

Ruby on Rails IDEs and Text Editors: A Survey

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Abstract: *The world of Programming Languages is very dynamic. Every company is launching their own programming language which can cater their specific demand and requirement. For every programming language new Integrated Development Environments (IDEs) or plug-ins are developed for existing IDEs. In this paper, we discussed various IDEs and Text Editors which work for Ruby on Rails for different platforms. In computer world new programming languages are coming and old one are getting outdated so is their IDEs and Text Editors. But programmers are used to old one and some are excited with features of new ones.*

Keywords: TextMate, Aptana, Ruby on Rails, Integrated Development Environments

1. Introduction

Ruby on Rails is framework for developing database-backed web-application based on Model-View-Controller architecture. From Ajax in View to the request-response in Controller to domain model wrapping database, Rails provides a pure-Ruby development environment. A database and Web server is required for website. Rails can be developed on various Operating Systems (OS) like: Linux, OS X, Windows and Solaris. Ruby Virtual Machines (VM) are plain old Ruby, JRuby, Rubinius and IronRuby. OS and VM will constrain choice of editor as different VM and text editors are suitable for different OS.

Rails application is test-driven development which starts with code generation. Generally, Incremental Model is followed, once application skeleton is created. Application is built up incrementally by adding and coding models and actions, adding and coding tests, running and debugging the tests, refactoring, adding Embedded Ruby pages to generate HTML views, testing the HTML display in a browser, and viewing the server log. If AJAX is required, many actions and effects can be generated entirely from Ruby, but more complicated or uncommon effects usually require some coding and debugging in JavaScript. Programmer shuffles among test, model, controller, helper, view code, and popping among editor, browser, and shell windows. So an Integrated Development Environment (IDE) and Text Editors increase efficiency of programmer by cutting down time spend on popping around.

In this paper we discussed many IDEs and Text Editors with their advantages and disadvantages.

2. TextMate 2.0

TextMate is first choice for Rails core developer on Mac because of essential marco extensions for TextMate as tool for Ruby and Rails programming. Keyboard shortcuts and automation facilities of TextMate increase efficiency of programmers which found in TextMate inspired E Text Editor and InText for windows as well. It includes Ruby and Rails Bundle. Integrated GUI development environment of RadRails for Rails runs whenever Eclipse and Java run. Beside this, free availability for Aptana RadRails Community Edition lures programmers. RadRails integration approach to Rails development is followed by 3rdRail, Komodo, NetBeans, IntelliJ IDEA, and Ruby in Steel but all are similar. TextMate with Rails bundles can be mixed and matched with NetBeans or RadRails IDEs which have debuggers. [1]

Whether you are a programmer or a designer, the production of code and markup is hard work. Without an editor dedicated to the task, it is also often cumbersome, overwhelming, and repetitive. Especially when you are dealing with a lot of files at once — like most projects do. TextMate puts you back in control, reduces the mental overhead, and turns manual work into something the computer does. Created by a closet UNIX geek who was lured to the Mac platform by its ease of use and elegance, TextMate has been referred to as the culmination of Emacs and OS X and has resulted in countless requests for both a Windows and Linux port, but TextMate remains exclusive for the Mac.

TextMate is not an IDE but by using its powerful snippets, macros, and unique scoping system, it can often provide features that even a language specific IDE lacks. It has enough project management features to keep most users happy, but is otherwise kept lightweight with a clean and minimalistic GUI. Figure1,2,3 shows Bundle Editor, OakFindManager, Font & color respectively.



Figure 1: BundleEditor[1]

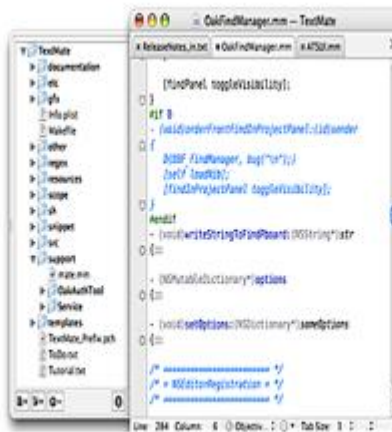


Figure 2: OakfindManager[1]

