JAVA WEB DESIGN FRAMEWORKS: REVIEW OF JAVA FRAMEWORKS FOR WEB APPLICATIONS

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ABSTRACT

In this paper I have present Web design frameworks as a conceptual methodology to exhaust the possibilities reuse in Web applications. Firstly talk over the necessity for construction abstract and reusable directional design structures, demonstrating with different kinds of Web Information Systems. Hibernate Framework technology as a unique and well-organized resources to access massive databases and also emphases on how to implement persistent features in object-oriented system finished it. It provides an indication of design patterns and frameworks and discovers the association between design patterns and frameworks.Java accepts N-tier framework of MVC Model in J2EE platform and uses EJB, Struts Web Framework and Hibernate technology.

Keywords: *Framework, Hibernate, J2EE, spring, Web Design*

I. INTRODUCTION

A study of the Java language expending the framework of abstract understanding has been the subject of substantial research in the last decade. Structure compound Web applications such as ecommerce applications is a time consuming task [1]. A major segment of the improvement of an enterprise application involves the creation and conservation of the persistence layer used to gather and retrieve objects from the database of choice. Hibernate phases in to fill this crack, provided that an easy-to-use and authoritative object relational persistence Framework for Java applications [2]. And Design patterns assistance to identify, name and abstract frequent problems in software development and to identify best practice solutions. Tools and techniques for testing concurrent Java programs are still under active research and include static analysis, dynamic analysis, model checking, and combinations of these techniques [3]. The objective of this paper refer to a practical library and practise to model check Java programs for confirming simultaneous components without the essential to install other more complex tackles, and show how this procedure can be functional in manufacturing and saleable settings today [4].The Spring Framework provides a comprehensive programming and configuration model for modern Java-based enterprise applications - on any kind of deployment platform. A key element of spring is infrastructural support at the application level: Spring focuses on the "plumbing" of enterprise applications so that teams can focus on application-level business logic, without unnecessary ties to specific deployment environments [5].

II. SPRING FRAMEWORK ARCHITECTURE

The spring framework offers one-stop works for java based application on all layers (one tier- stand-alone java application, web tier- in web application and enterprise tier tier- Enterprise Java Beans).The Spring Framework arrange for about 20 modules which can be used based on an application requirement [6].
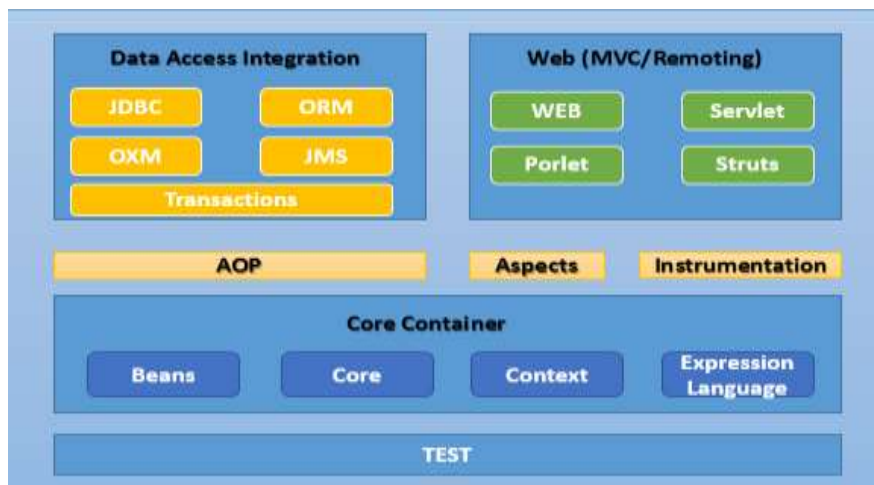

Fig 1. Spring Frame Architecture

Let discussion about Spring Frame Architecture that first core Container and then after Data Access Integration and Web MVC. Now the Core Container consists of the Core, Beans, Context, and Expression Language modules [7]. The Core Module Provides dependency Injection features and The Bean Module provides Bean Factory Pattern. The Context module dimensions on the compact base provided by the Core and Beans modules and it is a medium to access any objects defined and configured. And last The Appearance Language module offers a powerful expression language for querying and controlling an object graph at runtime. The Data Access/Integration layer contains of the JDBC, ORM, OXM, and JMS. The Web layer involves of the Web, Web-Servlet, Web-Struts, and Web-Portlet modules [8].

III. STRUTS FRAMEWORK ARCHITECTURE

This framework splits web system into three layers: Model, View and Controller. Model contains of JavaBeans, EJB; [8]View consists of JSP files; Controller is conceded out by Actions. Struts architecture can be shown as below:
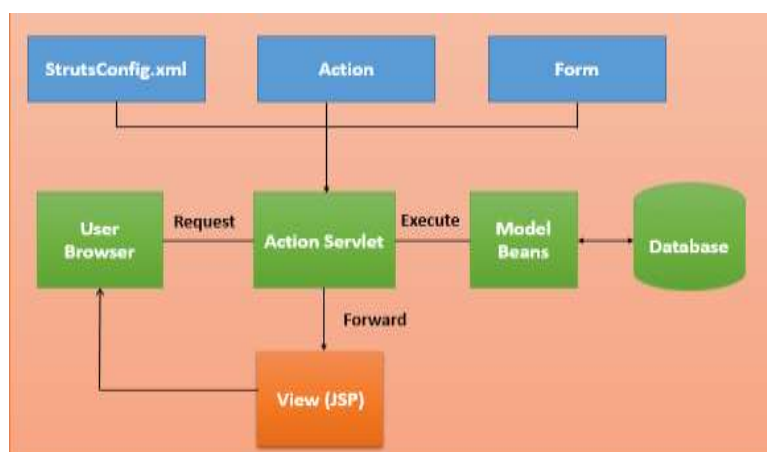
Fig 1.1 Struts Framework Architecture

