**Manasa**

**Sr. Java Full Stack Developer  
Email:** [**manasak98763@gmail.com**](mailto:manasak98763@gmail.com)

**Phone: (913)717-5757**

**PROFESSIONAL SUMMARY:**

* **8+ years** of professional experience in implementing and developing complex applications. Involved in Software Development Life Cycle **(SDLC)** which embraces Design, Development, Implementation and Testing of **enterprise business** applications using **Java.**
* Strong Knowledge on automated java-based integration testing and behavioral testing of the application using **Selenium (connects you to your browser), Unit testing, Junit4, TestNg, (organizes the tests) Mockito,** (**power mock for mock) and** for **rest testing mockmvc** and fluent **API, mockers service server for spring rest template template testing.**
* Well versed with **J2EE** Design Patternslike **DAO, Service Locator, Value Object, Business Delegate Pattern, Front Controller Pattern, Singleton, MVC, Session facade etc.**
* Implemented the **microservices** architecture based on **RESTful API** using **Spring Boot** with **Spring MVC.**
* Proficient in implementing frameworks such as **Structs, Spring MVC and AJAX frameworks.** Excellent experience using ORM tools like **Hibernate** and **Ibatis.**
* Expertise in using Spring frameworks like (**CORE, AOP, DI, SECURITY, IOC**).
* Expertise in using spring **JPA** as hibernate and used JPA as reference.
* Have experience using **ODM** frameworks to connect asynchronous environment with **Mongoose Connector** and **Cassandra Node Driver**.
* Experienced in creating, producing and consumption of services like request-response by using **JMS Active MQ.**
* Strong experience in developing **Dynamic Single Page Application (SPA)** using **MEAN (Mongo, Express Angular and Node**) full stack development tool kit.
* Proficiency in front end application developer using **Angular 2.0/4.0, React JS, Ember JS** for dynamic users and which helps in architectural pattern **MVC.**
* Strong understanding on client -side frameworks **Angular 4.x** for attaining architectural design flow of **MVC** using **dependency injection, pipes, directives and promises.**
* Worked on customized front end application development using **jQuery, React JS, Handlebar JS** and implemented React **JS** using **Redux** library and **Flux** pattern.
* Proficient in using **Spring (transaction support modules and JPA), Spring JDBC (for transferring data to database).**
* Experienced in using **Enable Caching** which has multiple implementation such as **EhCache 2.x, Redis** and **Couchbase**.
* Configured **Session Factory** for **Hibernate** mainly used for **Create, Read,** and **Delete** operations for instances of mapped entity classes.
* Developed projects with **RESTful** services **(JAX-RS, Spring Rest).**
* Implemented security to **RESTful** web services using **OAUTH 2.0.**
* Having expertise knowledge and experience on Java 8 features like **Functional Interfaces Multithreading, Collection API, Exceptional Handling, Time API and Stream API.**
* Extensive experience in developing scalable, reliable, efficient web and enterprise applications using **JSP, Servlets, Struts, JSF (Prime Faces)**
* Strong hands on experience with **Spring IO** and **Spring Boot.**
* Worked on different **SQL** databases like **MySQL, MS SQL Server, Oracle 11g.** Also worked on **NoSQL databases MongoDB, Apache Cassandra, Raven DB, Dynamo Db, Couch DB.**
* Having good experience in writing **Joins, clauses, store procedures, triggers, cursors** using **PL/SQL** in **JDBC, ODBC** and **WebLogic server.** Implemented **pl/sql scripts, triggers, store procedures and views.**
* Expertise in using front end applications using **HTML 5, CSS 3** mainly for styling and view rendering.
* Ample experience on usage of bundle package and familiar using tools like **NPM, Bower** as task runners. Used **Karma, Jasmine, Protractor** as **UI testing** for **Backbone JS** and **React JS**.
* Good understanding of global level process about **Microservices** architecture and **SOA**. Good knowledge on application of **Spring Cloud-Netflix** OSS for microservices deployment and configuration of **Hystrix, Zuul** a gateway for routing with **Eureka** for routing stability.
* Implemented **Splunk** and **kibanana** and log management with **ELK.**
* Implemented **Elastic search cluster API** that allows us to manage and monitor Elasticsearch cluster.
* **SOAP** (**JAX-WS, Apache CXF, WSDL, Apache Axis2**) and automated the documentation using **Swagger** and **WSDL.**
* Developed projects using **SOAP** and **RESTful** webservices and automated documentation using **Swagger**, WSDL**(SOAP) and WADL(REST)**.
* Good knowledge and implemented on providing authentication and authorization for web services using **OIDC and Spring security.**
* Used **Single Sign On (SSO)** to have access control on multiple independent software systems
* Having strong experience on JavaScript and implemented **ES6** features such as **Template literals, Multi line Strings, Block scope and Modules.**
* Experienced in developing Server-side applications using frameworks **Node JS (Express JS, Hapi JS)** for building **non-blocking i/o model** web-based applications.
* Good Knowledge in **Amazon Web Services (Amazon EC2, Amazon S3, Amazon Simple DB, Amazon Elastic Load Balancing, Amazon SQS, Amazon EBS and Amazon Cloud Front).**
* Well experienced with build tools like **Gradle, Maven** and **ANT**.
* Experience in Developing automated scripts for Regression Testing through **Selenium and Cucumber** Web Drivers.
* Exposure to Behavior Driven Development using tools like **Jbehave, Concordian**.
* Worked on different server such as **Apache Tomcat, WebLogic and Jboss** for configuring and deployment of the application
* Responsible for migrating existing modules in **IBM MQ** to **Apache Kafka** and worked on
* creating Kafka adaptors for decoupling the application dependency.
* Experienced in developing microservices using **Spring Boot** and deploying them in the **Pivotal Cloud Foundry (PCF)**.
* Implemented **Pivotal cloud foundry (PCF)** to deploy **IAAS** or **PAAS** and to run own applications.
* Automated the deployment process by integrating code repository using build pipeline **Jenkins**, **Bamboo** and **GoCD** for   Continuous Integration and Continuous Deployment that can run on the cloud or on-premises.
* Implemented a metrics collection mechanism for the server by utilizing **Apache Kafka** to **stream server-side events**.
* Used **Docker Container** to address every application across the **hybrid cloud and Docke**r   for better collaboration and innovation.
* Deployed the Zero **Down Deployment** using **Kubernetes orchestration service application**.
* Good practical experience with  Java-based [logging](https://en.wikipedia.org/wiki/Computer_data_logging) utility. i.e. **log4J**., sl4j, log common.
* Experience in Java Thread Dump Analysis and familiar with thread dump techniques.
* Good Experience in software configuration management using SVN, GitHub, GitLab, Bitbucket.

