

Web Framework Comparison

by 2Big2Slim

The list of our candidates are

- Spring ; <https://spring.io>
- Struts 2 ; <https://struts.apache.org>
- Vaadin ; <https://vaadin.com/home>
- Grails ; <https://grails.org>

Criteria

- Ease of learning
- Suitability to project
- Learning value
- Project health
- Community
- Interest

We tried to look for top java web frameworks and find out that this link is interesting,

<http://zeroturnaround.com/rebellabs/the-2014-decision-makers-guide-to-java-web-frameworks/>

They list many popular java web frameworks and give the scores for each framework in many criterias. Then each of us picks one of them and try to review them by our own opinions.

Spring

Description

Spring is framework that use to create a website and it is Developed by Rod Johnson and he share at www.springframework.org. This framework can connect to other frameworks easily by configuration. It is popular framework nowadays.

Ease of learning

They provide a lot of support and documentation. It can change application through configuration that is XML files. I think it is hard to understand because I think it relate to XML files.

Suitability for project

Although XML files are complicate but overall it learns and uses More easily than J2EE and Struts.

Learning Value

Spring java framework is popular because of it's benefits and supports so it is the best choice to learn and use."The more level of using Spring framework, the more easy life".

Project health

Spring java framework is just released new 4.0 version.

Community

There are developers that create the main community at <http://www.springsource.org>.

Interest

Recently, The ability to do DI(Dependency Injection) and AOP (Aspect Oriented Programming) is the main feature of Spring framework. Many programmers use Spring because that reason so it is interesting to find out why that ability is good.

Self opinion

I recommend it because Spring has interesting features and supports and it will more Popular than now so it doesn't waste time to learn this framework.

Advantages

- Support M-V-C Design Pattern
- Support .NET and Java
- Support AOP.
- Can separate UnitTest by JUnit
- Support WorkFlow.
- Support Web Security.
- Connect with other systems WebService, JMS, Email.

Disadvantages

- Has few tutorials.
- Complex.

Reviewed by : Mr. Nathakorn Sukumsirichart 5610545668

Struts 2 web framework

Description

Struts 2 is a web framework with complexity structure and many convention plugin for configuration on URL mapping and something more. Also have ability to combine with other new technologies by install some more plugins.

Ease of learning

Framework itself is complex and hard to understand. Also require a lot of other J2EE technologies knowledge to be completely in

Suitability of Project

It's performance might suit the project, but for further development might have some problem.

Learning Value

Since it use a lot of J2EE technologies so it might improve skill for a lot about many language technologies. But not much of them are popular among developers.

Project Health

This framework still on developing. Not at end-of-life

Community

It has it's own wiki but it's not so good to read. Also there is active post about it in Stackoverflow

Interest

It's look interesting but might not good to learn since you need to learn things a lot more to use this framework

Self-Opinion

For conclusion, Struts 2 is not suitable for our project since it's has a high learning curve for who doesn't similar to it. Also not much flexible for extend a project up. So, in my opinion, Struts 2 is not recommended for using with our project.

Good:

- Still under improvement by the creator
- Have wiki and Community still alive

Bad:

- Complex structures
- Difficult to learn
- Require a lot of knowlegde about J2EE beside the framework

itself

Reviewed by : Mr. Piyaphat Tulakoop 5610545731

Vaadin

Description

Vaadin is open source Java framework for building modern web applications. Vaadin first priority is to decrease development time of the application.

Ease of learning

Vaadin can be install as an plug-in for an Eclipse which is handy to most of the student, so how to use Vaadin might not be difficult, but in order to use it full function might take sometime to be study, since there is no special button or the description of it's function, but still you can read a book guide line which can be load for free at <https://vaadin.com/book> (a lot of pages)

Suitable for project

Vaadin has interesting function as to drag&drop a components of the application, that might save a lot of time for the project, but still it might require sometime to master the function, so if we not talking about time we spent to learn the function and feature, Vaadin might be a good choice.

Learning Value

Not much to be learn from Vaadin except it's feature and function.

