

WT SE-325

Assignment-2

- Ruby on rails:- It is an open-source used to build web applications. Rails is a framework used to create websites using the general-purpose programming language Ruby. It amalgamates Ruby with HTML, javascript and CSS to manufacture a web application that operates on a web server. It is generally organised to be a server-side web application development platform. Rails catalyzes the process of building complex sites. Rails is a framework for web application development written in Ruby. It provides a structure to web developers for all the codes. It is manufactured to ease web application programming by predicting what every developer needs to begin with. Rails requires less code but provides more capabilities than any other language or framework. Rails is an opinionated software. It assumes and brings out the best way to do something, and it is designed to promote that way.

- Features of ruby on rails:-

1. MVC Architecture:- It is based on Model, View, and Controller pattern, the widely used web application architecture. Hence, it separates codes of different functions, i.e. presentation layer, data layer, and maintaining a resource layer.
2. Active record:- It relies on the robust and powerful library called active record, which make it easy for developers design the database interaction queries. This is because they are writing the query in Ruby programming language itself, which is automatically converted into a SQL query, that receives the output and returns an ~~object~~ object. The active record library can accomplish most of the task, it is very rare to develop a query to SQL.
3. Convention over configuration:- It avoids configuration files to spare conventions, reflections as well as dynamic runtime extensions. The idea behind the "Convention over configuration" is assigning value automatically without user intervention.

4. Simple Testing Tool:- It also comes with a unit testing setup called RSpec, which is very easy to learn. Since it is ~~plain~~ plain Ruby, you can use it to test the functions employed in the application by separately calling them. It helps you to ensure your application has been tested properly.

5. Automated Deployment:- It includes libraries to allow the code to proceed to production with less efforts and reduced time. With just an initial one-time setup, it deploys every change

you have done to the production with just a single line on command interface.

6. Simple programming language:- It is an object oriented programming language, which allows us to create virtual objects in our code

PHP
`echo "Hello World"`

Ruby
`puts "Hello world"`

• Advantages of Ruby on Rails:-

1. Cost-effective:- It is 100% free and open source framework.
2. Secure:- The framework is by default, installed and enabled with some security measures. When you use Ruby in Rails, you are following a secure development process.
3. Flexibility:- It uses frontend and backend abilities; these are simpler and easier to create. A single-page web application uses Rails at the backend and may be any other framework like Angular for the front-end. This makes the application depend on Rails for the best qualities.
4. Productivity:- It permits you to develop features extremely fast. This happens because Ruby effortlessly combines the 3rd party software libraries.
5. Consistent:- It helps keep a project organized and decipherable as the developers have to follow standardized file storage and programming conventions. Plus, it saves a lot of time.

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- Disadvantages of Ruby on Rails:-

1. Obscurity due to convention:- Besides the advantages of convention over configuration to beginners, it adds obscurity to skilled programmers. For ex:- with the absence of the configuration file, there is no code, which discloses that data from a class named "chapter" is saved to a table named "Book".
2. Boot speed:- Based on the number of files and dependencies, it requires a substantial amount of time to start.

3. Multi-threading:- It supports multi-threading. Hence, if you are not cautious, requests will be queued up at the back of the active request. This can cause performance issues.
4. Runtime Speed:- The most cited argument against Ruby on Rails is that it is slow, we would agree, certainly when compared to the runtime speed of Node.js and Erlang.