Chevrotain uses several different types of tests to promote high quality.

The most basic ones are the \*\*mocha unit tests\*\*, which are also often the most relevant ones.

- `cd packages/chevrotain`

- `yarn coverage`

You can run the whole test suite by running:

- `cd packages/chevrotain`

- `yarn test`

Additionally \*\*integration tests\*\* are used to test Chevrotain as an end user via the examples packages

tests.

- In this repo's root

- `yarn test`

#### Running the central CI flow locally.

This is just another yarn task which performs the whole flow

including linting / doc generation / d.ts API creation / ...

- `yarn run ci\_full\_build`

- Node > 4 is required to pass the coverage checks.

#### Committing Changes

This project enforces consistent commit message format same as in the [Angular project](https://github.com/angular/angular/blob/master/CONTRIBUTING.md#type).

it is recommended to use `git cz` CLI tool to create these conventional commit messages.

- requires [commitizen](https://github.com/commitizen/cz-cli#installing-the-command-line-tool) to be installed.

#### Release Process

The release process \*\*requires push permissions to master\*\*.

- Update the [CHANGELOG](./packages/chevrotain/docs/changes/CHANGELOG.md).

- The header must be `## X.Y.Z (INSERT\_DATE\_HERE)` (\*\*literally\*\*).

- Update the [BREAKING\_CHANGES.md](./packages/chevrotain/docs/changes/BREAKING\_CHANGES.md).

- Only for major versions...

- Push the changes related updates to master.

- execute `yarn run lerna:version` and follow the instructions.

- This will update version related files and push a new version \*\*tag\*\* to github.

- Circle-CI will execute a deployment to npmjs.com due to this new tag.

- Additionally new website contents will be pushed to the gh-pages branch.

- Check that the release was successful.

- On [circle-ci](https://circleci.com/gh/SAP/chevrotain)

- On [npmjs.com](https://www.npmjs.com/package/chevrotain)

- On [The website](https://sap.github.io/chevrotain/docs/changes/CHANGELOG.html)

- On [The APIs webpage](https://sap.github.io/chevrotain/documentation/)

- The URL being redirected to should include the latest version number.

#### Legal

All Contributors must sign the [CLA][cla].

The process is completely automated using https://cla-assistant.io/

simply follow the instructions in the pull request.

[examples]: https://github.com/SAP/chevrotain/tree/master/examples

[sample\_grammars]: https://github.com/SAP/chevrotain/tree/master/examples/grammars

[cla]: https://cla-assistant.io/SAP/chevrotain

[package]: https://github.com/SAP/chevrotain/blob/master/packages/chevrotain/package.json