Project Health

Vaadin still on developing, there still a update version coming out.

Community

Vaadin has it's own forum for ask a question, there also have some tutorial for user.

Interest

It's seem very interesting for me, I really like a function drag&drop but it's still require sometime to use it's to fully function, and I also believe that there still many hidden feature that need to be learn in order to use it well.

Self-Opinion

Good

- It can be install as a plug-in for an Eclipse which is handy for most of the student since they always use the Eclipse for coding Java.
- Vaadin has a feature which can create a Vaadin Composite which is a component for a project. This component has a design mode which we can drag and drop a component freely.
- The result can be shown very quick.

Bad

- Require an application server to run a result.
- The installation for the application server might be somehow confusing.
- From user experience, since it can be install as a plug-in for Eclipse, it seem vaadin doesn't have so much feature that make it differ from Eclipse.
- From user experience, the composite feature might look great that can be drag and drop, but it is just a component not a main page for an application, I still confuse how to link those 2 together (might because of user lack of knowledge and experience)

In conclude, vaadin is quite a great choice since we can still use an Eclipse for coding with vaadin framework, but the installation might get a little confusing for me and beginner. Also some feature that might take some time to be learned since there is no specific button or explanation how many feature it has and what each feature can do.

Reviewed by : Mr. Nabhat Yuktadatta 5610546711

Grails

Description

Grails is an Open Source, full stack, web application framework for the JVM. It takes advantage of the [Groovy](#) programming language and convention over configuration to provide a productive and stream-lined development experience.

Ease of learning

They provide many documentations but, not a lot of very simple tutorial that is suitable for us. Actually, I found one and it's not too complex (I can't say that it's simple) and it explains a lot of things that beginners need to know. if you are interested in it please follow this link,

<http://grails.asia/grails-tutorial-for-beginners/>

//edit capital letters

Suitability for project

Because of its easy-understanding and interesting of Groovy language, the ease of other components of this framework, the community and its popularity. It's very suitable for our project.

Learning Value

Very Valuable. The framework introduces us to MVC pattern which is used for many web framework and we can also learn a lot about web framework from its components which are quite interesting.

Project health

It's in active and new version of Grails is just released for a few weeks!

Community

There are many dicumentations and tutorials at the Grails's community. But, there are not many tutorial sessions for beginner there. Anyway, I can find out good tutorials on google.

Interest

Groovy is very interesting and cool programming language. Instead of doing many manner-things likes in java, its syntax is easier and more human-like language. It can do many things in just one line of codes and also not that hard to learn. Even you don't like it, you can code it with java syntax. This is very interesting.

Self opinion

Recommended. it's interesting web framework with interesting java-like programming language and features. if we can get along with it, I think we will never feel regret to learn this web framework.

Advantages

- Groovy, amazing programming language
- has many features and components
- quite popular
- easy installation
- works with IDE such as Eclipse
- not too complex
- has many things to do with command line (i think this is advantage)
- use it for free!

Disadvantage

- not many simple official tutorial

Reviewed by : Mr. Punpikorn Rattanawirojkul 5610545722

Comparison Table

Web framework	Ease of learning	Suitability to project	Learning value	Project Health	Community	Interest
Spring	- Hard to understand because of xml	3	5	5	5	5
Struts 2	- Complex and hard to understand because of J2EE	3	3	5	3	3
Vaadin	- Easy installation. - Require quite framework understanding to begins with	4	3	5	5	4
Grails	- Groovy, nice language - Easy installation - Not too hard to understand the framework structure	5	5	5	4	5

Summary & Recommendation

For conclusion, The web framework that we recommended the most are Grails and follow up by Spring.

Grails has an interesting language structure, easy to understand. Also come with Groovy language which is very flexible and variable. It's can use together with Java language so writing a code is very handy.

Spring is a very flexible web framework one. It can connect with other framework just by change some configuration but that means you need to have some knowledge about XML language. It also can use JUnit to test with the source code for easier debugging. However it got a bit few of tutorial and it's language structre is rather complex.