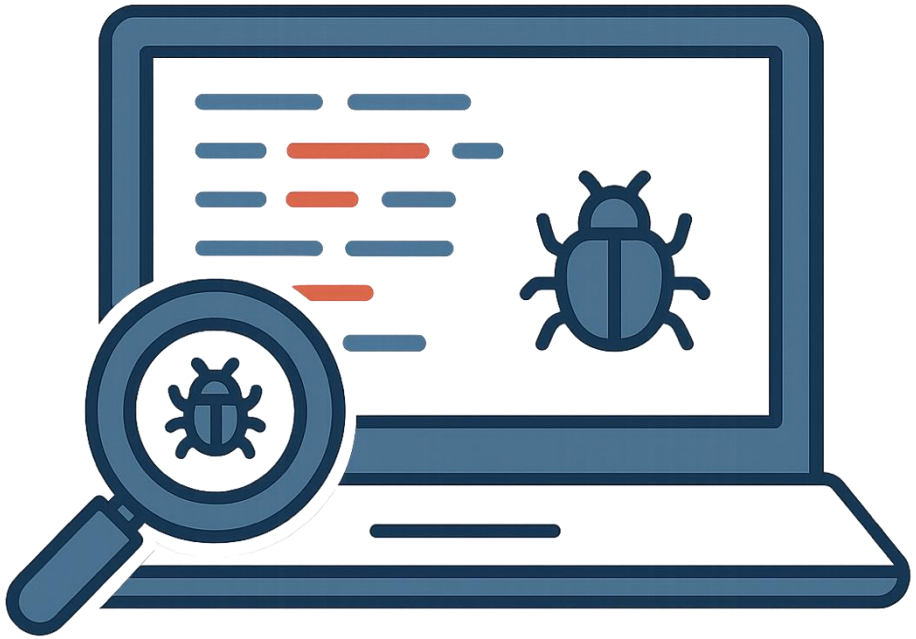
Web Advanced

Linting

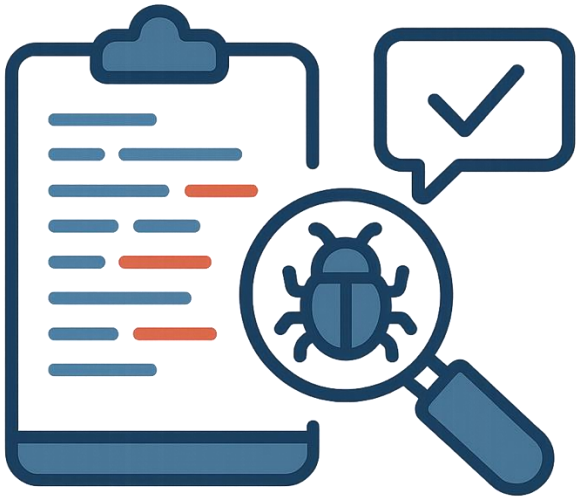
SAXION
UNIVERSITY OF
APPLIED SCIENCES

What is a Linter

- A linter is a static code analysis tool.
- It can automatically scan your code.
- The purpose is to find:
  - Errors
  - Potential bugs
  - Inconsistencies in code styles
  - Violations of best practices



Importance of Linting



- Linting can be done often and is (generally speaking) fast.
- You can detect and fix errors early. The sooner you find an error the easier it is to fix it!
- Encouraging best practices prevents the use of unsafe or outdated code patterns.
- The code style consistency makes code easier to read across teams with multiple developers.
- This in turn also helps reduce merge conflicts.

