

Product Review: SoftTree's SQL Assistant



Product Review: SoftTree's SQL Assistant

James F. Koopmann
Pine Horse, Inc.

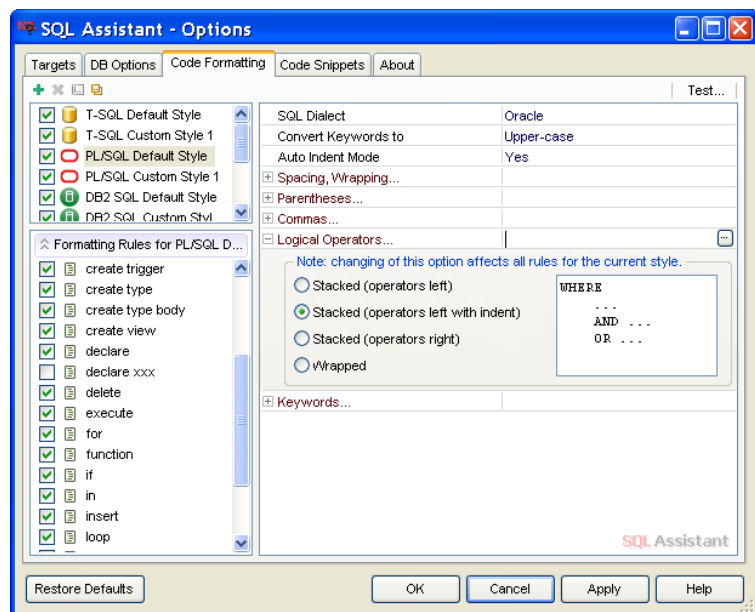
Introduction

As much as database vendors would like us to believe that databases are easy to use, databases in fact become more and more complex. With each and every release the amount of knowledge needed to find and use new features, options, and syntax can be quite daunting. In frustration, developers, DBAs, architects, and modelers will spend countless hours thumbing through documents and user guides for the proper syntax needed to successfully compile and execute data control language (CDL), data definition language (DDL), and data manipulation language (DML). This can cause an extreme decrease in coding performance and accuracy as well as a regression back to a familiar set of commands or syntax, often overlooking more efficient code options.

SQL Assistant can help remove the barrier to learning new syntax, options, and structures in a non-intrusive manner. With real-time syntax lookup, checking, and code completion, along with intelligent database object searching users can quickly develop code through supported editors to accurately build code that is ready for execution. With additional features such as code execution, data viewing, dynamic code generation, formatting, and code comparison users will enjoy a simple yet powerful interface to the databases they administer or develop against.