IV. HIBERNATE FRAMEWORK ARCHITECTURE

This framework moderates the complication and trouble while manipulating the JDBC and SQL data. It maps Java classes to database tables professionally. It is mostly connected with databases [9].
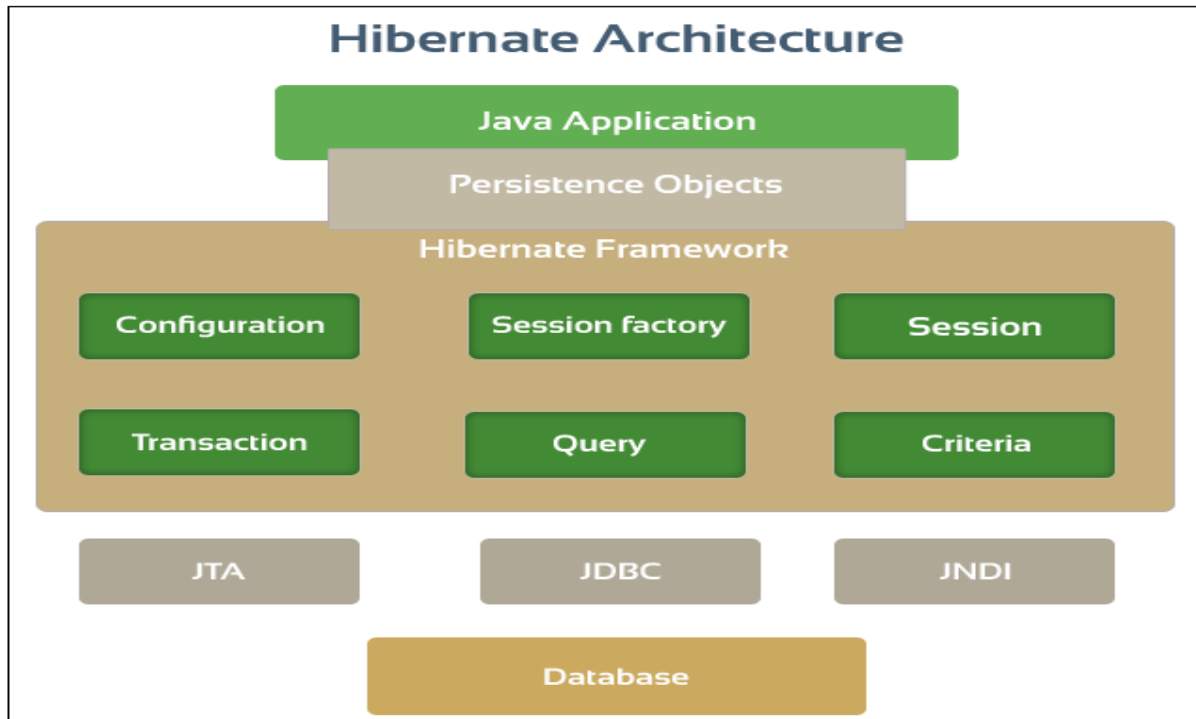

Fig 1.2Struts Framework Architecture

V. JAVA FRAMEWORK ADVANTAGE

A variation of frameworks have been suggested to define in a general way video analysis methodologies implemented in software.Java-based Web improvement has been filled by frameworks of every kind. It has been ages since I 'm saying a Web application being industrialized without any framework being recycled. Name it and there's a Java framework that privileges to do it. Essentially there might two or three that do the same thing. In this article, I'll take a closer look at the framework approach to development and some of the more popular Java Web frameworks available [10].

Struts: you want a group of taglibs that produce form fields and so forth, Struts is possibly the better choice. Our User Interface is typically click-driven and light on data and validation. It seems to me that peak individuals run into problems with Struts when they start touching a lot of data from HTTP into the model(2007, September).Struts is a refined framework contribution the easy 2 develop, structured view/presentation layer of the MVC applications. Advanced, strong and accessible view framework underpinning reuse and separation of concerns to certain extent.

Spring: Spring provides Aspect Oriented programming, it also solves the separation of concerns at a much bigger level. It allows the programmer to add the features (transactions, security, database connectivity components, logging components) etc., at the declaration level. Spring framework takes the concern of providing the input parameters required for the method contracts at runtime reducing the coupling between various modules by a method called dependency injection / Inversion of Control[11].

VI. CONCLUSION

In this review paper that I have presented an original abstract interpretation framework, which is generic in terms of the source language use means Java programming language. Spring offers a reliable way of handling business objects and inspires good put into practise such as programming to interfaces, rather than education classes. As the above stated, in this paper it programs much more overall function module of document management based onadvanced supposed of life cycle management. Spring and Struts provides the help of the user for development, debugging and testing the software.

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