Contents

1 Introduction

Rust is a programming language that focusses on performance, security an reliability. The first stable version Rust 1.0 was announced in in May 2015 (The Rust Core Team 2015). The project has since continued on a 6-week release cycle. Latest stable compiler version 1.51.0 being released on 25 of March 2021 (The Rust Core Team 2021).

The Rust project develops several tools besides the compiler itself. These tools are seen as a vital part in automating parts of the development process and collaboration among teams. *Clippy* the official linter of the Rust project is being developed in the *rust-clippy* repository. The linter contains over 450 lints which span from complexity and style lints over to restriction lints which might be required by certificates (The Rust Clippy Developers 2021).

The *rust-clippy* sub project, referred to as *Clippy* by the community, is the official Rust linter. Since 2018 Clippy is distributed as a component with the compiler itself (Lusby 2018).

- Developed by mozilla
- Rust foundation
- Opensource
- MIT licence
- Clippy official linter
- Lint description splitup
- Clippy is released as part of Rust
- No new lints policy https://rust-lang.github.io/rfcs/2476-clippy-uno.html?highlight=Clippy

Some text

- What is rust
  - Language
  - Rust foundation
- What is clippy (Well rust-clippy until defined that it will be called Clippy)
  - Background
  - Clippy's lint lint (Only what it does)
- Problems / Motivation behind this work
  - Long initial loading time
  - Mozilla Observatory low score
- Main question: *How can the internet presentation of the lint list for the rust-clippy project be improved?*
- How will this paper try to solve the main question
  - Define specifications
  - Look at current fulfillment
  - Explain the technical background
  - Try to find a solution (Or contact GH support)

Some text

2 Specification

2.1 Website specifications

2.1.1 Formal specifications

- Technical security measured by Mozilla Observatory

2.1.2 Informal specifications

* We need SPEED

3 Measuring the specifications

3.1 Running benchmarks

1. Simple *Mozilla Observatory*
2. Load times -> difficult
    - Comparing only on one device as this load time is significant and we want significant improvements
    - rustfmt's website shows that fast loading times are possible

3.2 Summary of benchmarks

Hello expedia

4 Analysis of benchmark results

4.1 Technical problems

- Explaining the grade C from *Mozilla Observatory*
- This should definitely include scientific sources to make this a valid paper
    - The examiner noted that the paper outline seems interesting but that I need to take care to include scientific sources
- Explanation why the listed security risks are security risks

4.2 Slow loading times (Browser debug tools)

Hello

5 Solutions for unfulfilled specifications

- Reading GH page documentation
- Maybe contacting support

Hello

6 Conclusion

Hello

References

Lusby, Jane (July 2018). *Add clippy to the tools list #1461*. URL: https://github.com/rust-lang/rustup/pull/1461 (visited on 04/17/2021).

The Rust Clippy Developers (Mar. 2021). *Clippy*. URL: https://github.com/rust-lang/rust-clippy/blob/7fcd1/README.md (visited on 04/17/2021).

The Rust Core Team (May 2015). *Announcing Rust 1.0*. URL: https://blog.rust-lang.org/2015/05/15/Rust-1.0.html (visited on 04/17/2021).

– (Mar. 2021). *Announcing Rust 1.51.0*. URL: https://blog.rust-lang.org/2021/03/25/Rust-1.51.0.html (visited on 04/17/2021).

7 Attachments