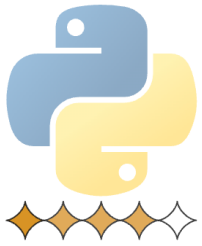
We will be using

checkstyle

Java

ESLint

Javascript

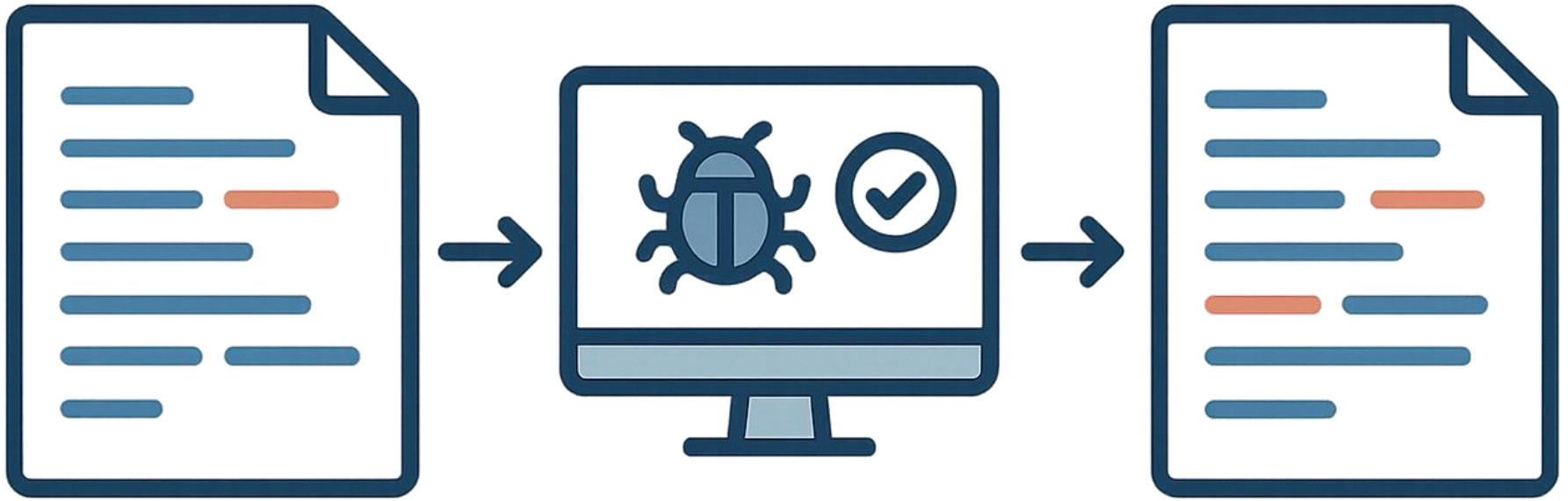


Pylint

Star your Python code!

