**VENKAT**

**(515)978-1798**

**Venkatworkplace5@gmail.com**

**PROFESSIONAL SUMMARY**

* Overall 8 years of professional IT experience in **Project analysis, Design, Development, Testing and Deployment** of Web Based Applications using **Java/J2EE.** Actively involved in each phase of **Software Development Life cycle** (SDLC)
* Strong application development experience in using **Agile** Software Development methodologies like **Scrum, Sprint** andTraditional software models like **Waterfall and TDD**.
* Expertise in developing **web pages** using **HTML5, CSS3,JavaScript, JQuery, Ajax, AngularJS, Bootstrap** with webpage cross browser compatibility and **responsive web design** andServer scripting language like **Node JS, BackboneJS.**
* Expertise in Web Front End Technologies **Struts, Tag Libraries** and **Struts custom validation rules, Tiles, JSTL, Java Script, DHTML** and **XML/XSL.**
* Developed web-based enterprise applications using **core Java, J2EE, Servlets, JSP, EJB, JMS, JDBC, Hibernate, Web Services (SOAP** and **REST), MVC framework (Struts, Spring MVC), SQL and Object-Oriented Programming techniques.**
* Proficient in core java concepts like **Collection Framework**, **Multi-threading**, **Generics**, **Annotations**, **Serialization, Thread pools, JavaBeans, Externalization.**
* Proficient in implementation of frameworks like **Struts, Spring (Spring MVC, Spring Web Flow, Spring IOC, Spring AOP, Spring Security, Spring Boot, Spring Data, Spring Batch), JSF, AJAX** frameworks (**Rich Faces, My Faces**) and **ORM** frameworks like **Hibernate, IBATIS.**
* Expertise **XML** technologies like **DTD, XSD, XSLT** and various parsers like **DOM, SAX and JAXB.**
* Extensive experience working with RDBMS such as **MySQL**, **MS SQL Server, Teradata, DB2, Oracle.**
* Experience in working with the **NoSQL** Database like **MongoDB** to manage extremely large data sets.
* Expertise at **JDBC API** for connection and access to databases.
* Expertise in Creating **Hibernate configuration** file, **Hibernate Mapping** files and defined persistence classes to persist the data into **Oracle Database**.
* Proficient in developing **Web Services**, related technologies &frame works**: WSDL, SOAP, REST, JAX-WS, JAXB, JAX-RPC, AXIS and Jersey, SOAP UI** and generating client’s client using Eclipse for Web Services consumption.
* Knowledge on **Java8** features like **lambda expressions** and **Java Stream API.**
* Experience with and solid understanding of **Microservices.**
* Managed **Amazon Web Services** like **EC2, S3 bucket, ELB, Auto-Scaling, SNS, SQS, AMI, IAM, Dynamo DB, Elasticsearch, Virtual Private Cloud (VPC)** through AWS Console and API Integration.
* Worked on deployment, installation, configuration and issues with Application servers like **Apache Tomcat, IBM Web Sphere, BEA WebLogic and JBoss Enterprise Application Server.**
* Experience in implementing Design Patterns like **Singleton, Factory, MVC, Data Access Object** and **Business Delegate.**
* Experienced in developing UML diagrams with **Star UML, Rational Rose.**
* Experience on different IDEs such as **RAD, Eclipse, Spring Tool Suite**, and **IntelliJ.**
* Actively involved in the DevOps streamlining process through **JenkinsCI** and **CD** Release Automation.
* Subversion **SVN, CVS, GIT** and Visual Source Safe as versioning software tools.
* Experienced in transferring data from different data sources into **HDFS** systems using **Kafka** producers, consumers and **Kafka** brokers
* Configured auto-scaling groups for applications like Elasticsearch and **Kafka** to scale automatically when needed.
* Hands on experience in building tools like **ANT, Maven, Gradle**.
* Extensively used **Apache Camel** for transformation and used both Java DSL and XML DSL.
* Extensively worked on **Pivotal Tracker** and **JIRA** tools for tracking stories in a Project in a different methodology of **Software Development Life Cycle**.
* Used **Apache** **POI** to convert XML files to Excel files and to read Excel files.
* **Configured and created** application **log files using Log4J** to trace required application messages.
* Having Experience on **UNIX, Linux** commands and Deployment of Applications in Server and ability to work effectively on **Windows** platforms.
* Ability to work effectively in cross-functional team environments and experience of providing training to business user.

