

Madera Unified School District
Classified Job Description

Database Administrator - Developer

Purpose Statement

The job of Database Administrator - Developer was established for the purpose/s of managing, supporting, and developing front and back end software for the district's Student Information System and connected systems; building, managing and troubleshooting databases and/or operational data stores; creating process and establishing formal relations, authority, and ownership among connected database systems; developing software to integrate the District's systems with internal and external systems, and to implement process automation where appropriate; developing queries and reports; and developing software that improves the experience and utilization of district databases to improve district processes.

This job reports to the Director of Information Technology and Support Services.

Essential Functions

- Manage, maintain and support the district's Student Information System.
- Create and execute processes to maintain data cleanliness and correctness in the District's Student Information System and connected systems.
- Develop migration software as needed to consolidate duplicative record systems with the aim of single system authority, such as in cases where record system migrations are incomplete.
- Set up, manage and troubleshoot features within the Student Information System in support of critical educational processes such as registration, course scheduling and grading.
- Administer and maintain user permissions, group permissions and passwords for the Student Information System.
- Scope and create sources of authority, data ownership, and data security in database systems by establishing database and/or application level security policies.
- Develop SQL queries and associated scripts, software, or processes to facilitate integration between the district's Student Information Systems, or other critical systems, and other internal or external systems.
- Develop and maintain back end software to automate account management between the District's Student Information System, HR System, and connected database systems.
- Develop and maintain front-end software to augment the functionality of database applications as needed to improve district processes.
- Develop new and/or change existing database structures, application programs, and web designs in response to bugs reports and/or management requests following a formal MUSD change management process.
- Document problems and solutions in MUSD help desk system.
- Follow MUSD standards for source code control, software design, and data governance.

- Develop and maintain API implementations in software to establish connections with external data providers in order to enable the data duties of this position on external connected systems.
- Creates reports using complex SQL procedures to facilitate data-driven improvements to business and educational processes.
- Perform administration of multiple databases and/or data warehouses.
- Analyze potential Database Management System applications to determine feasibility, requirements, and cost effectiveness in support of providing students and staff high quality and up-to-date technology services.
- Design, develop, maintain, and control the data governance standards for database information and its usage; database security, integrity, reliability and availability; monitor performance and capacity requirements.
- Develop and maintain written procedures and documentation to support the effective and efficient operation of the department.
- Consult and provide recommendations in the development of proposals, designs, programming, and implementation phases of applications added to database systems to insure that those systems adhere to MUSD data governance standards.
- Design the overall structural design of database systems at both the logical and physical levels, working with users and programming staff.
- Develop, design, coordinate, and write necessary programs, tasks and documentation providing for backups, reloads, recovery, reorganization, timely updates and restructuring of database systems.
- Debug, troubleshoot and correct problems in a reasonable, timely manner and provide solutions to resolve issues to meet the needs of users.
- Interact with vendor support to obtain information for the efficient operations of system applications and other related equipment or programs.
- Establish and maintain data dictionary systems.
- Support the district with timely and accurate responses to technical questions and issues concerning database systems and structures.
- Install, test, maintain, upgrade, reorganize and patch software related to database systems to ensure effective operation of programs.
- Assist technology staff and operations personnel in solving programming problems in a reasonable, timely manner; make effective use of computer hardware and software to support the effective operation of the school district.
- Train and provide clear direction and guidance to others as required in support of professional learning.
- Collaborate with other departments throughout the school district as needed.
- Participate in and/or lead projects, teams and meetings.
- Perform related duties as assigned.

Other Functions

Performs other related duties as assigned for the purpose of ensuring the efficient and effective functioning of the work unit.

Job Requirements:

Skills, Knowledge and Abilities

Skills:

Specific skill-based competencies required to satisfactorily perform the functions of the job include utilizing pertinent network, application, database monitoring and troubleshooting software; adhering to safety practices; planning and managing projects; and preparing and maintaining accurate records.

Knowledge of:

Methods and skills involved in establishing and maintaining an effective Relational Database Management System, including tuning, design, network communications, backup/recovery, security and administration; maintenance and administration of Relational Database Management Systems; computer hardware and peripherals; web applications; QL and other programming environments such as Visual Studio , ASP, NET, C#, EJB, Python, C++, PHP, PowerShell, PL/SQL, and/or Java, and/or the programming knowledge sufficient to learn new programming languages as needed; knowledge of k-12 student information systems and K-12 processes and functions including but not limited to: registration, class schedules, attendance, discipline and gradebooks; oral and written communication skills; knowledge of database administration tools; correct English usage, grammar, spelling, punctuation and vocabulary.

Ability to:

Operate standard office equipment, including computers and related software; perform a variety of specialized duties in programming, development, maintenance and analysis of computer applications, databases, and systems in support of assigned systems, programs and functions; prepare, organize, document, and control source code revisions to new and existing applications and features using standard source control systems; research, design, develop and implement new system applications as appropriate; design applications to meet district needs, enhance job performance and provide for system enhancements; develop and maintain source code for new and existing software applications; understand legacy code sufficiently to reengineer new applications; modify existing programs to enhance database operations and functions; design programming solutions for application defects; facilitate the computerized collection, management, manipulation, and distribution of data used for analysis; design programming solutions, troubleshoot, and resolve application defects; establish and maintain cooperative and effective working relationships with diverse range of people; train and provide clear direction to others; plan, prioritize and schedule work to meet schedules and timelines; read, understand, explain and implement technical material from manuals and journals; maintain accurate records; read, apply and explain rules, regulations, policies and procedures; analyze and troubleshoot situations accurately and adopt an effective course of action; communicate, understand and follow both oral and written directions effectively; communicate using patience and courtesy in a manner that reflects positively on the organization; actively participate in meeting district goals and outcomes; have integrity and honesty in all situations; learn district operations, policies, objectives and goals.

Responsibility

Responsibilities include working under limited supervision using standardized practices and/or methods; managing a team; and monitoring budget expenditures. Utilization of significant resources from other work units is sometimes required to perform the job functions. There is a continual opportunity to impact the organization's services.

Working Environment

The usual and customary methods of performing the job functions require the following physical demands: some lifting, carrying, pushing, and/or pulling; and significant fine finger dexterity. Generally, the job requires 80% sitting, 10% walking and 10% standing. The job is performed under minimal temperature variations and in a generally hazard free environment.

Minimum Qualifications

Education Bachelor’s degree in Information Systems, or Computer Science or a related field supplemented by college level courses in Systems Analysis, Database Management and/or programming.

Experience Four years of recent, progressively responsible experience in data analysis, database administration/management or programming. Experience working with Student Information Systems and/or in a K-12 environment is preferred. Possession of; or the ability and qualifications to obtain Microsoft Certified Solutions Associate; SQL Server; or equivalent or ability to obtain within 12 months of appointment; and failure to do so will result in termination.

Required Testing

Pre-employment Proficiency Test
Pre-employment Physical exam

Certificates

Valid Class C CDL
Microsoft Certified Solutions (SQL)

Continuing Educ./Training

Maintain as needed

Clearances

DOJ/FBI
Fingerprint/Background Clearance
TB Clearance

FLSA Status

Non-Exempt

Approval Date

Salary Range

Classified Salary Schedule
Pending CSEA Salary Negotiation