

## SOFTWARE ARCHITECT II

DISTINGUISHING FEATURES OF THE CLASS: Under general supervision, incumbents of this class, located in the Department of Information Technology, are responsible for providing technical leadership in the design, development, building, configuration, integration, testing and operation of secure software custom programming projects and systems, including in-house and third party software components, as well as off-the-shelf software modules, in order to provide quality IT services to user departments. This class is distinguished from the Software Architect I level by the scope and complexity of assignments as well as the frequent and ongoing use of independent judgment and action in completing assignments and projects within given timeframes, and in managing vendor relationships. Under managerial direction, incumbents of this class are also responsible for managing projects affecting county-wide activities, from beginning to end, as well as providing technical guidance and leadership to subordinate staff. While technical leadership and guidance is provided, supervision is not a responsibility of this class. Does related work as required.

### EXAMPLES OF WORK: (Illustrative Only)

Provides technical guidance and leadership to staff preparing project plans; designing Full Stack software module architecture; documenting and presenting designs and coding, while acquainting other staff with the details of the system; undertakes any other related tasks throughout the lifecycle of the project to build effective application systems within given timeframes;

Collects and organizes functional requirements, analyzes those requirements and develops a conceptual (logical) representation of the requirements;

Prepares work-flow analyses and process re-engineering;

Operates and refines application systems used in county departments to ensure they function reliably and efficiently;

Assists in preparing requests for proposals (RFP's) for vendor software, software tools and components; manages vendor relationships;

Designs and develops web-based, multi-tier applications using .NET, NET Core, HTML, Java, Spring Boot, and SQL, or other modern frame work Open Source tools appropriate to the application;

Uses systems configuration management and version control tools in the various life-cycle stages of a system;

Designs database schemas to meet the data needs of the departments, as identified in requirements analysis or county-wide mandates;

Designs, develops and administers systems based upon relational database management software such as Oracle and Microsoft SQL Server, or upon object-oriented database software;

EXAMPLES OF WORK: (Illustrative Only) (continued)

Uses computer applications or other automated systems such as spreadsheets, word processing, calendar, email and database software in performing work assignments;

May access protected health information (PHI) in accordance with departmental assignments and guidelines defining levels of access (i.e. incidental vs. extensive);

May perform other incidental tasks, as required.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND ATTRIBUTES:

Thorough knowledge of the fundamental concepts of server and client operating systems, including either Microservice Architecture, UNIX/Linux or Microsoft Windows; good knowledge of designing and programming for software; good knowledge of SQL, .NET, .NET Core, PL/SQL, PHP, Python, or Java; good knowledge of formal requirements, analysis and design methodologies and CASE tools; good knowledge of the design, programming and architecture of effective, maintainable solutions at the module level; good knowledge of how to use and select appropriate software components/objects; knowledge of object-oriented programming and database management systems; knowledge of distributed computing and 3-tier architectures, as well as middleware and other systems integration tools; knowledge of embedded systems; knowledge of relational database design, operation, optimization and tuning; familiarity with at least one of the following: GIS, object-oriented database management systems, middleware, embedded systems or expert systems; skill in the use of Rapid Application Development tools; ability to plan, coordinate, supervise and evaluate the work of others; ability to identify, evaluate and convey (both orally and in writing) requirements, designs and operations of application software and systems; ability to establish and maintain effective working relationships; ability to manage technical projects and vendor relationships; ability to gather and analyze data and draw conclusions; ability to establish and maintain effective working relationships; ability to effectively use computer applications such as spreadsheets, word-processing, e-mail and database software; ability to read, write, speak, understand and communicate sufficiently in English to perform the duties of the position; thoroughness and attention to detail; resourcefulness; initiative; imagination; good judgment; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: A Bachelor's Degree\* and five (5) years of recent (within the last 7 years) experience (pre- or post-degree) where a primary function of the position was designing and programming application software in Java, .Net, SQL, PL/SQL, or PHP; the administration of Oracle or MS SQL server databases; or full life-cycle project management of information technology focused projects.

SUBSTITUTIONS: A Bachelor's degree\* in Information Technology or closely related field may be substituted for one year of the required experience. A Master's Degree\* in Information Technology or a closely related field may also be substituted for one additional year of experience.

SPECIAL REQUIREMENTS: Possession of a valid license to operate a motor vehicle in the State of New York at time of appointment and maintain same while in the title.

NOTES:

1. \*Education beyond the secondary level must be from an institution recognized or accredited by the Board of Regents of the New York State Department of Education as a post-secondary, degree-granting institution.
2. Experience on a home personal computer may not be used as a substitute for the aforementioned experience.

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