Rao

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OBJECTIVE

Had 8 years of IT experience in all phases of Software Development Life Cycle (SDLC) such as Planning, Analysis, Design, Implementation, Testing and Maintenance of Web Based, Client-Server, Dev-ops tools, Software Configuration and Build/Release Management and N-tier Architectures in domains like Insurance, Healthcare and Finance. I had a wide knowledge and proven experience in web development and maintenance. I am self-starter, quick learner and capable of working independently to achieve milestones and deadlines. I am adept at prioritizing, tracking and completing tasks to accomplish project goals.

PROFESSIONAL SUMMARY

- Experience in providing technical solutions for business applications in development, designing, testing, building frameworks and implementing web-based Client-Server and Middleware multi-tier distributed environments using Java, J2EE.
- Experience in implementation of Web-based and Stand alone applications using concepts of **Object Oriented Design (OOD), Object Oriented Analysis (OOA), Object Oriented Programming (OOP).**
- Hands on experience with various application design patterns like MVC, MVVC, MVP and GWT.
- Designed and developed software applications using Java, Multithreading, Servlet, AngularJS, Bootstrap 3, JSP, JSTL, HTML, JavaScript, Ext JS, Groovy, Grails, EJB, JMS, XML, XSL, JSF, Ajax, JQuery, Adobe Flex 3, GWT, ADF etc.
- Used **Angular 2, TypeScript, Webpack, ES6** Features to develop the application.
- Turn mockups and design into pages complete with HTML/HTML5, CSS/CSS3, JavaScript and Angular2.
- Experience with **Java 1.8** features such as Lambda Expressions for making anonymous inline function calls by using functional Interfaces which makes code readable and concise.
- Worked with **Java 1.8** Streams API and parallel Streams API for enabling parallel processing of collections in distributed environment.
- Hands on Experience in developing and designing the **Micro Services** using **REST** framework and **Spring Boot**.
- Hands on Experience in designing and implementing **AWS** Solutions using **EC2**, **S3**, **EBS**, **Elastic Load balancer** (**ELB**), **VPC**, **Lambda**.
- Utilized **AWS EC2** instances for application installation and preferred **S3 buckets** for the storage.
- Expertise in developing the Web-Based application by implementation of frameworks like Struts (Struts, Tag Libraries and Struts custom validation rules, Tiles), Spring (Spring MVC, Spring Web Flow, Spring IOC, Spring AOP, Spring Security, Spring Boot, Spring Data, Spring Batch), AJAX frameworks (Rich Faces, My Faces) and ORM frameworks like Hibernate and Mybatis.
- Expertise in implementing Web Services, related technologies & frame works: WSDL, SOAP, REST, JAX-WS, JAXB, JAX-RPC, AXIS and Jersey, SOAP UI and producing client utilizing Eclipse for Web Services consumption.
- Diverse experience utilizing tools in N-tier and Micro services architecture applications using Spring Boot, Spring Cloud config, Netflix OSS components(Eureka, Zuul, Hystrix), Pivotal Cloud Foundry, AWS, Rabbitmq, Kafka, Zookeeper, Cassandra, MySQL, Restful Web Services.
- Hands on Experience in core java concepts like Collection Framework, Multi-threading, Generics, Annotations, Serialization, Thread pools, JavaBeans, Externalization
- Experienced in XML technologies like DTD, XSD, XSLT and parses like DOM, SAX and JAXB.
- Hands on Experience at writing composite **SQL queries, procedures, Triggers** and stored procedures in various databases such as **MySQL, Oracle** and **Cassandra**.
- Made the integration of data in several applications in favor JSON documents with dynamic schemas using MongoDB (NoSQL) database.
- Worked on Node.js and MongoDB data store procedures to satisfy various business requirements of the application.
- Experienced in Middleware persistence framework like **Hibernate/JPA** for mapping Java classes with database and utilizing **Hibernate Query Language (HQL).**

