

# Vamshi

## SUMMARY

- **8+ years** of experience in developing and designing **Web Based Internet/Intranet, Client- Server and Multi-tier distributed applications** using latest **J2EE** technologies and various open source frameworks.
- Experienced in all stages of **SDLC** (Software Development Life Cycle) including proposal, process engineering, requirement analysis, design, development, testing, deployment and support.
- Expertise in **Front-End Development using MVC** frameworks such as **SpringMVC, Struts, JSF, JQUERY**.
- Extensive experience in **Java, J2EE** technologies such as **JDBC, JSP, JSF, Servlets, EJB, Hibernate, Spring, XML, XSD, XSL and JNDI, Web services, Struts, Tiles, Hibernate, JMS, AJAX**.
- Expertise in **Client Side Designing and Validations** using **Angular js, Node.js, HTML, DHTML, CSS, Java Script, JSP, Struts Tag Library, JSTL**.
- Proficient in **Object Oriented Analysis and Design (OOAD)** based on **Unified Modeling Language (UML)** architecture.
- Developed different Web components such as JSPs, Servlets, Filters, **Custom Tag Handlers** and Business components such as **RMI, EJB, JMS, and Web Services**.
- Familiar with all aspects of technology projects including **Business Requirements, Technical Architecture, Design Specification, Development and Deployment**.
- Experienced in **databases** such as **Oracle, DB2 and MS SQL Server** to manage **tables, views, indexes, sequences, stored procedures, functions, triggers** and packages.
- Familiar and Worked on various Operating Systems like **UNIX (Sun Solaris, AIX), Linux, Windows NT, Windows XP, Windows 2K**.
- Proficient in with GUI plug-ins like **Tiles Framework, Custom Tag Libraries**, validation plug-ins like **Validator Framework**.
- Responsible in migration from Hibernate to Open JPA.
- Developed dynamic web applications and web services using **RAD, Eclipse, JBuilder, JDeveloper, Netbeans and Web Logic workshop**.
- Implemented various Ajax Frameworks such as **JQuery, DOJO, JSON**. Designed and developed various **integration components** using **JMS and MQ Series**.
- Extensively worked on XML technologies like **XML, XSL, XSD, XSLT, Xquery, Xpath** and **DTD**.
- Expertise in developing Web Services for data transfer from client to server and vice versa using **Apache Axis, REST, SOAP, WSDL, and UDDI**.
- Written and developed scripts for automating tasks using **Ant 1.5, and UNIX shell programming**
- Exposure to Application Servers like **BEA WebLogic, IBM WebSphere, Apache Tomcat and JBoss**.
- Hands on experience with source control tools like **CVS, Clear Case, SVN, Git and Perforce**.
- Worked on **Spring-DAO** based declarative transaction management.
- Worked extensively with importing metadata into **Hive** using **Scala** and migrated existing tables and applications.
- Defined **AWS Security Groups** which acted as virtual firewalls that controlled the traffic allowed to reach one or more **AWS EC2** instances.
- Experienced in frameworks like **Jakarta struts framework, JSF, spring, Spring Boot, Spring Batch, Spring Security, Hibernate**.
- Developed functions and store procedures using **SQL and PL/SQL** for the application.
- Wrote database queries using **SQL and PL/SQL** for accessing, manipulating and updating Oracle database.
- Expertise in Cutting Edge Technologies like **EJB, JMS, JTA, XML and Web Sphere MQ Series** with good experience in Developing and Deploying Enterprise Java Beans on Application Servers like WebLogic, WebSphere and JBoss.
- Extensively worked on **debugging using Logging Frameworks** such as **Apache Log4j**.
- Performed **Unit testing, Integration Testing** and generating of test cases for web applications using **JUnit, Log4J, and Cactus**.

- Hands-on experience with **Integrated Development Environment (IDE)** IDEs like **IBM Eclipse, JBOSS, WSAD, TOAD, Edit Plus**.
- Excellent Technical, Analytical, Problem Solving skills, strict attention to detail and ability to work independently, work within a team environment.

