

SANTA CLARA COUNTY OFFICE OF EDUCATION
Personnel Commission

CLASS TITLE: DATABASE ADMINISTRATOR III

BASIC FUNCTION:

Under the direction of the Manager - System Administration, perform database development and database warehouse system and support to the County Office and school districts; conduct database needs assessments to maintain existing database systems; assure the integrity of database systems; research software solutions for the integration of database systems; perform the installation and upgrade of database related products; lead, guide and train Database Administrator I and II.

REPRESENTATIVE DUTIES:

ESSENTIAL DUTIES:

Design and develop database and database warehouse systems; provide database analysis and data modeling, and perform normalization procedures to ensure an integrated database system for existing and new applications; set-up and test production environments for business applications.

Maintain production and test databases, ensure proper database performance and operation.

Assure data integrity, referential constraints, trigger, and procedures for database system to assure proper database operation.

Analyze and diagnose database system problems and takes appropriate corrective action for resolution.

Develop technical policies and specifications for data importing and exporting, database system development, maintenance, backup, and recovery; coordinate implementation of policies.

Oversee database security related to applications and operations.

Provide for project management for special projects such as the data warehouse and others as directed; develop and implement project plans for key departmental projects; assure standards and proper quality of services are met.

Maintain network system standards in database system development that optimize system integration and functionality.

Research, review, and provide consultation on software to determine the advisability and functionality of its use by COE internal departments and client districts.

Provide assistance in attaining software solutions to assure high quality and cost effective operations; recover lost data from database backup.

Oversee the daily operation of backups for logical logs and physical database systems.

Participate in the analysis of data requirements in the program development cycle and assist in the creation of Entity Relationships (ER) and Data Flow Diagrams (DFD).

Monitor, evaluate, and analyze MS/SQL table and usage; modify or redesign database as needed and update MS/SQL statistics and table indices as scheduled to assure proper database performance indexes.

Interface with system administration and operations staff to ensure efficient use of database systems; serve as second level user support.

Perform the installation and upgrade of MS/SQL, Open Database Connection (ODBC) Driver, client-server application components, report writer servers, QSS software, and database related products.

Support customer service staff in data access or database system related problems.

Maintain current knowledge of database system technologies related to MS/SQL, systems administration, and SQL.

Lead, guide and train Database Administrator I and II.

Drive a vehicle to various sites to conduct work.

OTHER DUTIES:

Perform related duties as assigned.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

Relational database design methods, techniques, characteristics, and practices.

Proper programming development procedures in a client-server environment.

Relational database techniques for performance monitoring and tuning, indexing, security, recovery, data segmentation, locks arrangement, and data integrity.

Multiple operating systems and applications disciplines such as UNIX/Linux/Windows Server/Oracle/SAP.

Networking concepts technology and related components of a client server environment.

C, GUI, .Net, PHP and 4GL programming languages.

Proper SQL and programming skills for writing database trigger and stored procedures.

SQL and Non-SQL data loading principles.

Data integration tools such as OLAP applications.

SQL Server Analysis Services (SSAS) delivering online analytical processing (OLAP) and data mining functionality for business intelligence applications.

Managing multi Tb (terabyte) data volumes.

ABILITY TO:

Design and develop database system, provide data modeling table normalization, and performance.

Design and develop data warehouse schemas and models.

Conduct database needs assessments.

Develop proper specifications related to database systems administration.

Analyze and evaluate database systems and modify database systems effectively to meet office needs.

Manage data across the enterprise through well established data design standards.

Develop and support conceptual, logical, and physical data models.

Support data access, acquisition and physical database design.

Support architectural compliance and infrastructure coordination.

Verify data models reflect business requirements and data usage.

Develop and implement data model meta-data.

Develop and enforce metadata standards.

Define data archiving/purge standards.

Develop XML schemas for SOA entity services.

Provide timely estimation of database/storage utilization and plan enhancements/upgrades required.

Quickly identify database problems, evaluate causes and take correction action for resolution.
 Communicate effectively in both oral and written form.
 Perform application programming.
 Establish and maintain accurate records and files and prepare reports.
 Work independently with minimal supervision.
 Work various shifts to meet the needs of the assigned duties.
 Establish and maintain effective relationships with those contacted in the performance of assigned duties.
 Lead, guide and train Database Administrator I and II.

EDUCATION AND EXPERIENCE:

Any combination equivalent to: bachelor's degree in computer science, information systems, or related field and five years of directly related experience in UNIX/LINUX/Windows Server system administration, database system administration and design, programming development in a client-server environment specializing in data modeling and normalization as well as data warehouse schema design using designated tools.

LICENSES AND OTHER REQUIREMENTS:

Valid California driver's license.

WORKING CONDITIONS:


ENVIRONMENT:

Indoor environment.
 Driving a vehicle to conduct work.

PHYSICAL DEMANDS:

Hearing and speaking to exchange information and make presentations.
 Dexterity of hands and fingers to operate computer keyboard.
 Seeing to perform assigned activities.
 Sitting for extended periods of time.
 Bending at the waist, kneeling or crouching.

Approved by Personnel Commission: January 8, 2014; revised June 10, 2015



Norma Gonzales
 Director-Classified Personnel Services

6/10/15

Date