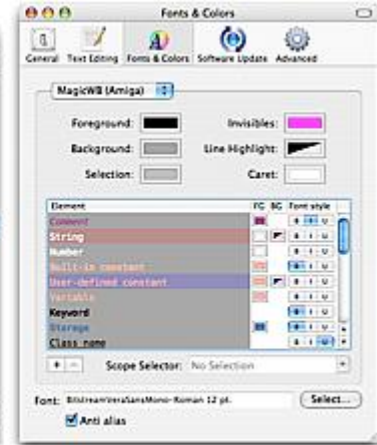


Figure 3: Fonts & colours [1]

3. SapphireSteel Ruby in Steel Developer Edition 1.5

SapphireSteel Software released version 1.5 of Ruby In Steel Developer, its professional Ruby and 'Ruby On Rails' IDE for Visual Studio. Ruby In Steel Developer 1.5 now includes built-in ToDo and User Task management. Users are able to enter 'ToDo' comments directly into the source code and navigate to them using the Visual Studio Task List. Project-

wide comments can also be entered directly into the 'User Tasks' pane of the Task List. It provides the most powerful integrated suite of tools available to Ruby On Rails developers including the unique drag-and-drop design environment, 'The Visual Rails Workbench', comprehensive analytical IntelliSense and the ultra-fast 'Cylon' drill-down debugger. [2]

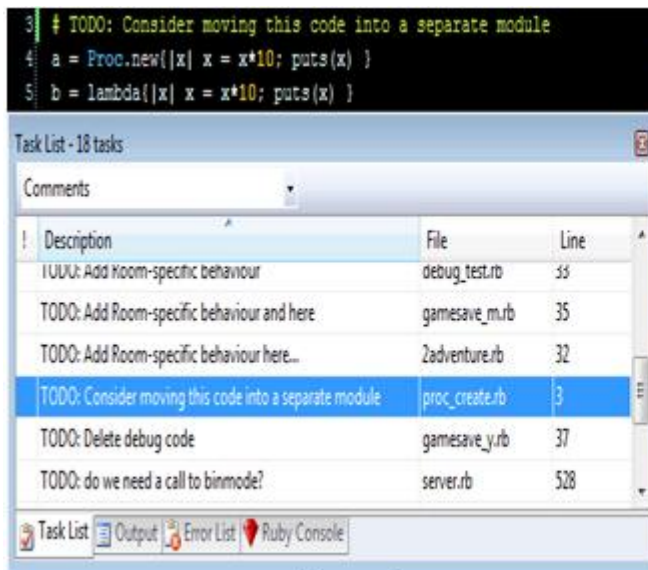


Figure 4

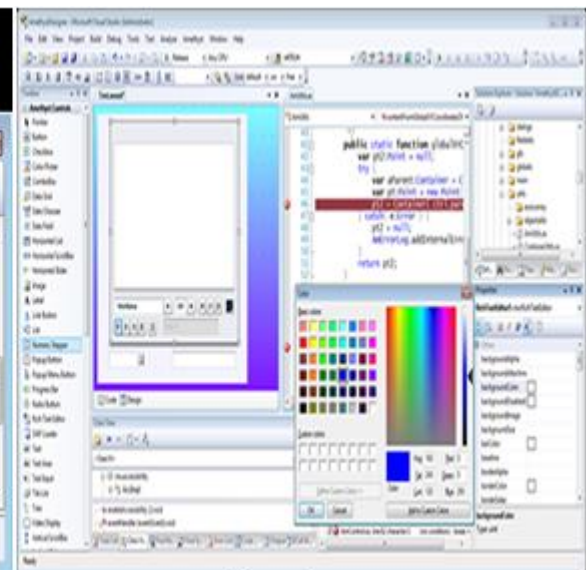


Figure 5

Amethyst is a fully-featured Visual Studio IDE for the Adobe Flash Platform. Amethyst supports the drag-and-drop design, editing and debugging of Flex and AIR applications and it can also load Flash IDE projects for editing and debugging. Sapphire ('Ruby In Steel 3') is a Visual Studio IDE for the Ruby programming language. It provides editing and debugging of projects for standard Ruby and also provides a designer for creating user interfaces.

4. Aptana Radrails 2.0.5

Aptana RadRails is an Integrated Development Environment for Ruby on Rails projects. Built on top of the well-known Eclipse platform, RadRails provides all the tools you need to

create a whole Rails application from a single interface, allowing you to focus on the creative part of the development as your IDE takes care of the mechanics. Code Assist helps to Quick access to Ruby, HTML, CSS and JavaScript structures, methods, elements, properties, tags & attributes.[3]

Integrated Debugger helps in Set breakpoints, inspect variables, and control execution. The integrated Ruby & Rails debugger helps you squash those bugs. Outlining helps in View and navigate the structures in your file using this hierarchical outline of your Ruby or HTML page. Select nodes to jump to that location in the editor. Filter nodes to see collections that match patterns.

