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Ruby on Rails DEFINITION: Ruby on Rails is a
software development environment that is built with and uses the
object-oriented programming language Ruby, with the overall aim of
making programmers' jobs both more fun and more productive.
The programming language Ruby has been around since 1993.
Initially popular in Japan, its use has been growing and widening.
Ruby got a big boost in 2004 with the release of a new programming
environment called Rails that was built around Ruby. Before
discussing Rails, let's first examine Ruby and see what makes it
different from other languages. Ruby is a pure object-oriented,
open-source programming language with a very clean syntax that
one writer has said "combines Smalltalk's elegance, Python's
ease of use and Perl's pragmatism." An interpreted scripting
language, Ruby is as useful for creating small ad hoc scripts as it is for
full-scale applications. Using a direct-execution model and dynamic
typing, Ruby lets you develop code incrementally. in most cases, you
can add a feature and then try it immediately. Ruby programs are
usually shorter than their Perl, Python or C counterparts. Ruby's
creator, Yukihiro Matsumoto, has said he wanted a language that
would make him more productive and at the same time be fun to
use. In fact, this desire for fun in programming is probably Ruby's
biggest single point of differentiation from any other language. When

one first starts reading the Ruby literature, it's easy to think that it's a boutique language with a cultlike following of near-fanatic users. But remember that Perl, PGP and Python started out in much the same way. Every language is designed with specific purposes: ease of coding, compactness of code, readability, speed of execution, orientation for specialized situations such as text processing, database handling or numerical computation. Even so, with most languages that are Turing-complete, you can pretty much do anything you need. the practical differences from one to another will be in the areas of form, style, size, ease of use or maintainability. For example, Python and Ruby provide almost the same power to the programmer. Ruby's syntax is such that once you're familiar with its vocabulary and style, you can read many lines of code in something like natural language, making programs much easier to understand and maintain. Ruby eliminates the need to start out each program with long statements declaring structures and variables. Like Perl, Ruby has features that make it easily adaptable to processing text files and to systems management tasks. You can add methods to a class, or even to an instance during runtime, so that you can have an instance of one class behave differently from other instances of the same class. Also like Perl, but quite different from Python, Ruby lets you code things in many ways, thus it can appeal to programmers with very different styles and personalities. Rails is a full-stack, open-source programming framework implemented in Ruby and designed for writing database-oriented real-world Web applications quickly and easily. It was created by David Heinemeier Hansson, a

Danish college student, based on a project management tool he'd written called Basecamp. Ruby on Rails was released to the public in July 2004. By full-stack framework, Hansson means that all layers are built to work together so that you don't repeat yourself (DRY) and you can use a single language from top to bottom. Everything in Rails is written in Ruby. To achieve DRY, Rails relies on a couple of guiding principles. The first is less software, meaning you write fewer lines of code. Keeping code small speeds development and makes for fewer bugs, and it makes code easier to understand, maintain and enhance. One feature of Ruby that contributes to writing less code is that it assumes that the framework itself can and should handle metadata. The second is the principle of convention over configuration, meaning that Rails doesn't use configuration files, relying instead on some simple programming conventions that let it figure out what it needs to know by using information already contained in the application code and the database that's running.
Ruby on Rails   Ruby on Rails
                              Ruby

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    1993
          2004   Rails   Ruby
                        Ruby   Rails
                        Ruby,   Ruby

                                        Smalltalk   Python
      Perl   Ruby

Ruby

Ruby   Perl   Python   C
Ruby   Yukihiro Matsumoto

Ruby
Ruby

Perl   PGP   Python

Python   Ruby   Ruby

Ruby

Ruby   Perl

Ruby   Perl   Python

Rails   Ruby

Web

David Heinemeier
Hansson   Basecampde

Ruby on Rails   2004   7
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DRY
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Ruby

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