**SKILL SET**

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| **Languages** | C, C++, Java 1.8, J2EE, SQL, PL/SQL, Python |
| **Enterprise Java** | Java, J2EE, Swing, RMI, Sockets, JDBC, Servlets, JSP, JMS, Java Beans, JSTL, JSF, Struts, EJB, Spring, JTA, JNDI and JPA |
| **Web/XML Technologies** | HTML, XHTML, JavaScript, AngularJS, CSS, XML, XSD, XSL/XSLT, SAX/DOM, AJAX, JQuery, JSON,Backbone JS,DOJO, NodeJs. |
| **Tools & Framework** | Struts, Hibernate, Spring MVC, Spring Web Flow, Spring IOC, Spring AOP,JMS, JSF, Log4J, Mockito, SOA,Jsp reports, SOAP UI, Spring Boot, Spring Batch, Spring Security, Spring Data. |
| **Web/App Servers** | Web Sphere, Apache, Tomcat, JBoss, EAP,Weblogic, Apache Camel |
| **Database** | Oracle, SQL-Server, MySQL server, MS SQL, IBM DB2, MongoDB and NoSQL, Cassandra. |
| **Development Tools** | Eclipse,My Eclipse, RAD,Spring Tool Suite (STS), IntelliJ |
| **Modeling/ CASE Tools** | Rational Rose, MS Visio Professional, Star UML |
| **Testing Tools/ CI Tools** | Selenium, JUnit, SoapUI, Putty, Rational Clear Quest, RTC, LoadUI, JIRA, Jenkins |
| **Version Control** | GIT, CVS,SVN, Rational clear case, Star Team |
| **Platforms** | Windows Win 2k Server, Sun Solaris, UNIX |
| **Cloud Technologies** | AWS EC2, S3 bucket, ELB, Auto-Scaling, SNS, SQS, AMI, IAM, Dynamo DB, Elastic search, Virtual Private Cloud (VPC), Micro Services |

**PROFESSIONAL EXPERIENCE**

**Client:Charter CommunicationsJuly 2017-Till Date**

**Location: St. Louis, MO**

**Role: Sr. Java Developer**

**Description:**Charter Communications is an American telecommunications company, which offers its services to consumers and businesses under the branding of Spectrum. Providing services to over 25 million customers, The Granite 100 project will establish an inventory accuracy rate for discoverable elements above 95% through the creation, standardization and implementation of new tools and clearly defined processes. The overall project scope of the Granite 100 project includes Optical Transport, RDC, and Video and enhancing Granite IP network inventory to include network transport, video, WAN, datacenter, and physical inventory.