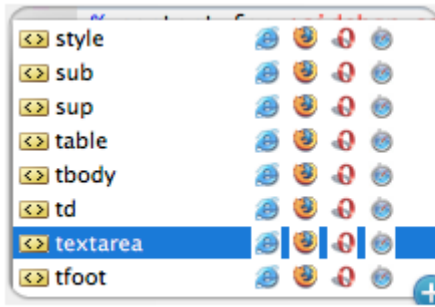


Figure 6: Code Assist

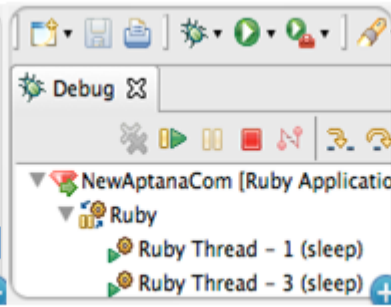


Figure 7: Integrated Debugger

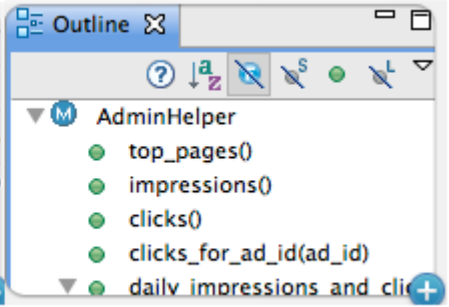
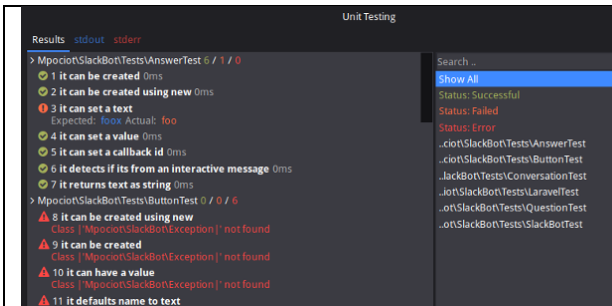


Figure 8: Outlining

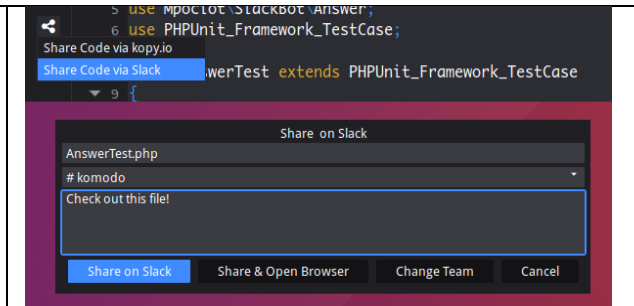
5. Activestate Komodo IDE 9.2 and Edit 10.0

Komodo IDE used for Python, Perl, and regular expression development for several years, and occasionally for Ruby,

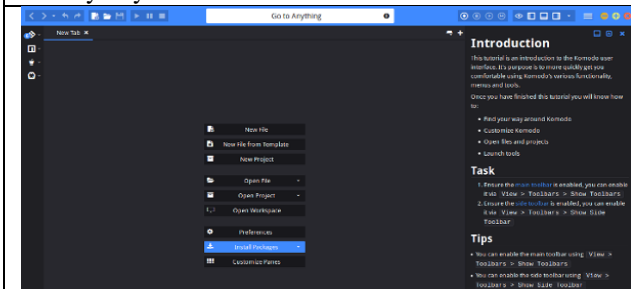
XSLT, and JavaScript development. Komodo is used for Ruby scripts, but not for Rails development. Some important features of Komodo are given in below table.[4]



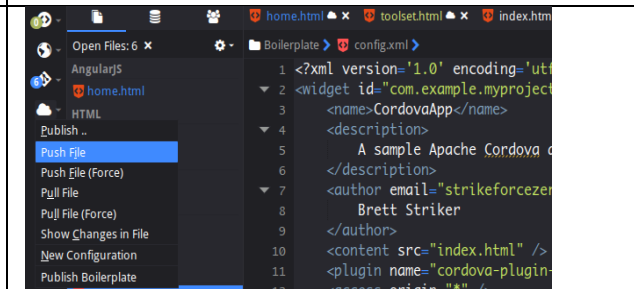
Run tests for more frameworks, including any that output in TAP or TeamCity compatible formatting. Filter test results, jump to test definitions and place breakpoints directly in your test.