- Installation and configuration of Active MQ, Open MQ, IBM MQ Series and caching software like Oracle Coherence, Redis, Memcached and IBM ExtremeScale.
- Experienced in managing the security part of the application using technologies related to SSO.
- Single sign-on (SSO) and multi-factor authentication with this property a user logs in with a single ID and password to gain access to a connected system or systems without using different usernames or passwords, or in some configurations seamlessly sign on at each system.
- Involved in Authorization, Authentications & SSO using LDAP & AD.
- Experience in configuring and deploying the applications on application servers like **WebSphere**, **Weblogic**, **JBoss** and **Glassfish**.
- Expertise in performing the unit testing using **JUnit**, integration and deploying the applications using tools such as **ANT** and **Maven**, debugging through **log4j**.
- Experienced in developing Automation Scripts using Selenium Web-driver
- Experienced in **JMS** over messaging to exchange the information in more reliable and asynchronous way in enterprise Applications. Used **Apache Active MQ** and **Apache Camel** providers.
- Actively involved in the **DevOps** streamlining process through **Jenkins CI** and **CD** Release Automation.
- Strong working experience in Cloud technologies like **Pivotal Cloud Foundry (PCF)**, **spring boot**, **Spring Cloud Config Server (SCCS)**, **Jersey in spring boot**, **Service Registry (Eureka)** on new development project as well as migration to traditional project on Cloud.
- Experience in implementing security models **OAUTH2** and **SAML** for authentication/authorization using **Spring Security** and **IAM Cloud Security**.
- Experience in deploying the Application into **Docker** container and made easily accessible at runtime using Cloud Foundry and other cloud services like **AWS**, **Netflix Eureka**.
- Strong technical, administration, &mentoring knowledge in Apache Spark and Datastax Cassandra.
- Experienced in using streaming software like: **Apache Storm, Kafka, Spark, RabbitMQ** and integrating with APIs [Restful] with APIGEE and Layer7
- Experienced in designing and developing asynchronous event based framework based on messaging
 infrastructure to process huge volume of messages using Solace queues, Apache Kafka, Storm and
 Zookeeper. Knowledge and experience in job work-flow scheduling and monitoring tools like Oozie and
 Zookeeper.
- Knowledge in testing web application vulnerabilities, OWASP is used as a guide in this review and testing process.
- Experienced in using **JSON** as the data exchange format and **Swagger** to provide the contracts between UI and middleware.
- Experience in writing **shell scripting** for deployment process and expertise in sharing files between Linux boxes and windows using the WinSCP, a secure FTP, SCP client for Microsoft Windows
- Experience in developing unit testing frameworks using **JUnit**, **JMeter**, **DB Unit**, **Mockito and Groovy Spock** based on test first or test driven methodology.
- Experienced in designing and implementing sw business rules using **DROOLS** framework.
- Experience in handling HP Fortify issues, Sonar, PMD.
- Extensive experience with Java complaint IDE's like IBM RAD, IBM WSAD, Eclipse, Spring STS and Intellij IDEA.
- Worked on production 0 for the client and business user application. Also supported critical business applications as **L2 production support** engineer.

TECHNICAL SKILLS

| Languages | C, C++, Java, J2EE, SQL, PL/SQL |
|----------------------|---|
| J2EE Technologies | JDBC, Servlets, JSP, JMS, Java Beans, JSTL, EJB, Struts, JNDI and JPA |
| Web/XML Technologies | HTML5, CSS3, JavaScript, JQuery, Ajax, AngularJs, Node JS, XML, XHTML XSD, XSL/XSLT, SAX/DOM, JSON. |

| Tools & Framework | Struts, Hibernate, Spring, Spring Boot, Spring Batch, Spring Security, Log4J, Jasper reports, SOA, SOAPUI, Apache Camel, Selenium and Cucumber. |
|------------------------|---|
| Web Services | SOAP, Restful, UDDI, WSDL, JAX-RPC, JAX-RS JAX-WS, JAX-B, Apache Axis2, Apache CFX, JMS, AWS, Micro Services. |
| Web/App Servers | WebSphere, Apache Tomcat, WebLogic, JBoss. |
| Continuous Integration | Hudson, Jenkins. |
| Database | Oracle, SQL-Server, MySQL, NoSQL like Mongo DB |
| Development Tools | Eclipse, RAD, Spring Tool Suite (STS), IntelliJ |
| O-R mapping | Hibernate, JPA, Mybatis |
| Testing Tools/ Others | JUnit, SoapUI, Putty, JIRA, Jenkins |
| Version Control | GIT, CVS, SVN, Rational clear case. |
| Platforms | Windows, UNIX/LINUX. |
| Cloud Technologies | AWS EC2, S3, Cloud formation, Netflix Eureka. |

PROFESSIONAL EXPERIENCE

Client: Express Scripts Location: Franklin lakes, NJ Role: Full Stack Developer Jan'17-Till date

<u>Description</u>: 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.