**Education :**

* Bachelors of Technology from Kakatiya University,India

**Technical Skills:**

|  |  |
| --- | --- |
| **Programming Languages** | Java, C, C++, PL/SQL, JavaScript |
| **Web Technologies** | HTML5,CSS3,AJAX,JSON,Bootstrap,jQuery, Angular2.0/4.0,Angular6.0/8.0 React JS with Flux, Redux, Ember JS, Knockout JS, Back Bone JS, Handlebar JS, NodeJS, Express JS, Hapi JS |
| **J2EE Technologies & frameworks** | Servlets, EJB, JSP, JSF, JDBC, SOAP, WSDL, REST, XML, JAXP, JAXB, JPA, JMS, Spring3.x/4.x/5.x, Hibernate, Spring MVC, Spring Boot, Spring Data, Spring Batch, Spring cloud, Dump Analysis. |
| **Databases** | Oracle 8i/9i/10g/11i, DB2, SQL Server 2000/2005/2008, MYSQL, MongoDB, Raven DB, Cassandra |
| **Application/Web Servers** | Oracle Web logic, IBM Web Sphere, JBoss, Glassfish, Apache Tomcat |
| **Messaging Services** | JMS, Active MQ, Rabbit MQ, IBM MQ, Apache Kafka |
| **Webservice Frameworks** | JAX-RS, JAX-WS, Axis, Jersey |
| **Software Methodologies** | Agile, Scrum, TDD, Waterfall |
| **Build & Configuration Tools** | Ant, Maven, Gradle, Jenkins, Bamboo Gulp, Grunt, Webpack, NPM, Bower |
| **Testing Tools** | Junit, TestNG, Mockito, Jasmine, Karma, Mocha, Chai, Spock, Protractor |
| **Version Control Tools** | GIT, SVN, CVS, Bitbucket, TFS |
| **Project Management Tools** | JIRA, Rally, Microsoft Project |
| **Cloud Technologies & DevOps Tools** | AWS, PCF, EC2, EBS, S3, Docker, ECS, EBS, EKS, SQS, RDS, S3, Glacier, Lambda, Kubernetes |
| **Operating System** | Windows, Linux, Unix, MA-OS 10.13.2 |
| **IDE’s** | Eclipse, Visual Studio, IntelliJ, Spring Tool Suite, Sublime Text, WinSCP, Putty |