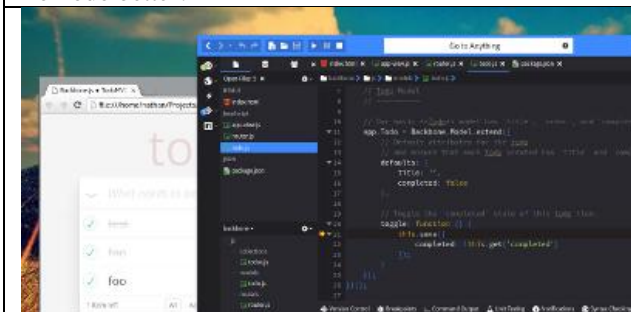
Share snippets, diffs and all kinds of code directly from Komodo to your team on Slack.



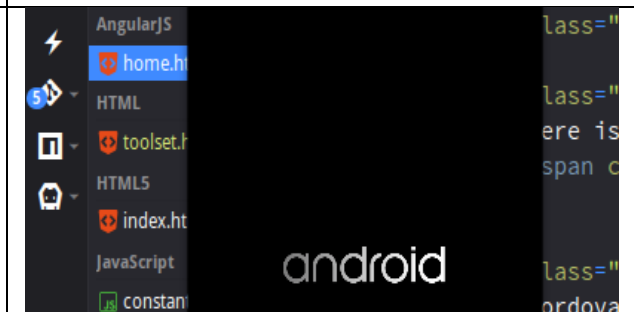
Write and use tutorials that will run in Komodo. The possibilities here are endless, you could learn how to program in a new language or framework completely from Komodo, or use it as an educational tool for the classroom. Use our Getting Started tutorial to get to know Komodo better!



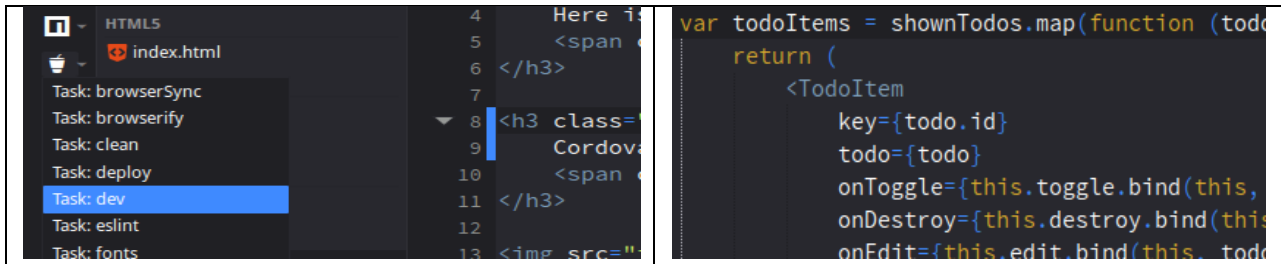
You can now force push and force pull files, which is incredibly useful for workflows where all you ever do is upload changes. Additionally we're introducing a dynamic toolbar button for Publishing actions, letting you quickly access common publishing tasks.



Debug your code in Chrome, from Komodo! No more context switching or locating the same code you've been working on again in the Chrome dev tools. You can write code, place breakpoints and debug all right from inside Komodo.



Quickly access PhoneGap and Cordova via your "dynamic toolbar", as well as interact with them via the Commando shell scope. Komodo automatically detects your configuration and provides contextual actions.



The image shows a screenshot of the Komodo IDE interface. On the left, a task runner menu is open, listing various tasks such as 'Task: browserSync', 'Task: browserify', 'Task: clean', 'Task: deploy', 'Task: dev' (highlighted), 'Task: eslint', and 'Task: fonts'. The main editor area displays HTML and JavaScript code. The HTML code includes a list of items, and the JavaScript code defines a 'todoItems' array with a 'map' function that returns a list of 'ToDoItem' objects, each with properties like 'key', 'todo', 'onToggle', 'onDestroy', and 'onEdit'.