SQL Assistant Options

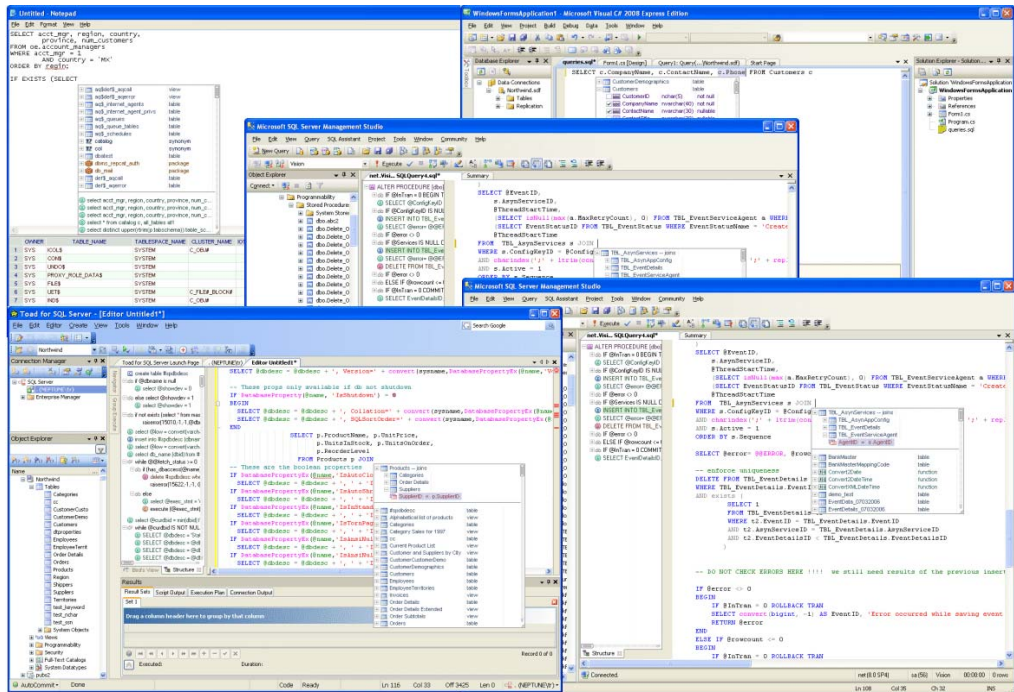
The customization of SQL Assistant is accomplished by a robust set of options—allowing users to manage database connections modify keywords, formatting options, error handling, and even the SQL used to query data dictionaries. Modifying the formatting options is where most users will spend there time, if any, to help ensure code looks and meets their particular shop standards and meets best practices. To do this, SQL Assistant provides a compact set of instructions that users can quickly configure and tailor the styles to their coding habits. Choice of SQL dialect, keywords, spacing, line breaks, wrapping, parentheses placement, etc. are all available within a couple clicks. Plus, having a ‘Test Formatting’ option readily available from the option screen where you define formats makes changes a snap and immediately verifiable.



Product Review: SoftTree's SQL Assistant

Pick Your Development Environment

Not wanting to cloud judgment of SQL Assistant with other vendor product features, and being the purist I am, I chose the non-exciting/vanilla Notepad editor for this product review. And while SQL Assistant enables users to define their own editor environment, let's make it perfectly clear that SQL



Assistant supports a wide variety of preconfigured development environment targets right out of the box that include:

- SQL Server Management Studio 2005/2008
- Visual Studio for Database Professionals (DataDude)
- Visual Studio .NET/2005/2008
- Visual Studio C# Express, VB Express, C++ Express, Web Developer Express
- Toad for Oracle, MySQL, DB2, SQL Server
- PowerBuilder 7/8/9/10.x/11.x
- SQL Server Enterprise Manager
- MySQL Query Browser
- SQL Query Analyzer
- Eclipse
- DB Tools for Oracle
- PL/SQL Developer
- Oracle SQL*Plus
- PostgreSQL pgAdmin III
- Microsoft Access
- UltraEdit

Just as there are plentiful options for editor targets, SQL Assistant is able to connect to all the major database sources—managing, handling, and reacting with their own set of specific behaviors including connectivity methods (ODBC, OCI, MySQL connector, ADO, SQLDAO, etc.). Current databases servers supported include:

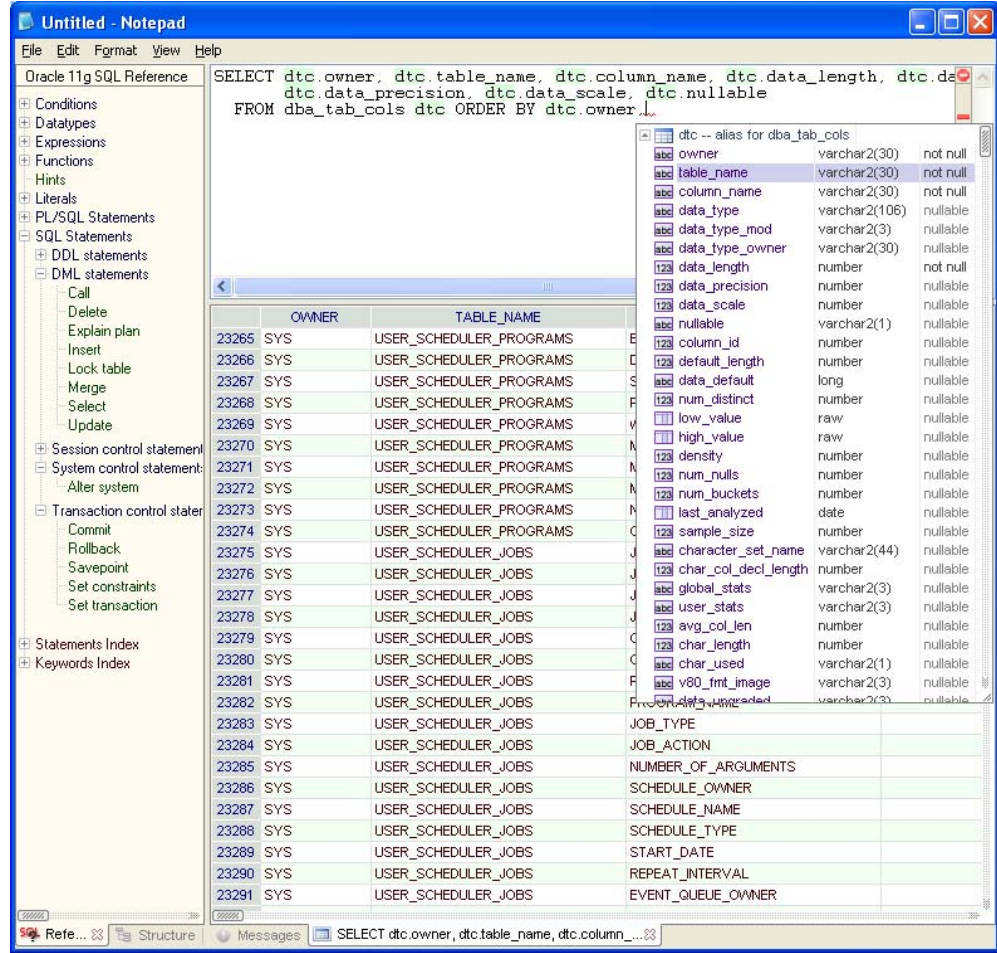
- Oracle 8i, 9i, 10g, 11g
- Microsoft SQL Server 2000, 2005, 2008
- Microsoft Access 2003, 2007
- DB2 UDB 7, 8, 9, 9.5
- DB2 UDB for iSeries
- MySQL 5.x
- Sybase ASE 12.x, 15.x
- Sybase ASA 7, 8, 9, 10
- PostgreSQL 8.x

The portability of SQL Assistant makes it a tool that can change with your development and/or backend databases environments—making it an no-brainer when considering future infrastructures. Portability also means that developers do not need to be locked into a single development environment. If DBAs like to use SQL*Plus, while developers use Visual Studio or Eclipse, both teams can produce code that has the same look and feel regardless of editing tool.

Product Review: SoftTree's SQL Assistant

Using SQL Assistant

SQL Assistant, when used with Notepad, has three main working areas. The left window can be used for accessing the SQL reference system and navigation of code. The lower window is used to produce code views, result set previews, messages, and syntax check results and the top window is used for entering SQL code. As SQL is typed, popup windows will appear—aiding the user in selecting and completing their code. Also available is another popup window from using



the mouse right-click button—providing display and configuration options as well execution, check, format, and compare options.

