

SYSTEMS AND PROGRAMMING ANALYST

DEFINITION

Under direction, performs complex professional information technology duties related to applications programming, operational systems support and other areas as assigned; writes, tests, modifies, debugs and revises routine computer programs; analyzes, designs and enhances data processing, software and hardware systems; assists users in resolving problems pertaining to system operations and procedures; and performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is the full working, journey-level analyst class in the Systems and Programming Series within the Yosemite Community College District (YCCD). Incumbents in this class perform the full range of journey-level professional analytical duties. Work may broadly involve supporting several disciplines such as programming, operations support, and project support or may emphasize a single functional area. Incumbents utilize professional knowledge of information technology to make decisions and complete assignments.

This class may be distinguished from the higher-level class of Systems and Programming Administrator because that is the advanced level class where incumbents perform system administration and database administration in addition to the application development and professional analytic duties contained in this class.

SUPERVISION RECEIVED AND EXERCISED

Incumbents in this class work under the direction of a manager or senior manager, receiving occasional supervision while working toward a definite objective that requires use of a wide range of procedures. Incumbents plan and/or determine specific procedures or equipment required to meet assigned objectives and solve non-routine problems, referring only unusual matters to a supervisor.

An incumbent in this class does not directly lead or supervise other full-time employees, but may assign, direct and/or monitor the work of subordinate full time, part time, and/or student employees on a project or assignment basis.

ESSENTIAL DUTIES

Note: Duties may be assigned from one or more of the following areas:

Applications Programming:

- Performs professional applications programming, testing, implementation, debugging and maintenance duties involving multiple platforms and technologies.
- Develops program code utilizing secure programming methodologies and develops accessible user interfaces in compliance with local, state and federal requirements.
- Utilizes version control systems to record and maintain program modifications. Submit code to peers for review and conducts peer code review for other team members.
- Creates installation packages as needed; works with team to build CI/CD pipelines for custom applications.
- As an active participant in Change Management, creates detailed change requests as necessary for application and system changes which are submitted for review, approval and execution by other authorized individuals or groups.

- As an active participant in Lifecycle Management, reviews and recommends changes to existing application code, reports and systems.
- Knowledge and practice of standard project management and business analysis practices. Management of pre-project work and project execution tasks to adhere to project timelines. Act as lead on project and project meetings as needed for assigned projects.
- Participates in activities surrounding data security and compliance with local, state and federal requirements.
- Meets with clients to establish application requirements; evaluates programming needs and identifies ways to integrate new programming code into existing programs to meet user needs.
- Identifies software and hardware required to support proposed applications; designs new programs, or improves existing software, striving for increased performance and data integrity.
- Details and documents the relationship of coding systems to program steps for ease of program debugging; prepares flow charts, block diagrams, data definitions and operational steps to ensure that the programming documentation is clear.
- Maintains and supports existing applications and responds to routine customer calls and requests for minor application programming modifications.

Operations Support:

- Provides professional support for computer systems and/or servers; monitors systems/servers for response time, problem prevention, performance and resource utilization.
- Recommends the evaluation, selection, and acquisition of new system hardware and software solutions; confers with vendors and/or other agencies as needed; researches options and analyzes costs/benefits of implementation; analyzes integration issues; helps determine communication requirements for new equipment installation; prepares reports and recommendations for management recommending the purchase of microcomputers, software and peripherals.
- Installs and configures complex computer hardware, software, programs and applications, including those serving enterprise-wide functions; tests and troubleshoots systems to ensure functional operation.
- Assists with the planning, development and preparation of technical standards, operational procedures and system performance objectives.
- Extracts application data and prepares reports; constructs queries; assists users in identifying data reporting needs.

All Support Areas:

- Assists in writing and developing documentation and procedure manuals.
- Participates in large and small technology development projects; assists with large-scale implementation of new processes, upgrades and equipment rollouts; helps implement enterprise-wide upgrade strategies and procedures; helps troubleshoot conversion and implementation problems.
- Performs technical administrative duties; attends meetings; serves on committees and task forces; independently responds to various inquiries and correspondence; prepares information and data requested for administrative review; maintains information system documentation; prepares reports, files, correspondence and other documents.
- Performs other related duties as assigned.

MINIMUM QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The Education/Experience, Knowledge and Ability requirements are representative of essential duties. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions of the position.

Education and Experience:

Pattern I

- Experience: One-year equivalent to a Systems and Programming Analyst at YCCD.

OR Pattern II

- Education: Possession of a bachelor's degree from an accredited college or university, with major course work in computer science or a closely related field.
- Experience: One year performing professional information technology duties that emphasized applications programming or systems analytical support, depending upon assignment.

Knowledge of:

- Principles, theory, design of professional data processing, networking, computer programming, operating systems and related hardware/software.
- Contemporary software, including operating, database, and report writing software.
- Methods, techniques, and procedures of modern computer and computer programming design, development and implementation.
- Professional methods and techniques of system troubleshooting, maintenance, development, enhancement, and testing.
- Change Management procedures
- IT Service Management procedures
- Principles and theory of professional business analysis practices, procedures and strategies.
- Principles and theory of professional project management practices, procedures and strategies.
- Current technological developments/trends in area of expertise.

Ability to:

- Develop, modify, and implement computer programs in a logical and sequential manner.
- Prepare flow charts and documentation pertaining to program steps and logic with speed and accuracy.
- Analyze user and system needs and problems, and develop clear and logical solutions.
- Work with customers to design and enhance computer software and systems based on business needs.
- Prepare documentation and operating procedures in a clear and concise manner.
- Communicate effectively, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of the work.

Licenses and Certificates:

- Depending upon assignment, a valid license to drive in California may be required.

Physical and Mental Standards:

- **Mobility:** ability to sit for long periods, move about an office, stand occasionally, reach above and below desk level.
- **Dexterity:** fine manipulation sufficient to operate a computer keyboard, handle individual papers, write and take notes.
- **Lifting:** frequent lifting of papers, files, equipment and material weighing up to 25 pounds; occasional lifting of items up to 50 pounds.
- **Visual Requirements:** close vision sufficient to read files, documents, and computer screens and do close-up work; ability to adjust focus frequently.
- **Hearing/Talking:** ability to hear normal speech, speak and hear on the telephone, and speak in person.
- **Emotional/Psychological Factors:** ability to make decisions and concentrate; frequent contact with others including some public contact; frequent deadlines and time-limited assignments.

TYPICAL WORKING CONDITIONS

- Work is generally performed in an indoor office environment that includes frequent exposure to computer screens.

Class Adopted: 03/01/09
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