**PROFESSIONAL EXPERIENCE:**

**Client: Visa,** **Austin, TX Jan 2022 - Present  
Role: Java Full Stack Developer**

**Responsibilities:**

* Implementation of the design wireframe using **Angular 8.0** and exposing backend services which runs on **Spring Boot**. Here we also have another layer that makes use of NodeJS mainly used for authentication, authorization, and session maintenance.
* Wrote services with **Angular** **6** to store and retrieve user data from the **DB** for the application on devices with **HTTP** service.
* Developed key services for authorization and authentication in Node server, where we used LDAP. Later migrated the authentication from **LDAP** to **Ping** Access-**SSO** (Single Sign On) Application.
* Implemented **point-to-point IBM** MQ for programmatical communication and later worked on enhanced implementation on **P/P IBM MQ** to **IBM MQ publisher/subscriber**.
* Involved in innovation of the current UI for **SASS/LESS** to make an implementation under mobile device access using **cross platform technologies** such as Ionic which helps in improving the business.
* Made use of **Reactive Forms** using **Angular 8.0** where most of the validation is done using component rather than using **template-driven** which provides in **HTML**.
* Developed test cases for each component in different panels using Junit, reported and deployed using **Jenkins**.
* Developed Data Ingestion application to bring data from source system to HBase using **Spark** Streaming, **Apache Kafka**.
* Designed and developed the framework to consume web services hosted in **Amazon EC2 instances**.
* Involved in writing test cases using **jasmine-karma, Test Bed** and maintained a stable code coverage with maximum threshold.
* Implemented the complete set up with configuration file changes from **Angular 6 to Angular 8.** Whilemigrating the project which involved converting angular components and updating router Modules.
* Developed UI application initially using **Angular 6.0** and made use of customized components.
* Mainly involved in deployment activities CI/CD deployment and familiar with **OSE (Open shift origin).** Also made changes in Jenkins Files as per the requirement of the pipeline.
* Worked on **Kubernetes cluster** as a part of deployment activity. Familiar with Open Shift commands mainly for deployment.
* Implemented features like Actuator in **Spring boot** for monitoring and tracing my application. Developed controller classes, complex services, database integration and backend process.
* Also created **YAMEL files** for using a swagger API within the UI.
* Involved in **web services** design and development. Responsible for creating and consuming web services using **REST** and **XML**.
* Implemented Java EE components using **Spring MVC**, **Spring IOC**, **Spring transactions** and **Spring security** modules.
* Implemented transaction management using **Spring AOP** and used **Spring Aspects** for implementing logging functionalities.
* Data segregation/categorization is performed based on the requirement using **Spark** Streaming API (Transformations & Output Operations) on the data stored in HBase.
* Worked in integrating **JMS** with **SPRING BOOT** by providing an instance which is embedded with **Active MQ**.
* **NODE PACKAGE MANAGER (NPM)** was used to list out the right versions of the packages and their dependencies for the project.
* Authenticating Users and to provide   the security to **RESTful** web services using **O-AUTH 2.0.**
* Extensively used **Spring IOC** configured **Application Context** files and performed database object mapping using **Hibernate** annotations.
* Implemented Spring Validators, persistence layer, and service layer components using **Spring/Hibernate API** and **Spring/Hibernate** annotations. Extensively used **Hibernate QL**.
* Created dynamic schema design through **NOSQL-CouchDB** by writing rich queries and achieved data in a collection to be distributed across multiple systems for horizontal scalability.
* Designed, configured, and deployed **Amazon Web Services** (AWS) for a multitude of applications utilizing the AWS stack (Including EC2, S3), focusing on high-availability, fault tolerance, and auto-scaling.
* Configured **AWS EC2 instances**, domain mapping via **Route53**.
* Have experienced developing web applications using **Bootstrap, Code Mirror, Brackets and Ember.js.**
* Involved in the creation of interface to manage user menu and Bulk update of Attributes using **Node.JS** and **jQuery**.
* Developed and configured **JMS** components in **WebLogic Application Server**.
* Building cloud Microservices and implemented back-end using **Spring Boot**. And Authored application using **Spring Cloud services** (spring version of **Netflix OSS-Eureka** that helps in routing, **Circuit Breaker** and **Ribbon** for client-side load balancing).
* Implemented **Spring Cloud-Netflix ZUUL** to build micro services for communication.
* Implemented Spring Circuit breaker pattern, integrated **Hystrix** dashboard to monitor spring micro services, writing server-side request handling and automated functional test cases to validate UI functionality using **Node.js**.
* Implemented a metrics collection mechanism for the server by utilizing **Apache Kafka** to stream server-side events.
* Hive external tables are created mapped to the data stored in the HDFS and Hive tables are accessed using **Spark** SQL.
* Used **Apache Kafka** in cluster as messaging system between APIs and microservices and worked on **Splunk** SPL (Search process language) queries, reports and logging using Log4j.
* Used **Docker Container** to address every application across the hybrid cloud and Docker   for better collaboration and innovation.