**Roles & Responsibilities:**

* **Involved in analysis, specification, design, and implementation** and testing phases of Software Development Life Cycle (**SDLC**) and used **agile** methodology (**SCRUM**) for developing application.
* Application is implemented using **agile** methodology where there is a daily **SCRUM** meeting to understand the status and resolve any issues.
* Designed, developed a custom, single-page, responsive web application on front end using **AngularJS**.
* Designed and developed the End Points (Controllers), **Business Layer**, **DAO Layer** using **Hibernate/JDBC** template, using **Spring IOC (Dependency Injection)**.
* Used Java-J2EE patterns like Model View Controller (**MVC**), **Business Delegate, Data Transfer Objects, Data Access Objects, factory patterns.**
* Used **Spring Framework AOP** Module to implement logging in the application to know the application status.
* Used **Spring DAO** Module along with **Struts Framework** to deal with Database.
* Implemented the application using **Spring IOC, Spring MVC Framework, Spring Batch, Spring Boot** and handled the security using **Spring Security**
* Implemented Batch jobs to deal with Large number of chunks using **Spring Batch** Framework to execute the similar jobs simultaneously.
* Used **Hibernate**, object relational mapping **(ORM)** solution, technique of mapping data representation from **MVC** model to Oracle Relational data model with an **SQL**-based schema.
* Used Apache POI for uploading Excel files and optimized the load time by extensively leveraging**Java 1.8 lambda expressions**, **Streams** and **parallel Streams**.
* Implement **Java 1.8** features including **Lambda**, Advanced for **each loop**, and **Streams**.
* Implemented **RESTful** web services using **Jersey** for JAX-RS implementation.
* Implemented **the REST API's** and data transformers using the JAVA connector which involves use **Java 1.8** features **Lambda** and **Streams** in particular.
* Involves in the design and development of **RESTful Web Services** using **ApacheCXF**.
* Performed **CRUD** operations like Update, Insert and Delete data in **MongoDB.**
* Worked on **MongoDB** database concepts such as locking, transactions, indexes, Sharding, replication, schema design, etc.
* Designed and developed **Microservices** business components using **Spring Boot**.
* Worked with **AWScloud** service in creating **EC2** instances and providing them roles and sometimes participated in writing custom policies and deployed applications on **Elastic Bean Stalk** and **EC2.**
* Participated in troubleshooting issues on **AWS**, **Netflix Eureka** and Cloud environments.
* Worked with core java concepts like **Collections Framework**, **Multithreading** and Memory management.
* Develop **Docker** based **microservices** deployment modules with **Jenkins** 2.0
* Workedwith **Docker** to deploy **Microservices** in modern containers to increase Isolation.
* Worked with **Spring Ribbon and Kafka** broker service to handle heavy traffic.
* Involved in developing Hive DDLs to create, alter and drop Hive tables and storm, & **Kafka**.
* Used **Apache Camel** for routing the exchanges between different systems.
* Used **ApachePOI** to create, modify, and display MS Office files using Java programs.
* Involved in installing and configuring **Maven** for application builds and deployment
* Worked on **Log4J** to validate functionalities and **Mockito** framework **JUnit** for unit testing
* Automate build process through **Maven** build framework
* Used **JIRA** to assign, track, report and audit the issues in the application.
* Setup the continuous Integration (CI) process for the application using the **Jenkins.**
* Used **GIT** to maintain the version of the files and took the responsibility to do the code merges from branch to trunk and creating new branch when

**Environment:** HTML5, CSS3, JavaScript, Bootstrap, Agile(SCRUM), AngularJS, AJAX, Hibernate, Spring, Spring Batch, Spring Boot, Spring Security, Servlet, XML, GIT, JSP, Spring MVC, JDBC, Mockito, JUnit, Maven, IBM WebSphere, BackboneJS, Methodology, Kafka, Restful, Apache POI, Docker, Log4J, Postman, MongoDB, AWS,Java8, Microservices**,**Mockito, Apache Camel, JIRA, Jenkins and STS.

**Client:JPMorgan chaseJan 2016-Jun 2017**

**Location: Houston, TX**

**Role: Java Developer**

**Description:**The move money services help general users and investment users, to carry monetary transactions among friends, family and to manage loans and pay bills.  The project consisted of developing and maintaining services of chase move money services like quick pay, bill pay, home loan accounts, mortgage accounts etc. the services were developed maintained and tested for the devices and the web. We worked on the architectures, services and the front-end UI for each of the applications.

