**Java Web Server and Java Server Pages (JSP)**

What are Java Server Pages or JSP for short? These are technologies that helps the software developer create a dynamically generated web page or pages which are based on HTML, XML and other document types. Sun Microsystems released JSP in the year 1999. JSP may be compared to PHP and ASP as they are somewhat identical but what separates JSP is that it uses Java Programming Language.

JSP is viewed as a high-level abstraction of the Java Servlets. Translation of the JSP to Servlets happen during runtime, then each of the translated JSP Servlet is cached and re-used until the modification of the Original JSP is completed. JSP may be used independently or as a view component of a server-side in a model-view-controller design, that is used normally with JavaBeans as the model and Java Servlet. Like any other Java program, JSP is required to be executed within the Java Virtual Machine or JVM that is interacting with the server’s host Operating System in order to provide an abstract, platform-neutral environment. HTML and XML documents are usually associated with JSP but through the use of Output Streams.

Several delimiters are used by JSP for the scripting functions.

* Scriplet
  + <% %> is used to contain fragments of the Java code that is a part of the Service() Method.
  + <%! %> declares the instance variables and functions for the Servlet class.
  + <%= %> is an expression Scriplet that is used for printing on page.
  + <%@ %> a Directive that gives direction to process a JSP page.

Code Example:

**<p>**Counting to three:**</p>**

**<%** **for** (int i=1; i<4; i++) { **%>**

**<p>**This number is **<%=** i **%>**.**</p>**

**<%** } **%>**

**<p>**OK.**</p>**

The Output would be:

Counting to three:

This number is 1.

This number is 2.

This number is 3.

OK.

**PHP**

PHP: Hypertext Preprocessor or PHP for short is an open source general-purpose that is widely-used for scripting language that is especially suited for web development. Ramsus Lerdorf is the creator of this web scripting language in the year 1994 and before becoming PHP: Hypertext Preprocessor, PHP stood for “*Personal Home Page*”. The PHP code may be embedded into a HTML code, or may be combined with various web template systems, content management, and frameworks. Usually, PHP codes are processed by a PHP interpreter implemented as a module in a web server or as a Common Gateway Interface executable or CGI for short. This is powered by Zend Engines, which is a free software that was released under the PHP License. It was not until the year 2014 where in the language evolved without a written formal specification or standard. This left the canonical PHP interpreter as a real o0r effective standard. PHP hosts a wide range of diverse arrays of web frameworks which require framework-specific knowledge.

Dagdag ung kay OJOJ ung sa JSP at PHP

**Ruby on Rails**

Ruby on Rails is a web application development framework. Its main purpose is to make programming web applications easier through making assumptions about the developers need in order to get started. Less code is definitely in the picture when it comes to Ruby on Rails while accomplishing more than any other languages and or frameworks. Developers that are experienced had also testified that web development became fun through this. Model-View-Controller or MVC framework for short provide a default structure for a database, web service, and web pages. This facilitates the web standards such as JSON or XML documents for data transfer together with HTML, CSS, and JavaScript in displaying the user interface. Rails also emphasize the use of other known software engineering patterns together with paradigms, includes Convention Over Configuration (CoC), Don’t Repeat Yourself (DRY), and active record pattern. David Heinmeier Hansson extracted Rails from his own work on the project management tool Basecamp at a web application company which also called Basecamp. The first release on Rails was on July of the year 2004, but the sharing of commit right was not established until the month of February of the following year. A milestone achieved by Rails was when Apple agreed to release the Mac OS X v10.5 “Leopard” together with Rails which happened in the year of 2007 of October.

Version History:

* Rails Version 2.3, released on the 15th of March in the year 2009 with new developments in the templates, engines, and with the Rack and nested model forms. Templates are now enabled with the generation of a skeleton application with the custom gems and configurations.
* Rails Version 3, whereas Merb, a web application framework, was launched on the 23rd of December of the year 2008. Merb was merged as part of the Rails Version 3.0 release.
* Rails Version 3.1, released on the 31st of August in the year 2011 with the features of reversible Database Migration, Asset Pipelines, Streaming, jQuery as the default JavaScript library and as a new feature that is CoffeeScript and Sass into the stack.
* Rails Version 3.2, released on the 20th of January in the year 2012 with the faster development mode and routing engine. Rails version 3.2.x is the last of this version that supported Ruby 1.8.7.
* Rails Version 4.0, released on the 25th of June in the year 2013 which introduced Russian Doll Caching, Turbolinks, Live Steaming together with Active Resources, Active Record Observer and other components in splitting it as gems.
* Rails Version 4.1, released on the 8th of April in the year 2014 that introduced Spring, Variants, Enums, Mailer previews and the Sercrets.yml.
* Rails Version 4.2, released on the 19th of December of the year 2014 that introduced Active jobs, Asynchronous emails, Adequate Record, Web Console and Foreign keys.
* Rails Version 5.0, released on the 30th of June in the year 2016 with added functions and introduced Action Cable, API mode, and a new version of TurboLinks which is TurboLinks 5.
* Rails Version 5.0.0.1, released on the 10th of August in the year 2016 with the Exclusive use of Rails CLI.
* Rails Version 5.1, released on the 27th of April in the year 2017 that introduced JavaScript interrogation changes which uses the system test of Capybara, Encrypted secrets, parameterized mailers, and direct resolved routes.