- Involved in analysis, specification, design, and implementation and testing phases of Software Development Life Cycle (**SDLC**) and used **agile** methodology (**SCRUM**) for developing application.
- Upgraded existing UI with **HTML5**, **CSS3**, **JavaScript**, **Ext Js** and **Bootstrap** with **Angular** interaction.
- Used **Angular 2.0** for Router to build single page applications for navigation through the different status and multiple modals.
- Used **Angular 2.0** forms like Template Driven forms and Modern Driven (Reactive) forms to perform form validations both on server and client side.
- Used JSP, JQuery, AJAX and JSON for implementing presentation layer as well as MAVEN and Node Js server for deploying EAR files.
- Used Java 1.8 features like stream API and Lambda expressions.
- Maintained **Interface** compatibility and **concurrency** in the project using **Java 1.8** new features like default, static methods and Concurrency API.
- Developed various helper classes needed following Core **Java multi-threaded** programming and Collection classes
- Involved in migrating monolithic application in **Microservice Architecture** and Developed Micro-services using **Pivotal Cloud Foundry** platform build upon **Spring Boot Services**.
- Designed and developed **Micro Services** business components using **Spring Boot**.
- Worked on the REST Web Services and used Spring Framework and developed the Spring Features like Spring
 Core, Spring IOC, Spring AOP, Spring Data Access, and spring web test, Spring MVC, Spring DAO, Spring
 Boot, Spring Batch, Spring Security, and Spring Integration..

- Developed messaging module using Spring JMS, Apache Camel and Kafka.
- Used **Spring AOP** Module to implement logging in the application to know the application status.
- Developed an **API** to write **XML** documents from a database. Utilized **XML** and **XSL** Transformation for dynamic web-content and database connectivity.
- Designed and developed **third-party** payment services, **REST Web Services** to offer users convenient payment methods using various **APIs** provided by various third-party payment processors based on **OAuth 2.0** protocol.
- Developed the persistence layer using **Hibernate** Framework, created the **POJO** objects and mapped using **Hibernate annotations and Transaction Management.**
- Involved in multi-tiered J2EE design utilizing Spring Inversion of Control (IOC) and Hibernate.
- Involved in testing the applicable code using **JUnit**..
- Responsible for creation and execution of automation test scripts using Selenium, Webdriver.
- Written **SQL Queries** and **stored procedures** to interact with **OracleDB**.
- Configuring and maintaining the database PL/SQL.
- Worked with **NoSQL Cassandra** to store, retrieve, and update and manage all the details for Ethernet provisioning and customer order tracking.
- Developed custom **Apache Spark** batch job programs in **Scala** to create recommendations based on customer data.
- Used **JIRA** to assign, track, report and audit the issues in the application. Configured and customized logs using **Log4J**.
- Configured **CICD pipeline** by setting up Build, test, & deploy automation Jobs in **Jenkins** using Conditional Build steps pipeline by integrating **Jenkins**, **Maven and Artifactory**.
- Installed, configured **SonarQube** and continuously integrated the issues.
- Employed fail safe and circuit breaker patterns for the first time in Client's email applications using **Hystrix** and Hystrix Dashboard in **Spring Boot Micro Service Applications**.
- Implemented **Single Sign On (SSO)** to define the user roles and access
- Deployed the Application into **Docker container** and made easily accessible at runtime using Cloud Foundry and other cloud services like **AWS**, **Netflix Eureka**.
- Responsible for creating an instance on **Amazon EC2** (AWS) and deployed the application on it and responsible for maintaining and expanding our **AWS** infrastructure using **AWS (EC2/EBS)**.
- Utilized Amazon Web Services (AWS) EC2 to deploy Docker containers.
- Responsible to maintain the networking from **AWS cloud** back to On-Primary connectivity and no direct internet access from **AWS cloud VPC** to the rest of the world (Internet).
- Installing and configuring the applications like **docker tool** and **kubernetes** for the **orchestration purpose**.
- Using **Chef** deployed and configured Elastic search for log analytics, full text search, application monitoring in integration with AWS Lambda and CloudWatch.
- Created **dynamic routing/load balancing** capability enabling large application scaling for high availability.

