

KING COUNTY LIBRARY SYSTEM
Job Description

Title: **Software Development Engineer**
Dept.: **Information Technology Services**
Reports to: **Business Applications Manager**
Effective Date: **Revised January 2018**

Job Code: **20503**
Grade: **20, Represented**
FLSA Status: **Exempt**

General Position Summary:

This position designs and develops features, tools, and applications used for enhancing King County Library System (KCLS) capabilities. In this role, the developer creates business requirements and technical requirements, estimates projects/tasks and creates prototypes, develops application and integration software and features, prepares test cases and tools, tests software, and generates documentation. The developer understands the underlying technologies in use and works to ensure strong technical integration and high quality assurance. Staying informed of the technical and feature direction of open source applications, and communication/collaboration with open source communities is a responsibility of this role. This position collaborates with ITS application system and operations teams, third party software development/database support/open source partners to develop technically appropriate and strong solutions, within a team release process to develop solutions, and with Quality Assurance Analyst for test/fix/implement.

Essential Duties/Major Responsibilities:

Any of the following duties may be performed. These examples are not necessarily performed by all incumbents, however, and do not include all specific tasks an incumbent may be expected to perform.

1. Participates in the design, development, testing and implementation of software applications, tools, systems and services. Analyzes user requirements for system features and functionality. Develops software requirements documents. Translates functional requirements into robust, scalable, supportable solutions that work well within the overall system architecture. Participates in the full development cycle, end-to-end, from design, implementation, and testing to documentation, delivery and maintenance. Creates and maintains comprehensive, usable software documentation. Ensures compliance with KCLS policies, procedures and standards.
2. Tests, debugs, and refines computer software to produce the requirement product. Collaborates on the health of development and test environments. Analyzes software problems, identifies alternative solutions, recommends and carries out appropriate solutions.
3. Understanding high level business goals and functional needs, develops a scope of work and time/cost estimates to complete the work. Builds initial prototypes.
4. Works alternately as a team member with third-party software development team in an agile fashion, contributing to large-scale releases, as well as an individual contributor on smaller, less complex solutions.
5. Partners with an open source community to optimize KCLS utilization of community code.

6. Researches, evaluates and makes recommendations around the use of new or existing software products, emerging technologies and development tools, considering among other factors cost savings, adoption, standardization, flexibility and reuse.
7. Assists with annual budget preparation by providing estimates for needs and resources.
8. Makes recommendations for the improvement of systems development life cycle (SDLC) processes.

Secondary Duties:

1. Serves as a consultant for database design, implementation and administration, including security, backup, recovery and maintenance.
2. Partners with internal and external team members to ensure software release content and implementation quality, and in continuous improvement of software release processes.
3. Participates in activities such as committee work, training, staff meetings, etc.
4. Other related duties as assigned.

Core Competencies:

Valuing Diversity

Manages relationships with all kinds and classes of people inclusively and equitably; respects, values, and encourages the unique dimension each employee adds to the organization and each member of the community brings to the whole. Seeks opportunities to learn about differences.

Customer Focus

Primarily focused on customer needs, able to deliver high quality, value added services. Constantly strives to find new ways to increase customer satisfaction and understanding, foster equitable services, and forge meaningful connections.

Ethics, Values and Judgement

Exercises best judgment, trustworthiness, and professional standards of conduct; consistently demonstrates organization's values, moral principles, and accountability through behavior, character, and action. Defends intellectual freedom and confidentiality.

Professional and Technical Knowledge

Demonstrates proficiency in professional and technical skills and/or knowledge in position-related areas; purposely keeps up with current developments and trends in areas of expertise, in order to better foster personal success and connections for others.

Communicates Effectively

Conveys ideas/information in a way that is clear, engaging, and suitable to the audience. Main point of their message is apparent. Listens more than they speak, responds appropriately. Seeks influence.

Work Quality

Inspires and strives for excellence in all aspects of work including setting high standards of

performance for self and others; ensures that results are complete and accurate; exhibits attention to detail.

Decision Quality

Makes decisions and solves problems, can deal adeptly with varied levels of complexity, ambiguity, and risk; takes responsibility and accepts ownership for decisions regardless of outcome. Responds promptly and appropriately in crises situations.

Dealing with Ambiguity

Can shift gears comfortably; can decide and act without the total picture; can comfortably handle risk and uncertainty, does not exhibit excessive need to control or track, can 'let go' and move forward in uncertainty.

Accountability

Holds self, direct reports, and others accountable for achieving intended outcomes; follows up and monitors progress to ensure that things stay on track; models organizational values and norms.

DESIRED MINIMUM QUALIFICATIONS

Education and Experience:

A typical way of obtaining the knowledge, skills and abilities necessary to successfully perform the essential duties of the position is:

- Bachelor's degree from an accredited school with major in a computer science, information technology, application development engineering, or related field preferred.
- Five years of work experience required; equivalent of full-time work experience in applications development, software design or systems analysis may substitute education on a year for year basis.
- Four years code development with object-oriented design and development.
- Experience with JavaScript, HTML, Perl, and Linux.
- Experience with SQL or PostgreSQL; experience with OpenSRF, a plus.
- Experience with both agile and waterfall methodologies and use of source control management tools.
- Or, any equivalent combination of education and experience that provides the knowledge, skills, and abilities to perform the duties and responsibilities of the classification.

SPECIAL REQUIREMENTS

None

PHYSICAL DEMANDS

While performing the duties of this job, the employee is constantly using hands in conjunction

with frequent finger use and keyboarding, this computer work may be repetitive up to occasionally. Constantly sits and will seldom stand or walk. Will frequently reach up to chest level with hands and arms to work at a desk. The employee will occasionally lift to 10 pounds and seldom up to 35 pounds and seldom push/pull carts using light force.

WORK ENVIRONMENT

This position encounters new, unusual, hectic or demanding situations almost on a frequent basis. Extensive PC monitor work is required. Work is performed in a normal office environment and requires a strong team orientation. Some pressure from deadlines or changing priorities exists and interruptions to workflow can occur. Occasional emergency on-call status may be present in the position.

Advancement Possibilities:

Other ITS classifications depending of education of experience

The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

The job description does not constitute an employment agreement between KCLS and the employee, and is subject to change as the needs of KCLS and the requirements of the job change.

Approval: _____
Director of HR