State of developer experience tools and LSPs in Ruby

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Summary

- Intro
- Static vs dynamic code analysis
- LSPs
- Rubymine
- Ruby LSPs
- ruby-lsp
- Solargraph
- Future of ruby development experience(summary)

Intro

Why this topic?

- Setting up the environment is not as straightforward as other languages (think openssl, nokogiri, pg, rails+wsl 🤮)
- Multiple options for extensions, confusing for beginners
- Changes in the community

Is this even important?

- Ruby is an idiomatic language
- Easy syntax, dynamically typed (is typing an advantage or disadvantage?)
- More people would give it a shot/consider it seriously (although real chads write code on paper so they don't care)
- Makes life easier, want it or not

```
clap if person.programming_languages.include?('ruby')
```

_new.html.erb | _post.html.erb | comment...troller.rb | routes.rb | commen...mailer.rb | submitt....html.erb | ● comment...review.rb

```
1   # Preview all emails at http://localhost:3000/rails/mailers/comments_mailer
2   class CommentsMailerPreview < ActionMailer::Preview
3
4     # Preview this email at http://localhost:3000/rails/mailers/comments_mailer/submitted
5     def submitted
6       CommentsMailer.submitted Comment.|
7     end
8
9   end
10
```

📁 demo

› 📁 models

⌄ 📁 views

  › 📁 active_storage

  ⌄ 📁 comments

      📄 _comment.html.erb

      📄 _new.html.erb   ✕

  ⌄ 📁 comments_mailer

      📄 submitted.html.erb   ✕

      📄 submitted.text.erb   ✕

  › 📁 layouts

  ⌄ 📁 posts

Static vs dynamic code analysis

Static analysis

- Performed on programs without executing them
- Statistics, errors, code readability, linters
- Not much competition between solutions(other that typing - check out Radan's talk)
- Tools: Rubocop, Brakeman, Reek, etc.

Dynamic code analysis

- Runs code to analyze it
- Think tests, debugging and code coverage
- Tools: Rspec, Coverband, byebug, etc.

LSPs(Language server protocol)

- Makes it easier for you to develop
- Microsoft specification
  (https://microsoft.github.io/language-server-protocol/specifications/lsp/3.17/specification/ 🤮)
- Has defined features that an LSP can support:
  - Code completion
  - Folding ranges
  - Syntax checking
  - Go-to definition
  - Find references

LSPs(Language server protocol)

- Where do LSPs come in here?

Without LSPs

Editors

| Vim |

| VSCode |

| Sublime |

Plugins

| Ruby |

| Python |

| JavaScript |

With LSPs

| Editor | ↔ | JSON-RPC | ↔ | Language server |

(what we are focusing on)
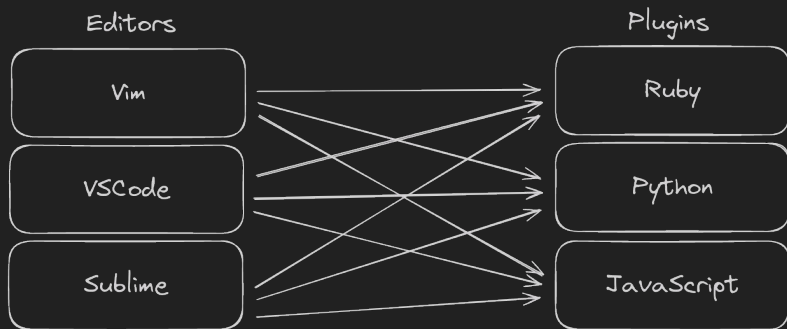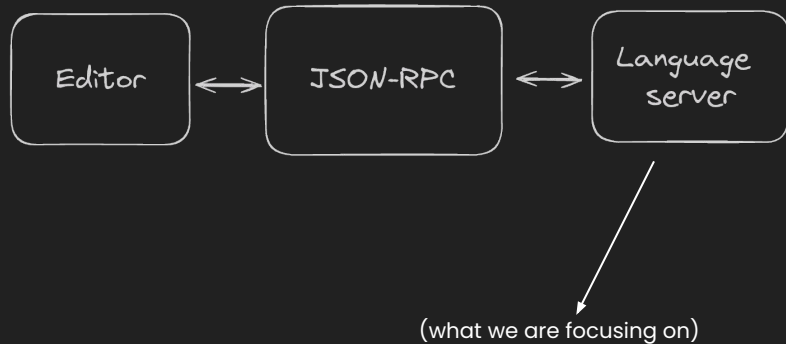
- Like having a frontend already made and focusing only on backend logic