Environment: Agile(SCRUM), HTML5, CSS3, Bootstrap, JavaScript, JQuery, Ajax, AngularJs, AWS, Micro Services, Spring MVC, Hibernate, Spring, Oracle, Spring Batch, Spring Boot, Spring Security, JSON, XML, GIT, JUnit, Maven, JMS, Apache Tomcat, WebSphere, Rest Restful, JAX-RS, Log4J, SOA, JIRA, Jenkins.

Client: BCBS Sep'15 - Dec'16

Location: Dallas, TX

Role: Full Stack Java Developer

Description: Blue Cross and Blue Shield is an insurance company owned by its policyholders. This application was created to help individuals and families easily shop for and buy health insurance. BCBS offers a variety of insurance plans, as well as tools to help to help you choose the plan that's right for you.

Roles & Responsibilities:

• 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.

- Extensive experience on DevOps essential skills like continuous integration, continuous deployment, continuous delivery, supporting Build Pipelines Release management and cloud computing.
- Involved in the front end using JSP, HTML5, CSS3, JavaScript, and AJAX.
- Used **AngularJs** to create views to hook up models to the DOM and synchronize data with server as a Single Page Application.
- Involved in development of Agent Verification System using **Spring MVC** framework.
- Used **Spring AOP** for **logging**, **auditing** and **transaction management** to distinguish **business logic** from the cross-cutting concerns.
- Implemented the application using **Spring IOC**, **Spring MVC Framework**, **spring Batch** and handled the security using **Spring Security**.
- Worked on **Single Sign On** application using **LDAP** directory service for secure authentication and assigning roles based on the login id.
- Implemented **Web-Services** to integrate between different applications components using **Restful** Web Services by using **Jersey**.
- Involved in identifying and implementation of different J2EE design patterns like Service Locator, Business Delegate, and DAO.
- Implemented business logic using Array list, Map and Sets of **Collections API**.
- Developed Web Services component using **XML**, **WSDL**, and **SOAP** with **DOM** parser to transfer and transform data between applications.
- Used apache common digester to parse data from **XML** files and populate data into **java beans**.
- 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**.
- Extensively used **hibernate** named queries, criteria queries, **Hibernate** Query Language (**HQL**) and Optimistic Locking and Caching to process the data from the database.
- Design and Coding the core framework using **J2EE**, **Spring Boot**, **Jersey**, **Cloud technologies** (SCCS, Eureka, encryption, security groups) on **Pivotal Cloud Foundry (PCF)** and the services with the integration points using J2EE, spring and Informatica Web Services (JAX RPC/JAX WS)
- Deployed and Monitored **Micro Services** using **Pivotal Cloud Foundry**, also Managed Domains and Routes with the Cloud Foundry.
- Performed deployment of applications on **IBM WebSphere** Application Server.
- Involved in implementing validations, exception handling. Worked with XML, XSLT for building up & transforming the xml files.
- Used **IBM MQ** and **IBM Broker** for transferring the data across multiple applications.
- Used **IBM MQ** as Queuing mechanism to send messages to clients and interact with other systems.
- Involved in testing the applicable code using **JUnit**.
- Used **ClearCase** for version control and **ClearQuest** for bug tracking and Used **Apache ANT** script for building the application with the build.xml.
- Used logging techniques provided by Log4i tool for efficient logging and debugging.
- Developed the application using **Eclipse IDE** and used its features for editing, debugging, compiling, formatting, and build automation.

Environment:HTML5, CSS3, JavaScript, JQuery, AngularJs, DOJO, AJAX, JSP, Agile, Hibernate, Spring MVC, Servlets, REST, JAX-WS, Log4j, PL/SQL, Web Services, Weblogic Application Server, Oracle, JUnit, Log4j, JIRA, SVN.