### Technical Skills

<b>Languages</b>	<b>Java, C, C++, SQL and PL/SQL</b>
<b>Java Technologies</b>	<b>Java, JDK, J2EE, Servlets, JSP, JSTL, JDBC, JNDI, JMS, JTA</b>
<b>Databases</b>	<b>Oracle, MYSQL, MS SQL Server</b>
<b>IDE/Development Tools</b>	<b>Eclipse, NetBeans, JBuilder</b>
<b>Frameworks</b>	<b>Struts, Hibernate, Spring (MVC, DI, AOP, IOC, Tiles, Security, DAO)</b>
<b>Operating Systems</b>	<b>Windows, Linux and Unix</b>
<b>Methodologies</b>	<b>Agile, Scrum, RUP, TDD, OOAD, SDLC</b>
<b>Design Patterns</b>	<b>MVC, DAO, DTO, Front Controller, Session Façade, Business Delegate, Observer, Singleton, View Helper</b>
<b>Web/Application Servers</b>	<b>IBM WebSphere, BEA WebLogic, JBoss and Tomcat</b>
<b>XML Technologies</b>	<b>HTML, DHTML, CSS, JavaScript, XML, XSD, XSLT, JQuery, Xpath, DTD and AJAX</b>
<b>Build Tools</b>	<b>ANT, Maven, GIT, Gradle</b>
<b>Web Services</b>	<b>WSDL, UDDI, SOAP, REST, Restful, JAX-WS, JAX-RPC, JAX-RS</b>
<b>Version Controls</b>	<b>SVN, VSS, ClearCase and CVS</b>

### Professional Experience:

**Client:** Staples

**Duration:** Jan 2016 to till date

**Role:** Sr. JAVA Full Stack Developer

**Description:** Staples mainly focuses on developing a Retail application for the Staples Incorporation for selling products such as printer, scanners, floppy, office accessories, sheets etc. The motive of Staples is to provide quick service to the consumer who needs quick purchase of office accessories both in lesser and bulk quantities. Generation of internal feeds like Coupons, Rebates and Campaigns are additional challenges. It requires technical expertise as well as domain knowledge.

### Responsibilities:

- Defined and constructed layers, server-side objects and client-side interfaces based on **J2EE** design patterns, Developed and implemented **Swing, spring and J2EE based MVC (Model-View-Controller) framework for the application**.
- Designed Prototype and project layout skeletons using **ReactJS, JQuery and CSS/LESS and HTML5**.
- Experienced in developing web-based applications using **Java, XML, CSS, HTML, DHTML and JavaScript**.
- Implemented the associated business **modules integration** using **spring**, and **Hibernate data mapping**.
- Used **spring dependency injection, annotations and Spring MVC components** to implement business layer and navigation part of application
- **RESTful** web services using Jersey for JAX-RS implementation.
- Worked on **Rest Web services** as well as **Node Rest framework** for backend services, used **Mongo DB (NoSQL)** for database services.
- Worked on **SOA Web Services** using **SOAP** with **JAX-WS** for transmission of large blocks of **XML** data over **HTTP**.
- Involved in designing and building microservices.
- Used various **jQuery** and **Bootstrap** plug-in like **date picker, Bootstrap** selectors.

- Exposed and consumed **SOAP** based **Web Services** to communicate between systems.
- GUI design and development using **Java Swing, JFC** Used for open source web testing.
- Used **ActiveMQ** to improve the stability and scaled the system for more concurrent users.
- Developed web application and Implemented user interface using **Ruby, CSS, HTML5, JavaScript, JQuery**.
- Wrote **SQL queries, stored procedures** and enhanced performance by running explain plans.
- Configured and verified **AWS** workstations as per application requirement
- Used **GWT** and **Amazon AWS (EC2/S3/EBS)** for prototyping and subsequent evaluation.
- Developed UI for internal data aggregation tool using **GWT, SmartGWT, Tomcat, RCP&REST** services.
- Developed **Microservices** using **spring boot**, spring security and deployed to jwt cloud.
- Configured Swagger-UI registered **Micro service** with Eureka server to monitor service health check from **Spring Boot** admin console.
- Used **Micro service** architecture, with **Spring Boot** based services interacting through a combination of **REST** and **Apache Kafka** message brokers.
- Developed quality code adhering to **Scala** coding Standards and best practices.
- Used **Java Messaging Services (JMS)** for reliable and asynchronous exchange of important information such as payment status report.
- Experience in Single Page Application (SPA) using AngularJS, created Multiple & Nested Views, Routing, Controllers, Services and Custom Directives, Node.js, Bower, Grunt
- Developed new features for a **REST SOA** backend in **Clojure** and led evolution of an entire backend architecture.
- Worked on **Rest Web services** as well as **Node Rest framework** for backend services, used **Mongo DB (NoSQL)** for database services.
- Developed the Web application using **Spring MVC, Ext-JS, Html and JavaScript**.
- Created and configured new **JIRA** projects and worked with departments to maintain existing **JIRA** projects.
- Used **log4j** for logging and **SVN** for version control.
- Brief experience on implementing the **AngularJS** in creating animations based on CSS classes for a new requirement surfaced for the client.
- Creating a responsive web application integrating Twitter Bootstrap with **Angular JS** and media queries.
- Developed **Maven scripts** and developed builds using **Maven** and continuous integration servers like **Jenkins**.
- Used **Maven** goals for testing and packaging the various components and releasing on **Apache Archiva** for easy accessibility and maintenance within the organization
- Consumed **Web Services** for getting the credit card information from third party application.
- Use of **data structures and algorithms** for time and memory complexity reduction
- Used **JMeter** to test performance of SOAP protocol.
- Used Junit and TestNG testing Framework as a test runner with **Selenium**.
- Used to test performance both on static and dynamic resources using **JMeter**.