Komodo now integrates with Gulp, Grunt, NPM and Yarn tasks. The integration allows you to run commands for those task runners in your shell scope (inside Commando), it also adds a button to your dynamic toolbar (new in Komodo 10) which lets you quickly run commands via those task runners

We've put a lot of focus on individual frameworks in Komodo 10, a trend you can expect to continue. With this iteration we focused on some of the most popular JS frameworks and derivatives.

6. Codegear 3RDRail 1.2

3rdRail version 1.2 introduces Problem Detection and Correction. Each time, programmer save changes to your code, 3rdRail provides detection of common Ruby and Rails coding errors. Detected errors are marked within the code and explained in the Problems view. In many cases, automatic correction is available via the "Quick Fix" option found within the context menu of the problem description. When automatic correction is not feasible, more general solution suggestions are shown. Ruby Validations like Syntax checking and API Deprecation & removal are including Constants, Variables and Methods in Classes and Modules. This includes suggestion of an alternative when possible.

Rails Validations like Invalid/Missing Ruby Interpreter, Missing Gems Installation, Missing "ruby-debug" Gem required in order to use "Fast Ruby Debugger", Missing specified version of Rails, Missing Database Configuration, Invalid/Missing Database Adapter, Missing "Session Secret Key" when "Cookie Store" is specified, Rails 1.2 Components exist in Rails 2.0 project, Reference to Rails 1.2 functionality which has been extracted to optional plugins in Rails 2.0 and Missing Rails item.[5]

RadRails provides simple GUI front ends for Rails generators and rake tasks; 3rdRail goes one better and provides higher-level wizards that collect the necessary information in a GUI and then run a sequence of generators and/or rake tasks in an enhanced command shell. Output from commands adding a model or view is immediately reflected throughout the IDE. Command output is hyperlinked, so that clicking on any generated file or folder will open that in the IDE."

That hyperlinking is surprisingly useful for such a simple feature. It can be very confusing to figure out why a test failed or a Rails page threw an error. With 3rdRail, once you pick out the root cause from the command output, one click takes you to the correct line of code. In similar fashion, the 3rdRail dependencies view lets you quickly navigate to the right code from a graphical representation of the application's functionality.

7. NetBeans IDE 8.1

NetBeans has long been a strong Java development environment. It gained Ruby and Rails support with Version 6.1, NetBeans is a seriously good Rails IDE. NetBeans is a Java IDE and is a Sun product, it has excellent support for JRuby. It also supports standard Ruby; however, it has a Ruby Platform Manager to select the Ruby interpreter used for a project. The NetBeans Ruby source code editor does code formatting and syntax and a right click in the code editor brings up a context menu which allows programmer navigate from action to view to test to declaration, rename, refactor, reformat, run, test, set a breakpoint, debug, or find usages. Each common action has a keystroke equivalent displayed on the menu. The code editor supports a number of shortcuts, snippets, and code templates, including a subset of the TextMate snippets. The number of predefined Ruby and RHTML templates in NetBeans pales beside the number of Java templates, but programmer can define his own templates. NetBeans uses the ruby-debug-ide gem for fast debugging. It came configured for the fast debugger in JRuby but not standard Ruby.[6]