Client: Flag Star Bank Location: Troy, Michigan Role: Java Developer Oct'14 -Aug'15

<u>Description</u>: Flagstar Bank is a Michigan based financial organization that offers services such as commercial and personal banking, online banking services, investment and loans. This application is developed to enhance online banking facility to the customer. Banking application has various modules for account maintenance, and email notification modules

- Involved in **SDLC requirements gathering, analysis, design, development and testing** of application developed using **agile** methodology.
- Created user-friendly GUI interface and Web pages using **HTML**, **Ajax and Java script**.
- **JVM** tuning experience by changing to heap sizes according to the requirement.
- Experience in presentation layer for front-end of the application by using **NodeJS** boot strap programming and HTML pages.
- 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.
- Extensively used **JSON** to parse the data from server side to satisfy the business requirement.
- Used Apache Axis Service Engine for creating and deploying Web Service clients using SOAP, WSDL.
- Used Web Services for creating rate summary and used **WSDL** and **SOAP** messages for getting useful plans from different module.
- Implemented persistence framework using **Hibernate**& handled **Transaction Management** using the provided data source.
- 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.
- Extensively used **HQL** and **SQL** for querying databases.
- Developed **Message Driven Bean** for asynchronous sending Messages using **JMS**.
- Used **Spring IMS** module for lookup for the queues and MDBs for the listeners
- Established Database Connectivity using **IDBC**, **Hibernate O/R mapping with Spring ORM** for **Oracle**.
- Packaged and deployed the application in **JBoss**.
- Used **Gradle** tools for building and deploying the Web applications.
- Analysis and Bug fixing 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: HTML, CSS, JavaScript, Bootstrap, AngularJs, JSON, XML, AJAX, JQuery, Struts, Hibernate, Spring MVC, SOAP,WSDL, HQL, SQL, JBoss, Oracle, JMS, JNDI, Maven, RMI, IntelliJ, UML, JIRA, JUNIT, Tortoise SVN, LINUX.

Client: All Star Nov'13 - Oct'14

Location: Chicago, IL Role: JAVA Developer

<u>Description</u>: All Star Insurance is a leading insurance company owned by its policyholders. An application is created to help individuals and families easily shop for, and buy health insurance which is used to handle insurance claims. ePAS is a secure, web-based insurance policy. Administration system allows authorized agents to quote and submit new policy applications, view policy statuses and submit policy endorsements. The system will guide the agent through the policy application and endorsement. Processes and automatically apply underwriting rules when submitting transactions.

- Involved in all phases of the Software development life cycle (SDLC) using Agile Methodology.
- Developed User Interface using JSP, JSTL, HTML, CSS, Java Script, jQuery.
- Used various **jQuery UI** controls and corresponding Event handlers.
- To maintain loose coupling between layers published the business layer as services and injected 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 and** Handled **Transaction Management** using the provided data source. 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. Established Database Connectivity using **JDBC**, **Hibernate O/R mapping with Spring ORM** for **DB2**.
- Worked on **Hibernate** in **Data Access Layer** for mapping the java objects to relational database and **SQL** queries to fetch the data, insert and update the data from the database.
- Implemented **SOA** architecture with **Web Services** using **SOAP**, **WSDL** and **XML** using **Apache CXF framework** and worked on parsing the **XML** files using **DOM/SAX** parsers.
- Extensively used **JSON** to parse the data from server side to satisfy the business requirement.
- Created Tables, Triggers, PL/SQL Stored Procedures, SQL queries, Joins and views for IBM DB2.
- Implemented **SOAP** based Web Services and used **Soap UI** for testing.
- Used **Spring JMS** module for lookup for the queues and MDBs for the listeners.
- Involved in **Unit Testing** of various modules by generating the **Test Cases**. Performed deployment of applications on **WebSphere**. Written **LINUX** shell scripts to identify user login information.
- Involved in day to day handling of **JIRA** issues (production issues at time) that involved data inconsistencies that required to be solved in very less time.
- Involved in Bug fixing of various modules that were raised by the testing teams in the application during the **Integration testing phase.**

Environment: Java, J2EE, HTML, CSS, JavaScript, JQuery, JSP, JSTL, Spring, Hibernate, XML, XSD, SOAP UI, SOAP, WSDL, Log4j, JUnit, IBM DB2, WebSphere, SVN, Eclipse IDE, JIRA, Agile Methodology, Linux, Rational Rose and UML