**Roles & Responsibilities:**

* Responsible for all stages of design, development, and deployment of applications. Active role in **Test Driven Development** termed as **TDD** apart from Agile Software Development.
* Used **Multithreading** in programming to improve overall performance.
* Designed, analyzed and developed the **front-end** and **back-end Servlets, Bootstrap** for designing**, HTML5, CSS3, AngularJS** and **AJAX,** for developing presentation layer**.**
* Involved in developing **UI** pages using **AngularJS** and calling the **Rest API's** from backend.
* Involved in payment status report for asynchronous exchange of information using JMS.
* Participated in creation of Spring Configurations using **Java 1.8** features, **Lambda Expressions, Streams, Filters.**
* Demonstrable experience working in continuous integration and continuous deployment systems (CICD)
* Actively involved in using **MVC, HTML5** to enable client-side date to meet specific criteria by applying various validation variables and used the **CSS** classes to provide visual feedback on validation.
* **JSON** used as the main data-interchange format in place of **XML.**
* Used **Apache camel** integration for routing and transforming the data between two Applications using HTTP protocol.
* Used **Sonar** to analyze and measure source code quality
* Demonstrated experience with Continuous Integration, Continuous Deployment (CICD) methodologies.
* **CRUD** was used as part of servlets where **DML** operations were required on **RDBMS** like **SQL DB’s**
* Created **RFP** microservice to provide **RESTful AP**I utilizing **Spring Boot** with Microservices.
* Used PMD, Find Bugs, Jenkins, Sonar to ensure the continuous integration in the project
* Developed **SOAP** based **JAX-WS Web** Service interfaces for integrating multiple systems, code re-usability.
* Used **Dependency Injection** feature for **wiring** and defined dependencies using constructor arguments.
* Implementation of data access layer has been cumbersome for a while and this was greatly resolved using **Spring JPA** through implementation of data access layers there by reducing boiler-plate-code.
* Used **AWS** SDK for connection to Amazon **S3** buckets as it is used as the object storage service to store and retrieve the media files related to the application.
* Used **Microservices** to ensure the scalability of application on cloud infrastructure**.**
* Developed **RESTful** Web services for other systems to interact with our system and secured the service with **Spring-Security OAuth.**
* Used spring framework including **spring core/IOC**, **Spring Web**, **Spring Security**.
* Used Jenkins as build management tool for continuous integration process(CICD).
* Configured **Hibernat**e with **Spring ORM** as part of **Spring** and **Hibernate** Integration for best results.
* Used **Spring MVC** components to implement business layer and **SpringBoot** for **Microservices**.
* Utilized **Spring core**, **AOP** and **security** to build robust business operations with transactional support.
* Worked with **IDE** as **Eclipse Indigo** and deployed into **Apache Tomcat Web Server** & used **Maven build tool** to achieve more functionality for build process.
* Defined several **UML** diagrams; Activity diagrams, Sequence and Object diagrams.
* Developed unit and integration tests for existing microservices using **JUnit, Mockito** and **Docke**r environments.
* Developed the data access classes using **JDBC** and **SQL query log4j** for logging and **SVN** for version control.
* Worked on **RESTful** Web services as well as **Node** Rest framework for backend services used **Mongo DB (NoSQL)** for database services and **RESTful** web services using Jersey for **JAX-RS** implementation.
* Created **Hibernate** persistent and configuration files for **ORM** implementation
* Code review using sonar tools and correcting the code base on the Sonar Report
* Used **Git** as Version Control System for the application. Used **JMeter** to test performance of **SOAP** protocol.
* Used **JBoss** as the chief enterprise level server while dealing the database activities with **Hibernates**.
* Participated in Defect tracking team using **ALM Quality Center for** Defect tracking, Defect priority and status.
* **GUI** design and development using **Java Swing, JFC** Used for open source web testing.
* Developed **AWS LambdaFunctions** in a stateless style and ensure there is no affinity between and compute infrastructure to manage the servers and run the code in the **AWS.**
* Create team specific Agile process flow in JIRA to move tasks from one activity to another.

**Environment:**HTML5, CSS3, JavaScript, Bootstrap, Agile(SCRUM), AngularJS, AJAX, Hibernate, Spring, MongoDB, Spring Batch, Spring Boot, Spring Security, Servlet, XML, GIT, JSP, Postman, Spring MVC, JDBC, Mockito, JUnit, Maven, IBM WebSphere, Restful, Log4J, SOA, AWS, MicroServices**,**Swagger, JIRA, Spring Security, Jenkins and STS.

**Client: Intermountain Health Care (IHC) Dec 2013 – Dec 2015**

**Location:Salt Lake City, UT**

**Role: Java/J2EE Developer**

**Description:**The Health Evaluation System is developed for the doctors who can use the system and give the details to the patients by the printout. This system will have all the information regarding the health-related issues. Using this system doctor will get all the types of medicines for any type of health issues. The system will store all the information regarding health issues and their medications for different ages.

