

Alameda County Office of Education

JOB TITLE: Senior Software Engineer (Range 23, CSEA)

JOB SUMMARY:

Plans, constructs, and maintains both static (HTML) and dynamic websites (using Java Server Pages, J2EE/EJB, Servlets) and related software, working closely with a systems administrator from the infrastructure team, various client departments within ACOE, and ACOE clients (e.g. school district personnel).

ESSENTIAL DUTIES AND RESPONSIBILITIES

Analyzes needs, plans, tracks, designs, develops (codes), tests, and manages assigned web applications, including creating page mock-ups and templates; coding business rules in Java using J2EE and client-side JavaScript; and creating database tables, SQL stored procedures, and indices.

Coordinates and conducts needs assessment meetings with clients.

Plans, develops, and maintains project documentation of current and planned projects.

Researches and resolves problems with assigned web applications.

Designs and develops specifications to integrate new systems and improve existing systems.

Designs performance and monitoring criteria and monitors use and performance of website features, content, and services.

Designs, writes, and updates training material and conducts user training related to assigned web applications.

Plans, develops, and performs data conversions.

Performs related duties as required.

QUALIFICATIONS To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

ABILITY TO

Program in multiple languages including Java, XML, XSLT, JavaScript, and SQL.

Ability to develop re-usable and modular code to be shared amongst development team.

Design and maintain complex database systems.

Configure and build features for a J2EE application environment, e.g. uPortal running on using Apache, Tomcat, or other Java application servers.

Use common programmer development environment software with a high degree of proficiency (e.g. JBuilder, Websphere Studio, Visual Studio, Eclipse, NetBeans, and XMLSpy).

Design and prepare user guides and instructions.

Analyze needs and develop requirements.

Facilitate needs assessment meetings.

Research problems using community tools.

Prioritize and schedule work (own and others).

Meet schedules and timelines.

Plan, coordinate, and document projects.

Represent the department at meetings.

Establish and maintain effective departmental and client relationships.

Communicate clearly (both orally and in writing).

KNOWLEDGE OF

Roles and practices used on a software development team.

Software design patterns.

Database design and performance optimization techniques.

SQL query design, including complex cross-table joins.

Java J2EE, XML, and Web Services related technologies: XHTML, XML, XSLT, XML-FO, XPATH, Servlets, Portlets, JMS, SOAP, WSDL, and UDDI.

Client-side scripting (JavaScript).

Effective interpersonal skills.

EDUCATION and/or EXPERIENCE

Associates degree in Computer Science, Management Information Systems, or equivalent; and a total of five (5) years website and internet application development work experience; or an equivalent combination of education and experience. Specific experience must include a minimum of:

- Three (3) years of programming experience with Java Web development: HTML, Servlets, CSS and JavaScript.
- Two (2) years of programming experience with J2EE development experience, including Portlets, SOAP, WSDL, XML, RSS, XSLT, and object persistence (e.g. Hibernate).

Desirable Qualifications: Knowledge of open source systems (such as uPortal, Sakai, Fedora, or equivalent software); experience in K-12 educational environment.

Experience with any of the following Java development portlet frameworks:

- MVC Portlets
- Spring Portlet MVC
- Spring Web Flow

Experience with any of the following non-Java technologies:

- Apache Web Server
- MySQL Database development and administration
- PHP, especially PHP 5

CERTIFICATES, LICENSES, REGISTRATIONS

California Driver's License.

Desirable Certifications: Sun Certified Developer for Java Web Services, and/or Sun Certified Web Component Developer

LANGUAGE SKILLS

Ability to read, analyze, and interpret general professional journals, technical procedures, or governmental regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of professionals and officials.

MATHEMATICAL SKILLS

Ability to work with mathematical concepts as they apply to systems analysis and design.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions in written, oral, diagram, or schedule form.

PHYSICAL DEMANDS The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to talk or hear. The employee frequently is required to sit and use hands to finger, handle, or feel. The employee is occasionally required to stand, walk, and reach with hands and arms. The employee must occasionally lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, color vision, and ability to adjust focus.

WORK ENVIRONMENT The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee regularly works in inside environmental conditions. The employee frequently works with a video display terminal for prolonged periods. The employee may be required to drive a vehicle in the course of employment, and may be required to attend evening meetings and travel. The noise level in the work environment is usually moderate.

Approved By: Personnel Commission
Approved Date: January 15, 2009