Ruby Essay

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1000 words

Related to the ruby programming language.

Argue for or against something. Suitable references from other people.

You will pull different arguments together promoting your interpretation of the work.

Good: Excellent use of wider-ranging material citations in well-argued discussion.

Think more deeply about Ruby and it’s practises.

Question:

Why Rails

or

# Why you should always use Sinatra instead of Rails

Essay writing basics.

Find the right problem

Pick one situation to explore further.

Generate facts about the problem.

Arguments for and against each framework.

## What to discuss:

1. Development speed
2. Computational speed
3. Hardware usage, stress
4. Ease of use/learning curve
5. Maintainability, updates
6. Price – just mention this

## Ruby on rails

Server side web app framework. Uses the model-view-controller- database, web service and web pages. Encourages and facilitates use of web standards such as JSON and XML, and HTML, CSS and JS for display and user interfacing. Emphasizes use of software engineering patterns such as: Convention over configuration, don’t repeat yourself and the active record pattern.

Convention over configuration can clash with other software engineering patterns where developers would rather make a decide everything.

Active record pattern: Stores in-memory object data in relational databases. A database table is wrapped into a class. So an object instance is a single row in the table. When you create an object, a new row is added to the table.

Active record pattern is a description of an object relational mapping system

ORM- Object relational mapping: Converting data between incompatible type systems in object-oriented programming languages. This creates a ‘virtual database’ that can be used from within the programming language. The object relational model implements the use of simple scalar values within a program/object values so that they can be stored in databases. I.e. programming language using objects for e.g. an address book needs to change object values into simpler forms.

However, heavy reliance on ORM is bad due to high level abstraction (developers not knowing what they’re actually doing) and results in poorly designed databases.

Another approach is to use an object-oriented database management system. They eliminate the need of converting data to and from SQL forms, as data is stored in object representation and relationships are directly represented.

Ruby library active record implements ORM (Object-relational mapping). It creates a domain model for objects and database tables. Logic and data are presented as a unified package. Active record adds inheritance and associations. Active Record is the default ‘model’ component of the Model-view-controller.

Ruby on Rails is great due to its custom gems and templates. It implements the latest technologies into a neat stack that is powerful, fast and maintainable.

Uses MVC pattern and the REST architectural style. Representational state transfer. Aimed for performance, reliability and scalability. To accomplish this, developers work with reusable components that can be managed and updated without affecting the system as a whole while it is running. Focus is on component roles and specific set of interactions between data elements. RESTful systems typically use HTTP with GET, POST, PUT, DELETE etc.

Rails includes WEBrick, a simple ruby web server and Rake, a build system distributed as a gem. Rake is a software task management and build automation tool. Rake and WEBrick are tools to provide a basic dev environment.

Rails is usually not connected to the internet directly, but through a front-end web server.

Rails uses a lot of JS libraries including Ajax actions. jQuery as well. Coffee script is used for JS scripting.

Coffee script is JS made more readable with some differences, e.g. variables don’t need a ‘var’ before them. Uses off-side rule (e.g. python) where blocks are expressed with indentation, not curly brackets.

Rails uses Sass as well, which is a scripting language that can use variables and advanced stuff that is then interpreted into CSS. Newer syntax SCSS uses block formatting from CSS. Sass can also loop through stuff and use selector inheritance.

Rails uses Embedded ruby in html views, supporting HAML and moustache as well.

## Ruby Programming Language

Developed in the mid 1990’s, supports object oriented programming, dynamic system and automatic memory management.

Ruby uses POLA – principles of least astonishment. As simple and straight forward as possible- it should behave the way it is expected to behave. Creator wanted to make the language for humans, not for computers.

Completely object oriented. Everything is an expression. It is an imperative language. Compared to python all variables are private within classes and are retrieved with set and get methods. This is different to python where changing a public variable to a private variable requires a lot of work for each instance of the variable.