Client: Soft Pro Systems Ltd, Hyderabad, India

June'11 - July'13

Role: Java Developer Project: B2B solutions

<u>Description</u>: This project is mainly an Intranet application meant for employees in the organization. They are Intranet mailing System, Chatting, File Transfer and Remote Login. This project is based on the client server methodology

- Involved in Requirement Analysis, Design, Development and Testing of the risk workflow system.
- Involved in the implementation of design using vital phases of the Software development life cycle **(SDLC)** that includes **Development, Testing, Implementation** and **Maintenance** Support in **WATER FALL** methodology.
- Created user-friendly GUI interface and Web pages using JSP, HTML, CSS, AJAX, JavaScript and JQuery.
- Involved in component development using J2EE principles and used design patterns such as **Singleton**, **Factory** and **Data Access Object (DAO)** in the implementation of the application.
- Responsible for designing, coding and developed the application in J2EE using Struts MVC.
- Implemented **Struts framework (Action & Controller** classes) for dispatching request to appropriate classes.
- Used simple **Struts Validation** for validation of user input as per the business logic and initial data loading.
- Achieved synchronization of multiple threads through **Multithreading** and **Exception Handling**.
- Extensively used **JSON** to parse the data from server side to satisfy the business requirement.
- Developed **Struts Action Forms**, **Action classes** and performed action mapping using **Struts**.
- Developed **RESTful** and **SOAP** based **Web Services** to consume and produce data in **XML** and **JSON**.
- And also was involved in several custom validations Integration if **Mybatis** has reduced to create a JDBC connection and has eased the way of writing code.
- Written **SQL queries**, **PL/SQL** store procedures and **Triggers** to fetch and store data from the database.
- Used **Log4** for application logging and notification tracing mechanisms.
- Developed the **ANT scripts** for preparing **WAR files** used to deploy **J2EE** components and deployment of the application was on **Jetty**.
- Prepared **JUnit** test cases and executed the test cases using **JUnit**.
- Involved in bug fixing during the System testing, Joint System testing and User acceptance testing.

Used GIT to check-in and check-out and co-ordinate among team members for Version Controlling.
 <u>Environment</u>: Java, HTML, CSS, AJAX, jQuery, JavaScript, Struts, Web Services, SOAP, RESTful, JSON, XML, JDBC, SQL, MySQL, ANT, Eclipse, JIRA, GIT, Jetty and UNIX.

Client: Info Tech May'09 - June'11

Location: Hyderabad, India Role: Jr. JAVA Developer

Description: This is an Intranet application for shopping online within the community. The member of the community sitting at his home or office can shop different items belonging to different categories like Stationary, Electronic Goods, Apparel, Furniture, Vehicles, Home need appliances etc. in the store belonging to that community. The mode of payment is through their membership Card. An Updated record is delivered every month to the concerned member so those dues may be deducted from his membership account. Adequate security features were incorporated into the Project. Another record maintains stock update.

- Involved in understanding and analyzing the requirements of the project. Followed **Waterfall** Methodology to implement the project. Used Java **JDK** features to implement the functionalities.
- Designed and developed the User Interface using **HTML**, **JavaScript**, **AJAX** and **CSS**.
- Implemented **Struts MVC** design pattern and front controller pattern and used for back-end.
- Developed **Action** Class components for performing business process execution and involved in configuration of struts configuration specific xml file.
- Created and handled Custom-**Exceptions** that are related to business operations. Created child **Threads** to improve the performance by running some independent tasks at background.
- Developed Server-Side components for the business services for creating Items, **BOM**, Sourcing Rules, and substitute.
- Used **Log4j** for logging purposes during the development of the application. Used **JDBC** to interact with the underlying **MySQL** Database.
- Extensively worked on **SQL** for writing complex queries in the business logic layer.
- Deployed Applications on Apache Tomcat Server and used CVS as the version control manager.
 <u>Environment:</u> Java, JDBC, JDK, Servlets, Struts, JSP, Hibernate, Java Mail API, AJAX, HTML, XML, ANT, Log4J, CVS, RAD, Putty, MySQL, Mantis, Apache Tomcat, Eclipse IDE, Waterfall Methodology.