

SECTION 1 - SCOPE

SCOPE

The scope of this document is to identify Structured Query Language (SQL) review standards that must be followed for all enterprise data base access, regardless of platform or language in which the SQL resides.

SQL Coding Best practices are not included in this document for SQL can vary greatly and its specific application depends on many factors relative to the utilized Relational Data Base Management System (RDBMS) and the particular application's data. Adherence to standard industry practices for database access, such as optimal qualification, minimum results sets, and efficient joining, is inherent.

Updates to this document are made on an as-needed basis by the Application Services Standards and Technical Work Group, as advised by Database Administration (DBA), upon approval by Application Services Management.

SECTION 2 - THE REVIEW PROCESS

WHAT IS A SQL REVIEW AND WHO PERFORMS IT?

A SQL review is a systematic review of SQL code used by or supporting an application. The SQL review will be performed by an assigned member of the Database Administration Technical (DBA Tech) team.

For enterprise applications that do not already have a primary DBA Tech assigned, contact the DBBSS Manager to assign a resource.

WHY IS A SQL REVIEW PERFORMED?

The SQL review is performed to allow the SQL to be reviewed by a resource other than the developer. It should be one skilled in the RDBMS utilized so that recommendations can be provided to improve performance, lessen rework required if inefficient code is found later in the testing process or even after Production implementation, and most importantly, facilitate the dissemination of good coding practices amongst the SQL developers.

WHEN IS A SQL REVIEW PERFORMED?

The Project Manager will identify a point in time when the SQL is stable and a SQL review would be appropriate. This establishes control at the project level rather than the individual code level to ensure that the review is done most efficiently and timely, ensure that it occurs at the appropriate time in the project life cycle, and ensure it appropriately incorporates shared objects.

The SQL review should generally be at the end of the project's Unit Test cycle to ensure any recommended modifications can be implemented without negatively impacting the System Test or User Acceptance testing. The depth of the modifications made to the SQL during System Test must be discussed with the assigned DBA Tech resource to determine if another SQL review is warranted.

When SQL code is modified on an individual object basis and not at the project level, the assigned developer can request a review of the SQL at an appropriate place in their work. This can be coordinated directly between the developer and the DBA Tech Team.

HOW IS A SQL REVIEW PERFORMED?

The logistics of the SQL review are straight forward. Once a review is requested, it is the developer's responsibility to work with the assigned DBA Tech resource to work out the best way for the SQL to be provided for review. For projects that have multiple developers, the Project Manager will identify one developer who will coordinate the review for all the developers on the project.

Generally, the review of static SQL will be on a plan or package basis. The review of dynamic SQL will be performed on a file of the SQL statements that is provided to the DBA Tech resource and/or will be performed by a coordinated tracing or monitoring effort. Again, this will be coordinated between the developer and the assigned DBA Tech resource.

HOW IS A SQL REVIEW DOCUMENTED?

Upon review of the SQL, the DBA Tech resource will respond back to the developer identifying statements in the SQL that are incorrect and require a change, statements in the SQL that can be improved or tuned, and statements in the SQL where the variation of data may have an impact or adding an index may help performance.

Based on this response, the developer will address the SQL as appropriate. When major alterations are required to the SQL, the developer will coordinate with the DBA Tech resource for a subsequent review. This can be an iterative process for the purpose of optimizing the performance of the SQL.

No set format will be required for this response to allow for the developer and the DBA Tech resource to determine the most efficient way to communicate the recommendations, however, at a minimum, an email detailing that the review has been performed will be required.