**Environment:**Java, J2EE, JDK 1.7/1.8, RCP, AWS SDK, Ext JS, Git, GWT, Swing, JFC, Spring 4.x, AWS SNS/SQS, hibernate4.x, Core Java,Scala, SOAP/Rest, Web Services, Python 2.7, JavaScript, clojure, UML, HTML5, CSS, SASS, RAD 7, WAS 8 WSDL, SDK's, JIRA 5.x/6.x, JAXB, Linux, JAX-WS, JAX RPC, JMS, JSF, UNIX, Selenium NOSQL(MongoDB), Angular JS, ReactJS, AJAX, Apache JMeter, JQuery, JUnit, Maven, EMR, Oracle 10g.

**Client:** Apple, SunnyVale, CA

**Duration:** May 2014 to Dec 2015

**Role:** Sr. JAVA Full Stack Developer

**Description:** Agent Toolbox is the new tool that the ASCS (Apple Store Customer Support) agents use now for all support calls - intuitive and user friendly. All the 1-800-MY-APPLE calls will be routed to the Agent Toolbox and the calls are taken care by the APPLE Employees. This is a single web page application and works on the Safari browser only as of now. Based on Service Oriented Architecture. This project was implemented to drive down AHT (average call handling time) and reduce agent-training time.

#### **Responsibilities:**

- Developed the **J2EE** application based on the **Service Oriented Architecture**.

- Used **Design Patterns** like **Singleton, Factory, Session Facade and DAO**.
- Developed using new features of **Java 1.7** Annotations, Generics, enhanced for loop and **Enums**.
- Developed screens using **HTML5, CSS, JavaScript, JQuery and AJAX**.
- Creation of prototypes using **Inkspace and Quickview 3.0**
- Developing and editing user Interface Screens using **JSP, HTML5.0, JavaScript and node.js**.
- Improve presentation of webpages **CSS 3.0, Adobe Flash and JQuery plug - ins**.
- Designed SOA integration using **Apache CXF**. Enabled rapid service tier development.
- Used **AngularJS** for **DOM Manipulation, Filters, and Directives**.
- Web application backend **REST API** utilizing **AngularJS and Oracle**.
- Used Twitter **Bootstrap** to create responsive web pages which can be displayed properly in different screen sizes.
- Worked on **Cross-browser Compatibility** of UI pages. Implemented for internet browsers such as **Chrome, Firefox, and IE 8/9/10/11**.
- Debugged the application using **Chrome Inspector, Firebug, IE Tester** and many other debugging tools.
- Created and injected **Spring** services, **Spring** controllers and DAOs to achieve **dependency injection** and to wire objects of business classes.
- Used **Spring Inheritance** to develop beans from already developed parent beans.
- Implemented SOA to develop **REST Based Web services** using **Apache Axis**.
- Developed Service layer Using **Spring, AspectJ** and persistence layer using Hibernate.
- Designed **spring boot** mechanism without configuration XML's and replaced it with Java classes.
- Involved in implementing DAO layers using **JPA** standards and Hibernate API interfaces.
- Built **spring based Java and Scala micro services** to support enterprise web application.
- Created SQL queries, PL/SQL Stored Procedures, Functions for the Database layer by studying the required business objects and validating them with Stored Procedures using DB2 and JPA with Hibernate provider.
- Extensively used **Hibernate mappings, HQL, EHCACHE, Query, Criteria, Lazy loading Transactions and Lockings**.
- Developed **REST Web Services clients** to consume those Web Services as well other **enterprise wide Web Services**.
- Exposed the **Web Services** to the client applications by sharing the WSDL's.
- Used **DAO pattern** to fetch data from database using **Hibernate** to carry out various database.
- Used **Hibernate Transaction Management, Hibernate Batch Transactions, cache concepts**.
- Modified the **Spring Controllers** and Services classes so as to support the introduction of **Spring** framework.
- Created logical and physical data models putting to practice, concepts of **normalization** and **RDBMS**.
- Used **XStream API** to transfer data back and forth between **Spring MVC** and **Ext JS**.
- **Jenkins** to automate the build and deploy process.
- Developed and consumed **Apache CXF** based Web Services as part of Payments Application.
- Focused on **Test Driven Development**; thereby creating detailed **JUnit** tests for every single piece of functionality before actually writing the functionality.
- Used **Rational Application Developer (RAD)** which is based on **Eclipse**, to develop and debug application code.
- Used **Log4j** utility to generate run-time logs.
- **SVN** was used for project management and version management.
- Deployed the application on **Websphere 7.0** application server.