Python

HOW LINTING WORKS

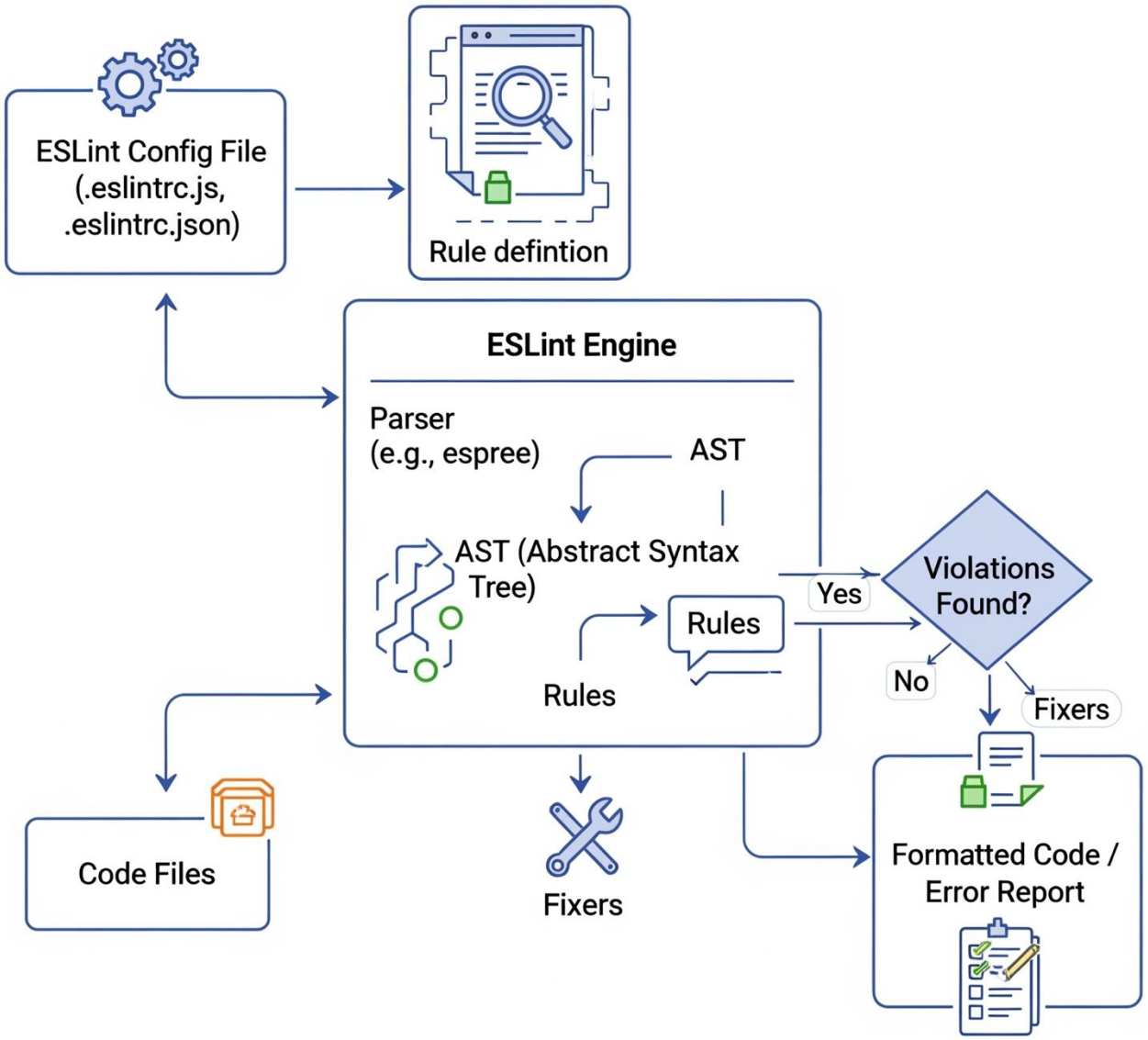


Source code

Linting tool

Linted code

How it works


ESLint Config File
(.eslintrc.js,
.eslintrc.json)
Rule defintion
ESLint Engine
Parser
(e.g., espree)
AST
AST (Abstract Syntax
Tree)
Rules
Rules
Yes
Violations
Found?
No
Fixers
Code Files
Fixers
Formatted Code /
Error Report