**Environment: JavaScript,  HTML5, CSS3-LESS, Spring Security, Rabbit MQ, Node JS, Express JS,Bootstrap4.0, Hibernate4.x,OIDC, Eclipse Java EE, Jenkins, Log4j, Redis, Mongo DB, Mongoose Connector, Oracle, JBoss, Kibana, Elastic search, Logstash, EBS, Elastic Load Balancer, Docker, Apache tomcat, Selenium, Spock, Karma, Jasmine, Mockito, Junit, mock MVC, Kubernetes, Dump Analysis, Netflix Zuul, Eureka, Swagger-OAuth 2.0,Spark Maven3.0.**

**Client: US Bank,** **Lansing,MI Oct 2020- Dec 2021**

**Role: Java Full Stack Developer**

**Responsibilities:**

* Experienced in implementing the **Node.js** server-side code along with the Express framework to interact with **MongoDB** to store and retrieve data by using the **Mongoose** package.
* Used **MongoDB** internal tools like **Mongo Compass, Mongo Atlas Manager & Ops Manager, Cloud Manager** etc.
* Worked on **MongoDB** database concepts such as **locking**, **transactions**, **indexes**, **Shading**, **replication**, **schema design.**
* Used **Node.js** and **Express.js** to develop the relevant back end RESTful API.
* Extensive use of **Node.JS**, **Express JS**, and **Mongo DB** along with Mongoose to create server-side applications.
* Csc Installed and configured multi-node Apache Hadoop, Apache Spark cluster for data store and data processing. Importing structured data into HDFS using Sqoop.
* Developed various screens for the front end using **React JS** and used various predefined components from NPM and Redux.
* Implemented MVVM architecture using Redux Architecture with **React JS**.
* EstablishingRestfulAPI'Susing NODE.JS and application backend implemented   as NODE.JS application server.
* Developed common reusable component libraries (CRUD Scaffolding) to be reused in different projects throughout the company's IT team using GWT, **Spring Data**, JPA.
* Automated the front-end workflow using **NPM.**
* Automated testing using **Mocha** and **Chai**.
* Designed and developed **Micro Services** business components using **Spring Boot.**
* Implemented the Project structure based on Spring MVC pattern using **Spring Boot** and persisted data to MongoDB using Spring Data.
* Worked on Hortonworks Data Platform for managing nodes in hadoop cluster. Implemented solutions using Hadoop, Apache Spark. Spark Streaming, Spark SQL, HBase and Scala.
* Used JavaScript ES6 in **Node.js** runtime environment to build RESTful APIs and to import data.
* Worked on Prototyping and Implementation using Java, **Node JS**, AWS with Slacker platform.
* Developed single page applications using **React** **Redux** architecture, **ES6**, **web pack** and **grunt**.
* Involved in creating a reusable component using **React JS** for DOM manipulation.
* Wrote Client-Side code using **React JS** and used **NPM** & gulp directories to generate the server environments used browser, flux to manage with targeted URL's and to monitor the application.
* Worked on using **Rule Engines**, **Drools** with corresponding to validate the business User Roles.
* Worked with a team to develop and maintain an internal Log Delivery System, utilizing various Apache products, **Kafka**, and **Tomcat**.
* Closely worked with Application using **React JS** and Node.js libraries NPM, gulp directories to generate desired view and flux to root the URL's properly.
* Responsible for implementing UI mockups, integrating third party react libraries, and handling/creating **Redux** store data.
* Implemented **OAUTH** **2.0** authentication protocol and provided **OAuth** **2.0** token implementation guidelines for enterprise web API security model.
* Used **Webpack** for bundling our application which takes JavaScript application and bundling it all together with its dependencies.
* Introduced and implemented **Webpack** infrastructure to modernize JavaScript practices by extending **ES6** through **babel** loaders.
* Developed Micro Services based API using **Spring Boot** and **Spring Data**.
* Implemented storing the High-volume transaction data in NOSQL Databases using **Spring Data.**
* Created producers, consumer, and Zookeeper setup for oracle to **Kafka** replication.
* Design and build a large-scale global **Docker** Container-as-a-Service.
* Design and build Docker tools and integrations like **Docker** images and **Docker** Plugins.
* Worked on **Docker** container implementation for the Enterprise build system.
* Micro services have been built using spring boot, Netflix OSS, **Spring Cloud** and deploying to AWS Cloud.
* Speeding up Existing Applications with a Cache services using **Redis Cache, Gem fire.**
* Implemented **AWS** solutions using E2C, S3, RDS, EBS, Elastic Load Balancer, Auto-scaling groups and used **AWS** **SDK** to connect with Amazon SQS for bulk email processing.
* Created instances in **AWS** as well as migrated data to **AWS** from data Center using snowball and **AWS** migration service.

