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Preliminary Title

To what extent does a Ruby on Rails affect performance in a platform independent system.

Problem formulation

In today's society a lot of pressure is put on user experience, a service should be fast enough and always available to the user. In a platform independent system this puts a great deal of pressure on the back-end. Platform independent means that it should be accessible irregardless of what platform is used, e.g. mobile phones, desktops. A direct consequence of this is that a lot of extra code will be added to the back-end and most likely more traffic will reach it. To be able to handle these demands, an effective and stable back-end framework is needed.

The back-end framework will need to be fast, so will the database management system. The framework will have to be handle a lot of requests in a timely manner, from a big code base and possibly a large database. These are things I can study from the chosen theory containing performance information and compare to other back-end frameworks. This can be studied on my own implementation. I can test how long different responses take and also perform stress tests on my implementation.

Method

For my method of evaluation, I will implement a platform independent back-end in Ruby on Rails and evaluate these implementation with stress tests as well as user experience test, to see how users feel about the response times of the implementation. I will be studying theory regarding Ruby on Rails, it's structure and how it operates. I will have a closer look at Ruby, the language that Ruby on Rails operates in. Other important aspects to be evaluated are the database management and object relational mapping of Ruby on Rails, but also how it behave with other frameworks that the system might need.

Literature

I will use literature about Ruby on Rails and the aspects that I talked about in the method section, this to evaluate Ruby on Rails and see if it actually is a performance effective back-end. I will look into the object relation mapping of Ruby on Rails as well as its engine, the Ruby language. Literature about how it function with other frameworks might also be used. Another important aspects that needs to be studied is scalability, for two reasons, platform independent means that more code will be added and this influence performance and speed, but this also most likely means that more users and platforms will be communicating with the back-end which also adds extra pressure on performance.

Articles

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