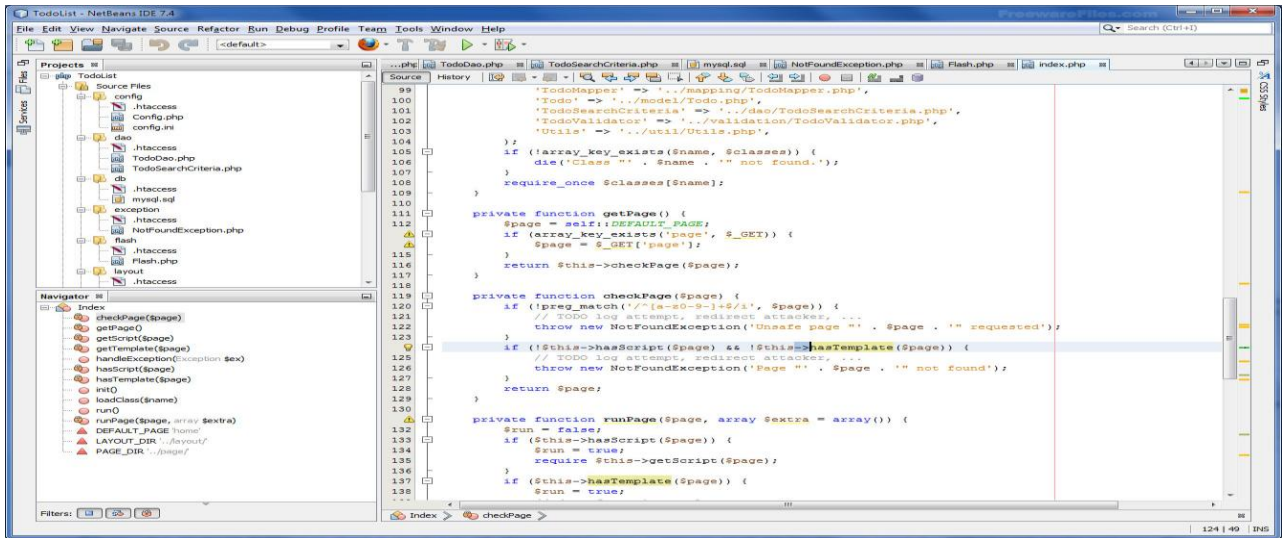


Figure 9: Netbeans IDE

8. JetBrains IntelliJ Idea 7.0.3 with Ruby Plug-IN 1.0

IntelliJ IDEA is widely regarded as an excellent Java IDE and has managed to survive as a commercial product with superior features in the face of strong competition from the free NetBeans and Eclipse products. Although the current Ruby plug-in for IntelliJ IDEA need improvements to make it a good Rails IDE. Ruby and RHTML code coloring, formatting, refactoring, dependency analysis and completion work well. Code inspections and debugging aren't yet implemented for Ruby; according to the company, a Ruby and Rails debugger is planned for the IntelliJ IDEA 8 release. When command shell output is shown in a Run window, it is often but not always hyperlinked to bring up the appropriate line of code in an edit window.

At this point, if you develop Rails with IntelliJ IDEA and want to use a graphical debugger on occasion, you'd be well advised to use NetBeans or RadRails as a free secondary IDE.[7]

9. E Text Editor 1.0.20 BETA

The E Text Editor is basically a TextMate clone for Windows. It shares many of TextMate's strengths and

weaknesses. Because several TextMate bundles rely on Unix capabilities, E asks that you install Cygwin to enable those bundles. E has a few Windows-specific bundles of its own, for example to support C# and ASP.Net, and ships without the obvious Mac-specific bundles, such as ActionScript and Objective-C.

E takes advantage of the community that has grown up around TextMate. Most of what's in the TextMate book applies equally well to E, and many TextMate bundles downloaded from the Macromates Subversion repository will run as is in E.

10. Intype Alpha 0.2.X

Intype comes with several bundles by default. TextMate bundle consists of snippets, commands and grammars. Grammars and theme files are platform-independent, they are supported. Commands and snippets use shell code, which is different on Windows and Mac, so it is not possible to transfer them. Intype is free during the alpha and beta development phases but once it reaches release 1.0 it will be priced similarly to TextMate.