**Environment: Mongo DB, Express JS, Angular 2.0, React JS, Node JS, Spring Boot, Redux, ES6, Web Pack, Grunt, NPM, OAuth 2.0, Spring Data, Mocha, Chai, Kafka, Docker, Spring Cloud, AWS, Drools.**

**Client: O9 Solutions, Austin, TX Jan 2019 – Sep 2020**

**Role: Java Full Stack Developer**

**Responsibilities:**

* Implemented multi-threaded synchronization processes, with **JMS queues** for consumption of Asynchronous requests.
* Implemented light weight **WADL** (Web application description Language) for better understanding of **Rest** based web services and its configuration.
* Performed unit testing using **JUNIT** framework and tested DAO's and Business Services
* Provide 24x7 support to the application in pilot and **production** phases. Support included being on conference calls, identifying and fixing **bugs**, investigating reasons for specific application behavior.
* Written complex **SQL** queries, **Stored Procedures** and **Functions** in **PL/SQL** for manipulating the data.
* Developed **Servlets** for server-side transactions and made use of **AJAX** for server-side processing without refreshing JSP page.
* Used **AJAX** and **JavaScript** for Client-side validations.
* Created Web User Interface (UI) using **HTML5, DHTML, table less XHTML, CSS3** and Java Script that follows W3C Web Standards and are browser compatible.
* Used **HTML5** wireframes with **CSS** provided by the design team. JS is used to make it dynamic
* Used **JavaScript, HTML, JSP** pages for developing front end UI and wrote application level code to perform client-side validation.
* Designed new classes and functionalities using various **JQUERY components** for CRM application for customer service.
* Experience in generating Reports and Dashboards on Dynatrace and Splunk
* Configured **Bamboo** to handle application deployment on **Cloud (PCF)** and to integrate with **Git Hub** version control.
* Migrated technology from **Angular 1.0** to **Angular 2.0** to use upgraded features such as Angular Components and Angular Routers as per the strategy requirement.
* Developed application using **Spring JPA, Angular 2.0** on the presentation layer, the business layer is built using **spring** and the persistent layer uses Hibernate.
* Experience in implementing **Mongo DB CRUD** (**C**reate **R**ead **U**pdate **D**elete) operations by using **Mongoose** library in Node-JS including **Angular JS.**
* Extensive professional experience in Developing and Deploying enterprise applications on web/application servers such as **JBOSS EAP 5.1, Tomcat 5.x/4.x, IBM WebSphere 6.x/7.x, Web Logic under Windows OS**and**UNIX**
* Used multithreading for writing the collector parser and distributor process, which was getting real-time data from Zacks API in format of **JSON,**using **multithreading**improved the performance by a lot. Moreover, using concurrency package of **collections** made it thread safe.
* Used **SOAPUI** to test for send and receive XML data and worked with **JMS Queues** for sending messages in point to point mode communication.
* Implemented **AngularJS Controllers** to maintain each view data. Implemented **Angular service calls** using Angular Factory with Dependency Injection to prevent scope conflict commonly found with JavaScript.
* Worked on Lambda Expressions, Functional interfaces Stream API's, Time API, and Improvements on Collection, Concurrency, and IO improvements by using **Java 8.**
* Developed and implemented **Restful Web APIs**, and exposes endpoints using **HTTP** methods like **GET, PUT, POST and DELETE**.
* Used **Message body Writer** for converting Java types streams.
* Built **Java Security Aplite** add security and authentication to my application.
* Used **Maven** for compiling and building the code.
* Used **Subversion** for configuration Management and **Jira** for task management and bug tracking.
* Extensively used **Jenkins** as Continuous Integration tools to deploy the **Spring Boot** with **Microservices** to Pivotal Cloud Foundry **(PCF)** using build pack**.**
* Deployed our application on **Pivotal Cloud Foundry (PCF)** which is used to reduce the development overhead by providing a ready to use platform.
* Involved in bug fixing during the System testing, Joint System testing and User acceptance testing. Deploying the applications and binding third party services like App Dynamics on **Pivotal Cloud Foundry (PCF).**