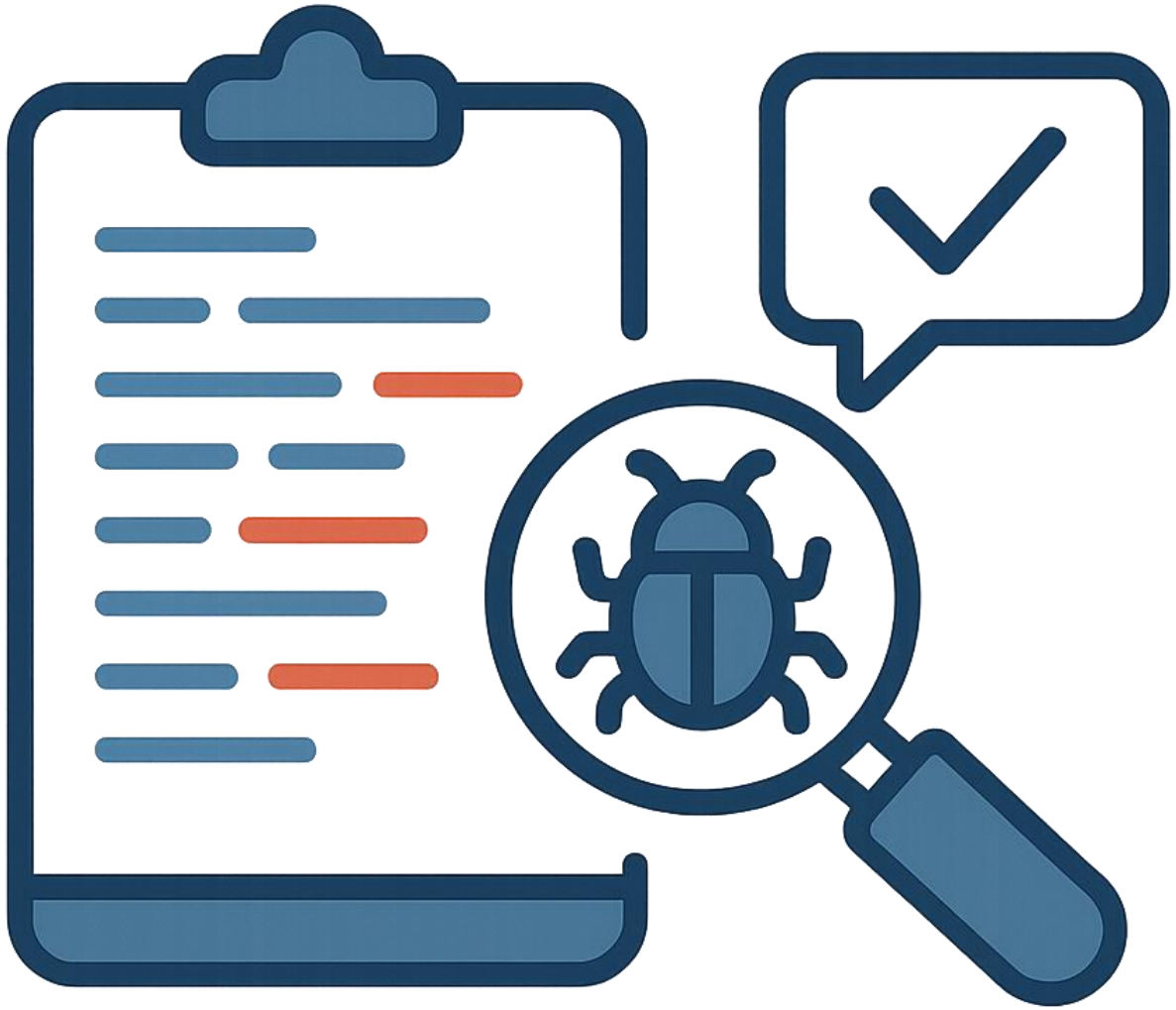
Configuration

- The linting tool can check for various things.
- Not everyone wants the same things.
- So you need to create a config.
- The config determines what is checked

```
1   import { defineConfig } from "eslint/config";
2   import js from "@eslint/js";
3
4   export default defineConfig([
5       { files: ["**/*.js"], plugins: { js }, extends: ["js/recommended"] },
6
7       {
8           rules: {
9               "no-unused-vars": "warn",
10              "no-undef": "warn",
11          },
12      },
13  ]);
```

Configuration

- ES Lint comes with a large number of built in rules.
- You can enable or disable any of them
- Using plugins you can even create custom rules to validate



Running ES Lint

- Your template already has ES Lint installed.
- Both client and server `package.json` files have lint scripts

- You can run them by executing these scripts
- `npm run lint`

Documentation

- ES Lint is still in active development
- As such, features are added and changed
- This is also true for configuration options
- Information about features and configuration options can be found in the documentation
- See `https://eslint.org/docs/latest/`, for all current information

Questions?