**Roles & Responsibilities:**

* Involved in the complete **SDLC** including design of System Architecture, development of System **Use Cases** based on the functional requirements.
* Involved in Daily Scrum(**Agile**) meetings, Sprint planning and estimation of the tasks for the user stories, participated in retrospective and presenting Demo at end of the sprint.
* Documented detailed technical design documents including class diagrams, technical flow diagrams and sequence diagrams.
* Responsible for development of Business logic in **CoreJava**.
* Involved in the front end using **JSP, JSTL JQuery, Servlets, HTML, JavaScript, and AJAX**.
* Created user-friendly GUI interface and Web pages using **HTML, Angular JS, JQuery, Ajax and Java script**.
* Implemented **MVC** architecture using **JSP, Spring, Hibernate** and used **Spring Framework** to initialize managed beans and services.
* Involved in development of Agent Verification System using **Spring MVC** framework.
* Used **Spring Inheritance** to develop beans from already developed parent beans.
* Used **Spring AOP** for **logging**, **auditing**, **transactionmanagement** to distinguish **businesslogic** from the cross-cutting concerns.
* Used **Spring Security** for **Authentication and Authorization** of the application.
* Created **data model** and generated **Hibernate mappings** and **domain objects** using Hibernate tools.
* Interfaced with the **MySQL** back-end database by integrating **Spring** with **Hibernate**.
* Consumed **RESTful** Services APIs, and Local Storage for Data Persistence.
* Developed **REST API** for test server for Express Router middleware-based API's with **Mongo DB** integration
* Implemented **MongoDB** database concepts such as Locking, Transactions, Indexes, Sharding, Replication, Schema design.
* Extensively used **hibernate** named queries, criteria queries, Hibernate Query Language (**HQL**) and Optimistic Locking and Caching to process the data from the database.
* Used object storage container to store the secured files and retrieved from API by using **Amazon webservices**(**AWS**).
* Designing and developed a data migration strategy and source to target mapping to migrate the data out of the legacy systems into the **Cassandra** customer DB.
* Responsible for design of **WSDL** files and schemas. Designed and hosted **SOAP** based Web Services on **Web Sphere** Application Server.
* Used Spring Core Annotations for Dependency Injection and used **Apache Camel** to integrate spring framework.
* Implemented quartz jobs for running the batch jobs based on the cron triggers configured in the spring files.
* Developed Unit /Integration test cases using **Junit** tool.
* Used **Gradle** tools for building and deploying the Web applications.
* Used **JIRA** tool for tracking stories progress and follow agile methodology.
* Used logging techniques provided by **Log4j** tool for efficient logging and debugging.
* Developed the application using **Eclipse** as the **IDE** and used its features for editing, debugging, compiling, formatting, build automation and **version control (SVN).**
* Involved in Maintenance and Enhancements for the project.

**Environment:**HTML5, CSS3, JavaScript, AngularJS, Agile, Struts, Hibernate, Spring, Servlets, JSP, Junit, AJAX, JQuery, SOAP, WSDL, JAX-WS, Cassandra, Log4j, Apache POI, RESTful, Mule ESB MongoDB, PL/SQL, web services, AWS, WebSphere Application Server, Apache Camel, Selenium, MySQL, Eclipse, Gradle, Junit, JIRA, SVN.

**Client: AIG Insurance Sep 2012-Nov 2013**

**Location: Chicago, IL**

**Role: Java/J2EE Developer**

**Description:** The Agent Portal project involves the design and development of a Web based application to provide online insurance services. The web application provides functionalities such as policy management, profile management, and claim reporting for home and vehicles and all kinds of insurance policies.

**Roles &Responsibilities:**

* Involved in **SDLCrequirements gathering, analysis, design, development and testing** of application developed using **Agile** methodology.
* Defined new validations through **AngularJS** for the form field validation implemented through **HTML5**.
* Used **Spring MVC** and **Dependency Injection** for handling presentation and business logic.
* To maintain loose coupling between layers published the business layer as services and injected the necessary dependent components using **Spring IOC** and published cross cutting concerns like Logging, User Interface exceptions, Transactions using **Spring AOP.**
* Integrated **Spring DAO** for data access using Hibernate.
* Used **Spring Security** for **Authentication** and **Authorization** of the application.
* Implemented persistence framework using **Hibernate**& Handled **Transaction Management** using the provided data source.
* Extensively used **JSON** to parse the data from server side to satisfy the business requirement.
* Responsible for designing **Hibernate mapping files** based on business logic and Object relationships.
* Integrated **Spring and Hibernate** together and worked on developing backend components and services using Hibernate and spring and extensively used **HQL** and **SQL** for querying databases.
* Developed **Message Driven Bean** for asynchronous sending Messages using **JMS**.
* Consumed **Web Services** to interact with other external interfaces in order to exchange the data in different forms by using **RESTful** service.
* Used **Spring JMS** module for lookup for the queues and MDBs for the listeners
* Established Database Connectivity using **JDBC, Hibernate O/R mapping with Spring ORM** for **Oracle**.
* Packaged and deployed the application in **IBMWebSphere**.
* Written **LINUX** shell scripts to identify user login information.
* Used **Log4J** for application logging and notification tracing mechanisms.
* Used **Maven** tools for building and deploying the Web applications.
* Analysis and Bug fixin
* g of the production problems and defects along with enhancements
* Implemented **JUNIT** test cases for unit testing and Suites for end to end testing.
* Used **JIRA** for tracking the **Project Stories** in Agile Methodology.
* Used **Tortoise SVN** to maintain the version of the files and took the responsibility to do the code merges from branch to trunk and creating new branch when new feature implementation starts.