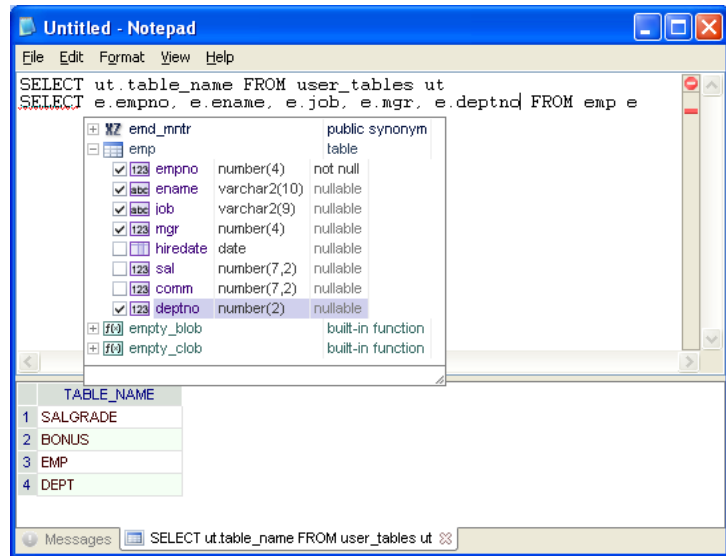
Getting started with SQL Assistant is very easy and requires very little interaction with the User Guide to learn the basic functions. Anyone familiar with writing SQL will be able to just start coding. SQL Assistant seems to bring features to the forefront as they were needed—teaching the user as the tool is used. By all means use the user guide as it does contain a wealth of information on the finer points on configuration and use of SQL Assistant; it's just not needed for 80% of the functionality.

Aiding in the completion of code, as it is being typed, is what SQL Assistant was designed to do and it does exceptionally well—providing additional options and choices along the way. As the user types, SQL Assistant provides intelligent finishing options for words, that you can quickly arrow down, accept with the enter key, or just keep typing. The ability for SQL Assistant to understand if the user is free-typing or referencing a database attribute is its strong point, even to the extent of allowing you to type in a database table where a column would go—quickly offering a drop down list of matching table and column choices. Selection is expedited with the use of arrow keys—using the down arrow to find a table, a right arrow to select the table, and then down and right arrow keys to scroll down and select columns, very elegant as the SELECT statement is quickly filled out as columns are selected.

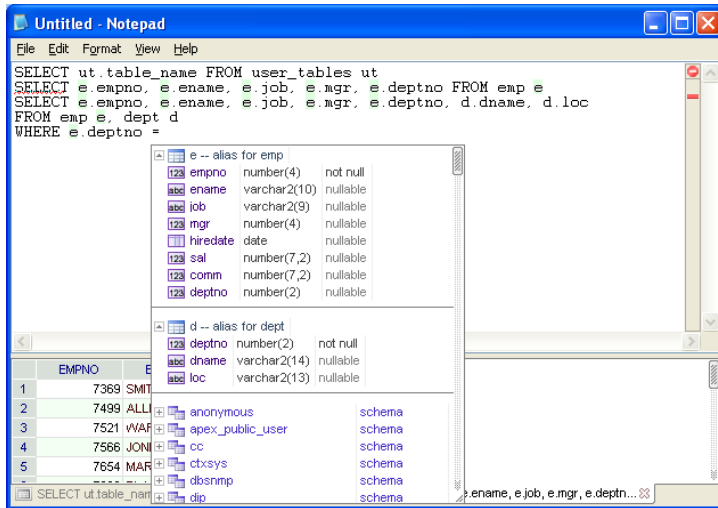
Product Review: SoftTree's SQL Assistant