Rubymine

- Bloated, confusing, commercial
- Doesn't conform to the Microsoft specification at all
- But it just works 😭

r/neovim • 5 mo. ago
nothingsleftanymore
I wished IntelliJ would maintain LSPs

ApatheticBeardo • 1y ago • Edited 1y ago

> Which one would you recommend?

If you care about your time at all, none.

I'd pay for RubyMine and spend time building things instead of endlessly fiddling with mediocre-at-best tools.

3   Reply   Share   ...

Ruby LSPs

- Deprecated??

Ruby v0.28.1
Peng Lv · 3,610,594 · ★★★★☆ (51)
Ruby language support and debugging for Visual Studio Code
⚠ This extension is deprecated. Use the Ruby LSP extension instead.

VSCode Ruby v0.28.0
Stafford Brunk · 2,751,070 · ★★★★★ (2)
Syntax highlighing, snippet, and language configuration support for Ruby
⚠ This extension is deprecated. Use the Ruby LSP extension instead.

- Shopify??

Ruby LSP v0.5.11
Shopify ✔ shopify.com · 584,569 · ★★★☆☆ (33)
VS Code plugin for connecting with the Ruby LSP
Disable ▾ Uninstall ▾ Switch to Pre-Release Version ⚙
This extension is enabled globally.

Ruby LSPs

r/ruby • 5 mo. ago
Serializedrequests

···

Any users of VSCode notice that the existing extension pack got deprecated ILO the Shopify LSP?

ViniStock • 5mo ago • Edited 5mo ago

Hello! Vini from the Ruby LSP team here.

We requested for Rebornix.Ruby to be deprecated because its repository has been archived for a while and the project is no longer maintained.

Shopify LSP can't seem to do as much yet, so this seems a bit premature.

ruby-lsp

- https://github.com/Shopify/ruby-lsp
- At an early stage of development
- Integrates with Sorbet and Rubocop
- Started as RBS replacement for Solargraph, Solargraph adopted RBS in the meantime
- Uses prism(C99) for parsing

Ruby 3.3.0 Released
We are pleased to announce the release of Ruby 3.3.0. Ruby 3.3 adds a new parser named Prism, uses Lrama as a parser generator, adds a new pure-Ruby JIT compiler named RJIT, and many performance improvements especially YJIT.
Continue Reading...
Posted by naruse on 25 Dec 2023

```
{} settings.json    ⚙ Settings    🍒 test3.rb ●    🍒 test2.rb    🍒 Gemfile

🍒 test3.rb > ...
  10    require_relative 'test2'
   9
   8    class MyClass
   7      def initialize; end
   6
   5      def call
   4        puts 'test'
   3      end
   2    end
   1    🔵
  11    MyClass.new.ca
            ☐ class                              New class
```

(oof)

ruby-lsp

- The Ruby LSP features include
    - Semantic highlighting
    - Symbol search and code outline
    - RuboCop errors and warnings (diagnostics)
    - Format on save (with RuboCop or Syntax Tree)
    - Format on type
    - Debugging support
    - Running and debugging tests through VS Code's UI
    - Go to definition for **classes, modules, constants and required files**
    - Showing documentation on hover for classes, modules and constants
    - Completion for **classes, modules, constants and require paths**
    - Fuzzy search classes, modules and constants anywhere in the project and its dependencies (workspace symbol)
- ruby-lsp + Sorbet?(combo used at Shopify)

Solargraph

- Much more stable
- Supports almost all modern features
- Much slower than ruby-lsp
- Requires more configuration
- Incomplete documentation
- Slow development
- Uses slower parsing gems:
  - RubyVM::AbstractSyntaxTree
  - Parser
- No debugger - suggested deprecated gem
- No testing environment

Solargraph gem not found. Run `gem install solargraph` or update your Gemfile.