**Environment:**HTML5, CSS3, AngularJS, JSON, XML, AJAX, JQuery, Struts, Hibernate, SpringMVC,RESTful, HQL, SQL, IBM WebSphere Server, Oracle, JMS, JNDI, Maven, RMI, Eclipse IDE, UML, JIRA, Tortoise SVN, LINUX.

**Client: TekStromIncMay 2011 - Aug 2012**

**Location: Bangalore, India**

**Role: Software Developer**

**Description**:The objective of this project is to implement a web based front end system which can be used by the employees, managers and higher-level management having specific role permissions for effective processing of day to day business activities in the company like leave management, project management and resource management etc.

**Roles &Responsibilities:**

* Was involved in all the phases of the project right from requirements gathering to maintenance.
* Participated in Functional Document reviews and created Technical documents.
* In architecting various Business Layer and Data Management components of multi-tiered web-based system over **J2EE** architecture.
* Actively designed, developed and integrated the Metrics module with all other components.
* Used **Spring Security** to provide authentication, authorization and access-control features for this application.
* Used **Scrum** for managing product development.
* Development using **Bootstrap** for real time web development.
* Designed and developed **Hibernate** DAO's using **spring framework's** Hibernate Dao Support and Hibernate Template.
* Developed **Struts Action** and Form classes to access Java Beans and UI.
* Developed and deployed various Sessions beans.
* Used **Spring Core** for middle tier development to achieve inversion of control.
* Wrote complex queries and mapped database views using DAO in **Oracle**.
* Used various Core Java concepts such as **Multi-Threading, Exception Handling, Collection APIs, Garbage collections** for dynamic memory allocation to implement various features and enhancements.
* Developed Web Services using **XML** messages that use **SOAP**. Developed **Web Services** for Payment Transaction and Payment Release.
* Developed the application using **RAD** as the **IDE** and used its features for editing, debugging, compiling, formatting, build automation and **version control (SVN).**
* Involved in testing the applicable code using **Mockito** framework and **JUnit**.
* Wrote test cases in Junit for unit testing of classes and implemented the logging using **Log4j**.
* Retrieving code from the repository and deploying in Production using **ANT**

**Environment:** HTML, CSS, XML, DHTML, JSP,JavaScript, Servlet, Struts, Spring IOC, Spring Data, JNDI, Hibernate,Log4j, Ant, WebSphere,Bootstrap, Scrum, Oracle, Rational Software Architect, Web Services(SOAP/WSDL), Web Logic Application Server, SVN, UNIX.

**Client: Savisra Software Solutions Pvt.LtdAug 2010 - May 2011**

**Location: Hyderabad, India**

**Role: Jr.Java Developer**

**Description**:Was a part of a 3-member’s team, working under a Sr. Analyst, to identify and resolve technical issues during the design and development of its first Blast-Analytical System. Responsible for all facets of system related projects, business analysis, scope and specification reviews, system analysis and design, project management and scheduling, program testing, maintenance and training.

**Roles & Responsibilities:**

* Developed web application using **Struts**, **JSP, Servlet, Java beans** that uses MVC design pattern
* Created user-friendly GUI interface and Web pages using **HTML, CSS** and JSP
* Wrote JavaScript for client-side validation.
* Used Eclipse as IDE tool for creating **Servlet**, **JSP**, and **XML**.
* Wrote SQL for JDBC prepared statements to retrieve the data from database.
* Monitored the logs using **Log4J** and fixed the problem
* The application was deployed on the **Tomcat.**
* Involved in build and deploying the application using ANT
* Used **CVS** as version control system
* Worked on bug fixing and Production Support

**Environment:**J2EE, JDBC, Struts, JavaScript, Html, CSS, JSP, Servlet, Tomcat, Oracle, Eclipse IDE, CVS, ANT, Log4J.