**Environment:** J2EE, Spring framework, Spring MVC, Hibernate 3.x, Angular JS, jQuery, JSON, JSF, Servlets 2.3, JDBC, AJAX, Web services, SOAP, XML, Java Beans, XStream, NetTool, Apache CXF 2.6, Apache POI, Ext JS, JQuery, JavaScript, Oracle 10g, IBM RAD, Websphere 7.0, Agile Methodology, Design Patterns, SVN, Apache Maven, JUnit, HtmlUnit, XSLT, HTML/DHTML.

**Client:** BCBS, Richardson, TX

**Duration:** Nov 2012 – Apr 2014

**Project:** Small Group Renewal

**Role:** Sr. Java Full Stack Developer

**Description:** Small Group Renewal (SGR) is the automated solution for streamlining the health insurance sales process. BA Renewals delivers information and tools created to assist with reselling or reacquiring existing accounts,

presenting additional plan offerings and alternatives, and monitoring anniversary effective dates to reduce the forfeiture of any business opportunities. Workflow, Single Rating Engine (SRE), and other relevant common services are used to enable Renewing process automation.

### Responsibilities:

- Involved in complete development of 'Agile Development Methodology/SCRUM', developed and tested the application during various iterations.
- Involved in various phases of Software Development Life Cycle (SDLC) such as requirements gathering, modeling, analysis, design, development, testing, and monitoring.
- Spring JMS was used to connect to **ActiveMQ** for the purpose of interconnecting various internal systems.
- Java Messaging Service(JMS) - IBM MQ Series provides independent and potentially non-concurrent applications on a distributed system to communicate with each other, Used to achieve SOA.
- Involved in fitting the Data power SOA web sphere appliance in the **web services** for the ease of error handling and load balancing.
- Tested **Web Services** using SOAP UI and involved in composing test suites for operations.
- Used **Collection Framework and Multithreading** for performing cache Operation.
- Developed, and debugged the **EJB** with WebSphere Application server.
- Developed the middle tier using **EJBs, Java Servlets**.
- Developed **session, entity beans and message driven beans**.
- Designed and developed web pages using with **HTML5, DHTML, XHTML, CSS3, Ajax, JSP** and **JQuery** based on the W3C standards and Web 2.0.
- Achieved role control functionality mainly by retrieving **JSON** data from **AJAX** and combining the retrieved data with **jQuery** to manipulate nodes in DOM tree.
- Utilized a combination of regular expression and **jQuery** Validation Plugin to conduct input check.
- While in the newer sub project, conducted validation in **AngularJS** way.
- Wrote **Oracle PL/SQL Stored** procedures, triggers
- Involved in Use Case Diagrams, Class Diagrams and Sequence diagrams using **Rational Rose**.
- **MQ** was used to provide a single unifying transport that reduces cost and maintenance efforts, including support for **HTTP, REST and JMS**.
- Created test cases to validate **Regular Expressions**.
- Developed reports in an excel format using **POI-HSSF API**.
- Used **XML/XSLT** for transforming common XML format and **SAML** for Single Sign-On.
- Designed configuration **XML Schema** for the application.
- Used **Regular Expressions** to Serializable for pattern classes.
- Developed **Maven scripts** and developed builds using Maven and continuous integration servers like Jenkins.
- Used **XMLHttpRequest** Object to provide asynchronous communication as part of **AJAX** implementation.
- Experience with **KORN** based scripts as part of triggering **UNIX** and J2EE based Jobs.
- Extensively used various **Spring Framework** modules like **DI(IOC), Bean Wiring, Inheritance, Auto Wiring, JDBC Templates, AOP and Spring Quartz Schedulers for Jobs**.
- Used SOAP for **Web Services** by exchanging XML data between applications over HTTP.
- **WSDL** was used for publishing Web Service interfaces.
- **JUnit** tests were written to test each module in the application.
- Wrote **Ant Scripts** to automate the build and deploy process.
- Prepared the test plans and executed test cases for unit, integration and system testing using different automation tools like **JUnit, Soap UI and Fiddler**.
- Performance Testing experience using **Jmeter**.