Source: Ruby Solargraph

Install Now

Couldn't start client Ruby Language Server

A request has failed. See the output for more information.

Source: Ruby Solargraph

Go to output

```
{} settings.json    ⋯ Settings    test3.rb ●    test2.rb    Gemfile
test3.rb > ...
10    require_relative 'test2'
 9
 8    class MyClass
 7      def initialize; end
 6
 5      def call
 4        puts 'test'
 3      end
 2    end
 1
11    MyClass.new.
                     call              =▸ nil
                     class
                     clone
                     define_singleton_method
                     display
                     dup
                     enum_for
                     eql?
                     extend
                     freeze
                     frozen?
                     hash
```
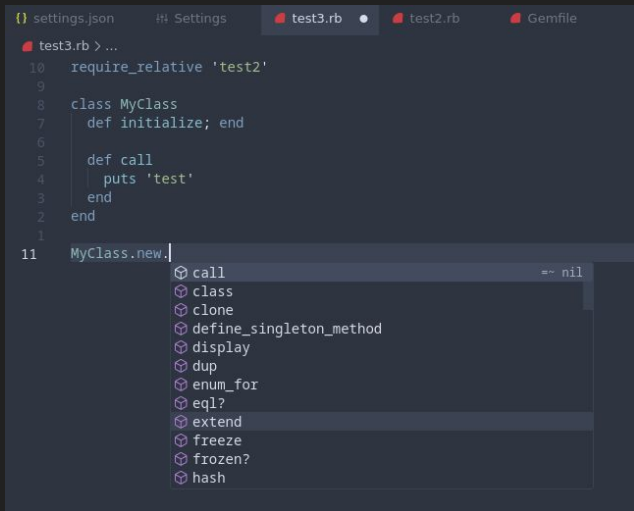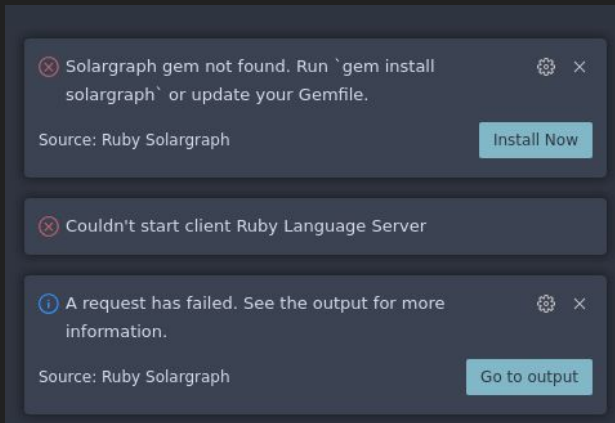
Future of Ruby development experience(summary)

- Will never reach the "Typescript standard"
- Only alternative is using something like Sorbet

Solargraph and Rails

Ruby on Rails uses a lot of "magic" that makes it difficult, but not impossible, to gather code intelligence through static analysis. This page explains the current progress and provides some tips for improving Solargraph's intellisense features in Rails projects.

Quick Start

castwide / **solargraph**

<> Code ⊙ Issues 114 ⇅ Pull requests 11 ⬚ Discussions ⊙

Rails support #87

⊙ Open **philevans** opened this issue on Sep 17, 2018 · 127 comments

Ruby LSP Rails

Ruby LSP Rails is a Ruby LSP addon for extra Rails editor features, such as:

- Displaying an ActiveRecord model's database columns and types when hovering over it
- Running tests and debugging tests through the terminal or the editor's UI

Future of Ruby development experience(summary)

- Exciting that the problem is getting funding from Shopify
- The project looks promising
- Development is taking a long time
- Consider having both running at the same time
- We might not need it since AI is gonna write our code anyways ¯_(ツ)_/¯

RUBY COMMUNITY