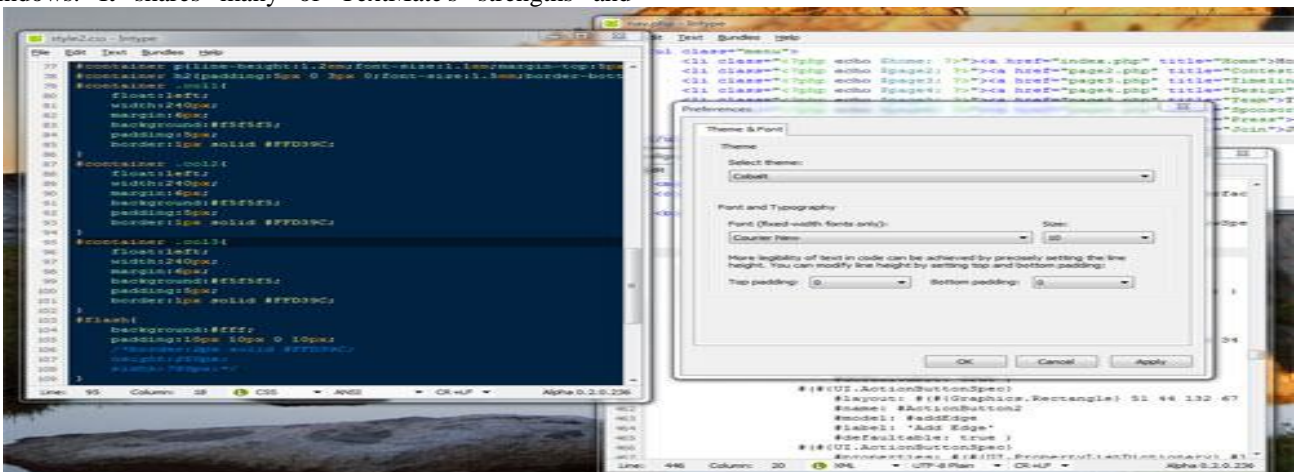


Figure 10: Intype Alpha

11. Eclipse IDE

Eclipse is famous for our Java Integrated Development Environment (IDE), but our C/C++ IDE and PHP IDE are pretty cool too. You can easily combine language support and other features into any of our default packages, and the

Eclipse Marketplace allows for virtually unlimited customization and extension. Ruby on rails plug-in is used by windows platform users.

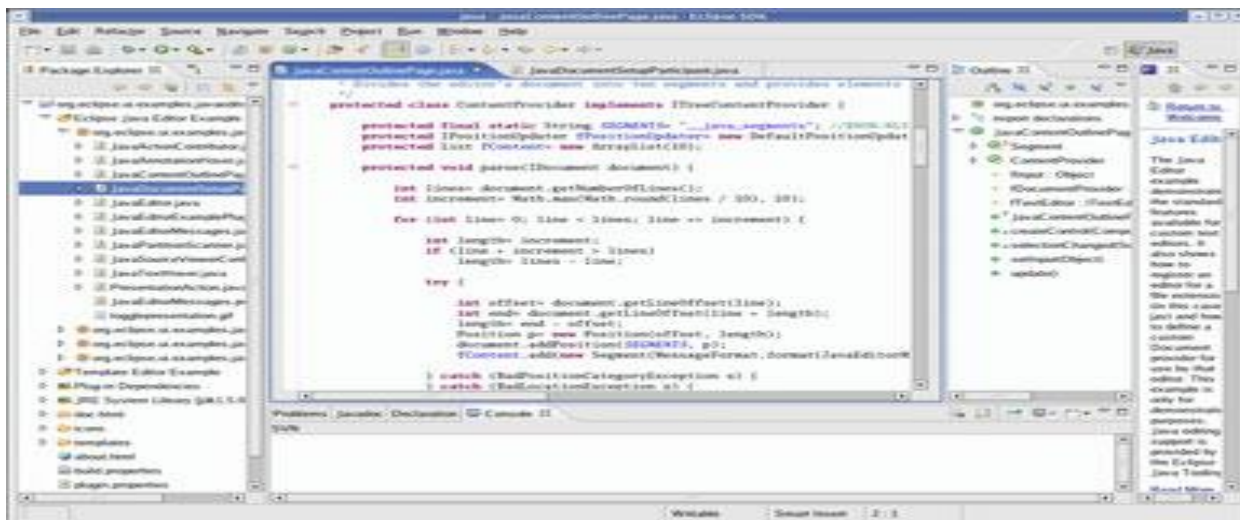


Figure 11: Eclipse

12. Conclusion

In conclusion, Rails itself is in a state of flux, and the Rails IDEs are mostly still trying to catch up to the changes introduced on Rails 2.0, much less Rails 2.1. Most of the Rails IDEs discussed in this review package will work well with the current Rails and rake gems with only minor annoyances: The most common annoyance is confusion between RHTML files and HTML.ERB files when generating and navigating to views.

Of course, the next time the Rails core changes, the IDE vendors will have to scramble to keep up, once again. The entire Rails core team is using TextMate on Mac OS X. It's a fantastic editor that ships with Ruby on Rails highlighting and macros. If you're not running Apple, check out RadRails. It's a cross-platform Rails editor built on top of the Eclipse IDE."

References

- [1] <https://macromates.com/>
- [2] www.sapphiresteel.com
- [3] www.apтана.com
- [4] <https://www.activestate.com>
- [5] www.codegear.com
- [6] <https://netbeans.org>
- [7] <https://www.jetbrains.com>