**Environment:** Core Java/J2EE, Servlets, JSP, Java Spring, JSTL, EJB, JMS, XML, XSLT, JDBC, AJAX, IBM WebSphere Application Server 7.0, Oracle 10g, WSAD, IBM MQ, HTML, CSS, JavaScript, Eclipse, UML, Rational Rose, Windows XP, CVS, JUnit, ANT, Adobe Flex, Visio.

**Client:** JPMorgan Chase, NYC, NY

**Duration:** Feb 2011 – Oct 2012

**Project: Prime Brokerage & Financing Technology - PB CSR Dashboard****Position: Sr. Java Developer**

**Description:** **CSR Dashboard** is an internal facing application, accessed via the **Prime View portal**, which is currently designed to serve the CSR who need to provide a proactive and superior client service with Option Assignment events, with Corporate Actions and Money Transfer events to follow. This tool provides a CSR centric view of all key events for all families supported by a CSR, Team Lead or Area Manager. As of today Option Exercise and Corporate Actions have been on boarded.

**Responsibilities:**

- Worked on **Agile** Scrum development lifecycle with 2-week sprints, fast-paced deadlines to implement new features and get it deployed to prod every 2 months.
- Used **Spring** Framework for **dependency injection**, **integration** of **Hibernate** using **Spring ORM support**, development of **RESTful web services** to give **JSON** output.
- Used **Spring MVC** front controller pattern to handle requests starting with dispatcher servlet to handle incoming requests.
- Configured **Spring MVC** from scratch using **XML configurations**, **namespace handling**, **spring security** set up and giving access to resources.
- Used the concepts of **Internationalization and Localization** using Spring.
- Involved in writing code to transform **XML** documents using JAXB Marshalling and Unmarshalling using Spring Injections.
- Used Hibernate in **persistence layer**, written **hibernate mappings using Annotations, HQL, Criteria and Named Queries**.
- Involved in Design and Development of **RESTful API**.
- **REST web services** are created using spring with **Jackson Mappers** to exchange data using **JSON data structure**.
- Used **SVN** for source Version Control, resolving code conflicts and merging code base.
- Deployed the application in **Web Logic Application Server**.
- Strong experience in writing **PL/SQL queries** and performance tuning.
- Developed **UnixShell scripts** to automate repetitive database processes.
- Used **Maven** for dependency management, build applications and deploy to the containers, application servers and create versions in the repository.
- Involved in **SDLC** and moving project from one stage to another such as testing, UAT and production.
- Designed and developed the UI using **Node.js, Angular JS, JQuery, Ext JS, Backbone JS, HTML 5, CSS 3, bootstrap and JSP**.

**Environment:** Core Java, Java 1.6, Spring, Hibernate, SVN, Apache, Eclipse 3.3, JSP, JNDI, Log4j, JUnit, XML, XSD, Angular JS, Node.js, JQuery, HTML 5, bootstrap, JavaScript, Web Logic Application Server, Apache Tomcat 6.0, Oracle, Windows XP, REST API, NetBeans, UNIX.