**Environment: Angular JS, HTML5, CSS3, AJAX, Bootstrap, JSON, XML, Active MQ, JMS, Hibernate, DB2, SOAP-AXIS2, Restful services, JAX-RS SOA, Eclipse Java EE IDE Neon.3, Git, Log4j, DB2, Maven, TestNg, WADL,PCF.**

**Client: iCloud Services, Hyderabad, India. July 2015 to Dec 2018**

**Role: Java Developer**

**Responsibilities:**

* Performed many DOM manipulations using **Native JS** and **jQuery** for loading and manipulating dynamic content on webpages.
* Deployed application on **Client Linux server.**
* **Java message queue** (JMS) is used for exchanging the information and messaging services.
* Developed **SOAP web services** (JAX-WS) for sending and getting data from different applications **WSDL** generation and exposed the service at server-side.
* Developed and implemented the **MVC architectural** pattern using **Struts Framework** including JSP, Servlets and Action classes.
* Designed and integrated the full-scale **Struts/Hibernate persistence** solution with the application architectures.
* Build and maintain **SQL** scripts, indexes, and complex queries for data analysis and extraction.
* Created many **Stored procedures** and scheduled jobs to support our applications for to create reports for customers.
* Created PL/SQL procedures, functions and written complex SQL queries for C2C resume builder
* Worked with the **QA team** to solve the issues related to the development.
* Involved in **system integration** and solved the production issues.
* Used **JavaScript** and **jQuery** for validating the input given to the user interface.
* Used **jQuery** to build accordion style content, drag and drop functionality, calendar, popup and modal windows.
* Experience in installing, configuring and deploying application on **Web Logic Server**.
* Used **BackboneJS** for creating responsive UI modules with hardcoded dependency of **Underscore JS** in combination with Handlebar JS for templating.
* Used **Backbone JS** to utilize minimal set of data-structuring and user interface primitives for building a **MVC** workflow design.
* Worked on **JSP, Servlets, Struts framework** and production support issues of the existing applications.
* For messaging, used **Message Driven Beans** for consumption of JMS.
* Involved in deploying the application. Worked on **MAVEN** to build the application.
* Developed **DAO** pattern to retrieve the data from database.
* Database and Implementation skills with **ORM** frameworks Implementation skills with **ORM** frameworks like **Hibernate** and **MyBatis**
* Extensively involved in **Unit testing** and coordinated with the testing team and fixing Bugs at various stages of the application development.
* **JUnit frameworks** were used for performing unit and integration testing by writing test cases.
* **ANT** was used as a build tool. Also worked in an agile work environment.
* Used **Log4j** for logging errors, messages and performance logs.

**Environment**: **Core Java, J2EE, JSP, HTML, MVC, Servlets, Struts, JMS, MDB, EJB3.1, JUnit, DAO, Web Logic Server, Ant, SOAP, JAX-WS, WSDL, Junit, SQL.**