

## IT Senior Programmer Analyst

### **General Class Purpose**

The Senior Programmer Analyst does complex analysis and advanced level programming for web and client-server enterprise-level applications. Employees perform a variety of coding and programming tasks on various platforms; manage complex application development projects; design specifications for comprehensive system software; and provide guidance to IT staff in their area of expertise. They also facilitate the needs of users from multiple City departments, resolve conflicts from varied user needs and present design and implementation plans.

### **Distinguishing Features**

The Senior Programmer Analyst is an advanced level professional classification. Employees apply highly developed analysis and programming skills, and have expert competence in one or more phases of applications development work. Employees are expected to facilitate the needs of users from multiple departments to solve complex functioning problems, or develop complicated programming.

The Senior Programmer Analyst is distinguished from the Programmer Analyst by the breadth and depth of assigned tasks and responsibility for leading large, complex, enterprise level projects requiring advanced programming and project management skills.

### **Supervision Received and Exercised**

Employees work under the direction of a supervisor or manager, and receive general instructions regarding the scope and approach to their projects. The employee decides the procedures and techniques. Employees may exercise lead direction over lower level classifications and give assistance to peers in the area of their specialty. When assigned as a project manager, they will give functional supervision to project staff, and lead complex specialized application development projects.

### **Examples of Essential Duties and Responsibilities**

*The listed examples are illustrative of the classification level and not intended to list all duties typically assigned to this classification. Employees may do all or some of the listed duties, or other related duties.*

1. Facilitate meetings with users and management staff from different departments to understand system and business requirements. Analyze current and projected data needs, resources and systems to plan new or modify current enterprise-level applications. Resolve conflicts from varied user needs. Determine applications requirements and define scope and content of new automated systems. Collaborate with programmers and data base specialists to conceptualize and develop new software design.

2. Prepare detailed specifications, flow charts and diagrams from which programs will be written. Design data structures and application interface. Build software modifications, and write programs using appropriate languages; test and debug coded programs to verify proper functioning, data integrity and optimal performance. Determine if new applications meet the business and technology requirements.
3. Develop data model to support new or modified applications; normalize data. Develop and implement database design; maintain data dictionary for application in cooperation with database administrators.
4. Plan and prioritize work of lower level staff and serve as project manager over complex and specialized application development projects. Facilitate project management meetings. Identify and allocate staff resources and set project priorities, goals and objectives. Establish schedules and methods for achieving goals and objectives. Review work products, make corrections and coordinate staff training. Prepare and present project reports. Identify and find solutions to technical, vendor or resource problems.
5. Develop software contracts following City guidelines and negotiates terms and conditions of contract with vendor. Monitor vendor progress, quality of deliverables and time limits. Resolve performance problems and authorize vendor payments. Work with vendors to diagnose, isolate, and correct software functioning problems.
6. Oversee quality assurance procedures for new applications. Review new application software before implementation for compliance with standards. Coordinate with Information Technology staff to solve problems with system applications. Design and write descriptions and functions of the applications and database code, recovery procedures and intervention methods. Compile and document program development and revisions.
7. Assist users with existing systems and programs; solve complex software related problems; assist with data transfers between different platforms. Coach users on newly developed systems and software. Prepare and update user manuals and training materials.

### **Minimum Qualifications Upon Entry**

#### Extensive knowledge of:

- Methods and techniques of business process redesign, application analysis and design, data modeling
- Techniques and methods of advanced web based and client-server programming
- Methods and techniques of using application design and development tools
- Computer languages and programming best practices typical to the job assignment
- Methods and techniques used in the installation, trouble shooting, problem resolution and maintenance of computer applications
- Methods and techniques of evaluating client information technology requirements
- Principles and practices of computer science and information systems
- Operational characteristics of multiple operating systems and platforms
- Principles, practices and methods of integrating a variety of applications into existing and proposed operating systems across multiple platforms

#### General knowledge of:

- Principles, practices, methods and techniques of leading application development projects

- Methods and techniques of project management and typical contracting process for procuring software
- Structure and content of the English language including the meaning and spelling of words, rules of composition and grammar
- Database management systems and related computer languages
- Group facilitation methods and leadership techniques used to gain agreement among competing interests
- Principles of lead supervision and training

Skill to:

- Perform advanced applications development, analysis and programming duties
- Design, evaluate, test, implement and maintain a variety of software applications
- Design and implement projects to meet user specifications
- Design, develop, install, troubleshoot and upgrade applications
- Manage complex application development projects
- Lead, organize and review the work of professional and technical information systems staff
- Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems
- Identify complex problems and review related information to develop and evaluate options and implement solutions
- Determine causes of operating errors and decide what to do about it
- Communicate effectively interpersonally and in groups
- Write clear and concise memorandums, reports and other documentation

Ability to:

- Arrange actions in a certain order or pattern according to a specific rules such as mathematical operations
- Apply general rules to specific problems to produce answers that make sense
- Effectively prioritize tasks and plan work
- Be careful about detail and thorough in completing work tasks
- Develop, design or create new applications, ideas, relationships, systems or products
- Explain to people with a non-technical background what the technical information means and how it can be used
- Establish effective working relationships with members inside and outside the organization
- Ability and willingness to work as part of a team to produce work
- Be pleasant with others on the job and display a good-natured, cooperative attitude
- Accept criticism and deal calmly and effectively in high stress situations

**Experience and Education**

*A typical way to obtain the required knowledge, skills and abilities would be:*

A Bachelor's Degree in computer science or technology, information systems or software engineering, business or a related course of study; and five years experience in business process analysis, application design and computer programming using languages typical to the position;

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or any combination of experience and training that demonstrates possession of the knowledge, skills and abilities. Experience leading application development projects is desired.

**Physical and Mental Demands**

*The listed physical and mental demands are representative of those that must be met by an employee to successfully do the essential functions of this classification. Persons with disabilities may be able to carry out the duties with accommodation. Reasonable accommodation will be evaluated upon request.*

Employees must possess visual acuity for doing programming or software installations, and see detail at close range. They will regularly communicate with others to convey or receive information and express ideas; therefore, they must understand the speech of another person, and speak clearly so others can understand. The job requires physical conditioning to sit for prolonged periods of time. Employees will also use their fingers to make precise coordinated movements when using a computer keyboard.

Employees in this classification must apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions. Work requires that employees deal with several abstract and concrete variables and order information into a logical sequence.

**Work Environment**

Work is regularly performed in an indoor office setting. The employee may work early and late hours to meet time lines, provide off-hour upgrade and maintenance, and respond to emergency situations.

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Senior Programmer Analyst, Created \_\_\_\_\_;