**Client: American Family Insurance Madison, WI****Duration: Nov 2009 –Jan 2011****Role: Sr. Java/J2EE Developer**

**Description:** Sales Tool Project is an Online Auto Insurance Sales tool used to estimate the quote, calculate the premium as per state rules and sell the quote to customers. Customers can access this tool from [www.amfam.com](http://www.amfam.com) and buy insurance online, Sales Tool Rewrite project is an enhancement and Integration project with the following major business requirements. Implement a new Online Auto Insurance Sales process flow for quoting to reduce the number of questions/responses necessary to provide a quote premium.

**Responsibilities:**

- Analysis and understanding of business requirements.
- Involved in the architecture team for design and implementation of system.
- Developed application using **Spring MVC, JSP, JSTL and AJAX** on the presentation layer, the business layer is built using spring and the persistent layer uses **Hibernate**.

- Developed Custom Tags to represent data in a desired unique table format and to implement paging Logic.
- Used JavaScript for client-side validations, and **AJAX** to create interactive front-end GUI
- Created the web application using **MVC Struts framework**.
- Designed developed and maintained the data layer using Hibernate and performed configuration of Struts, Application Framework.
- Developed views and controllers for client and controllers for client and manager modules using **Spring MVC** and **Spring Core**.
- Developed user interfaces using **JSP, HTML, CSS, JavaScript, JQuery** and **Ajax** with **JSON**.
- Business logic is implemented using **Spring Core** and **Hibernate**.
- Data Operations are performed using **Spring ORM** wiring with **Hibernate** and Implemented **HibernateTemplate** and criteria **API** for **Querying database**.
- Developed Exception handling framework and used **log4J** for logging.
- Developed **WebServices** using **XML** messages that use **SOAP**. Created **WSDL** and the **SOAP** envelope.
- Developed and modified database objects as per the requirements.
- Involved in Unit integration, bug fixing, acceptance testing with test cases, Code reviews.

**Environment:** Java, J2EE, JSP, Spring, Hibernate, JMS, XML, Web Services, SOAP, AJAX, HTML, JavaScript, CSS, Log4J, JUnit, Maven, WebSphere, Application Server, Eclipse, Oracle.

**Client:** ValueLabs, Hyderabad, Andhra Pradesh

**Duration:** May 2008-Oct 2009

**Role:** Java/J2EE Developer

**Description:** BSHM builds a system, which helps both Doctor and patient in an efficient manner by providing information about the availability of Doctors, maintaining patient records according to their visit and generating reports of patients of their medications, Lab Findings, Problems List and serves the pharmacy maintenance also. The information may be very critical from both doctor's and patient's point of view, BSHM maintains a safe and secure database system for patients. BSHM stores patient's records efficiently and make them easily retrievable. The whole system modules are Appointments, patient chart, Reports, pharmacy, Administration.

#### **Responsibilities:**

- Involved in Analysis and Design of the Project, which is based on **MVC (Model-View-Controller) Architecture and Design Patterns**.
- Involved in developing prototypes of the product.
- Created **UML Use Cases, Sequence diagrams, Class diagrams** and **Page flow diagrams** using **Rational Rose**.
- Designed GUI Components using **Tiles** frame work and Validation frame work.
- Designed and developed UI using **HTML, JSP** and **Struts** where users have all the items listed for auctions.
- Developed **ANT** scripts for builds and deployments.
- Developed **Controller Servlets, Action** and Form objects for process of interacting with **Oracle** database **and retrieving dynamic data**.
- Responsible for coding **SQL** Statements and **Stored procedures** for back end communication using **JDBC**.
- Parsing of XML documents was done using **SAX** and **DOM** and XML transformation was done using **XSLT**.
- Wrote **JavaScript** validations on the client side.
- Involved in writing Detail Design Documents with **UML** Specifications.
- Involved in unit testing and system testing and also responsible for preparing test scripts for the system testing.
- Responsible for packaging and deploying components in to the **Tomcat**.
- Used java IO to create reports, which were mailed to be mailed to manager every hour.
- Responsible for performance tuning of the product and eliminating memory leakages in the product.
- Participated in Code Review meetings with developers.

**Environment:** CoreJava, Java Beans, JSP, Jbuilder, Javascript, Servlets, JDBC, LOG4J, XML, XSLT, HTML, Struts, Tiles, SAX,DOM, Tomcat, UNIX, Oracle.