Database Exploration

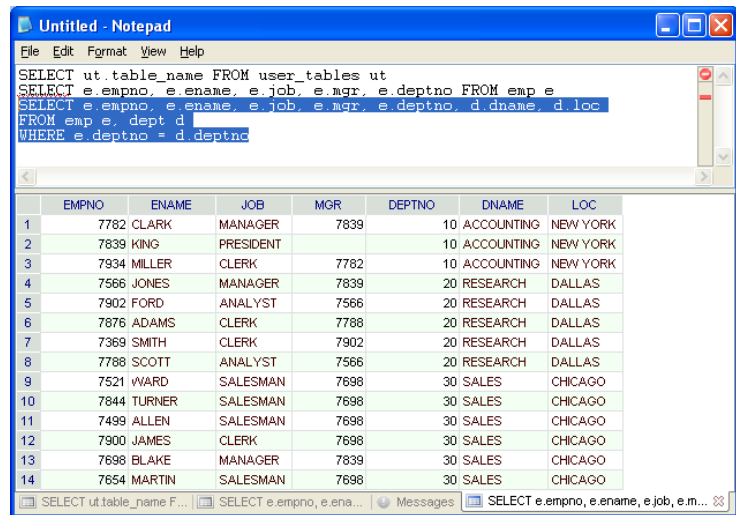
Developers and DBAs are often confronted with the need to explore database information, often times with nothing more than a loose set of requirements. SQL Assistant empowers developers with the ability to explore a database to quickly find schema objects and then build SQL based on their findings. In the case of building SQL against an Oracle databases, users know there is a dictionary table called USER_TABLES that can be queried against to find tables they have access to.



A query against this dictionary table produces a listing of tables. Since the developer knows he/she needs employee information the EMP table is a strong candidate. Building a quick query to select data the user then notices another field called deptno. Recognizing this as a key column and remembering a table called DEPT from the previous query, SQL Assistant helps the user quickly completes the SQL, selecting columns from the DEPT table and joining the two tables on deptno to produce the SQL needed.



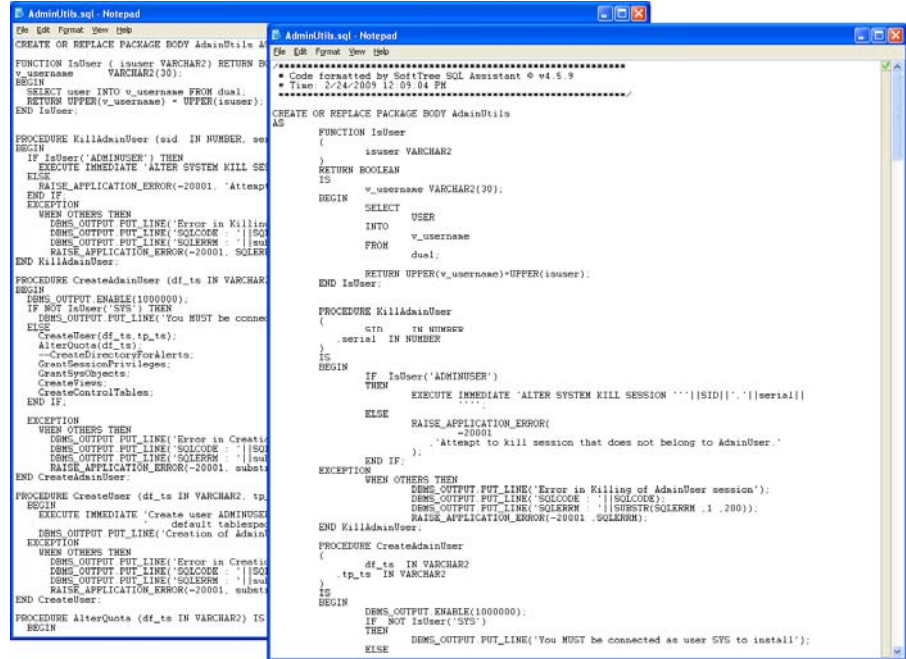
Using SQL Assistant to explore both database structures and table data, while keeping a tabbed set of results, makes it an exploration tool for all sorts of developer and DBA tasks. As code is developed in the primary window a user can easily produce multiple result sets below to help recall and aid the development process. Having SQL Assistant complete SQL eliminates the need to know database structures intimately and easily cuts the development process in half for building simple or complex SQL statements.



Product Review: SoftTree's SQL Assistant

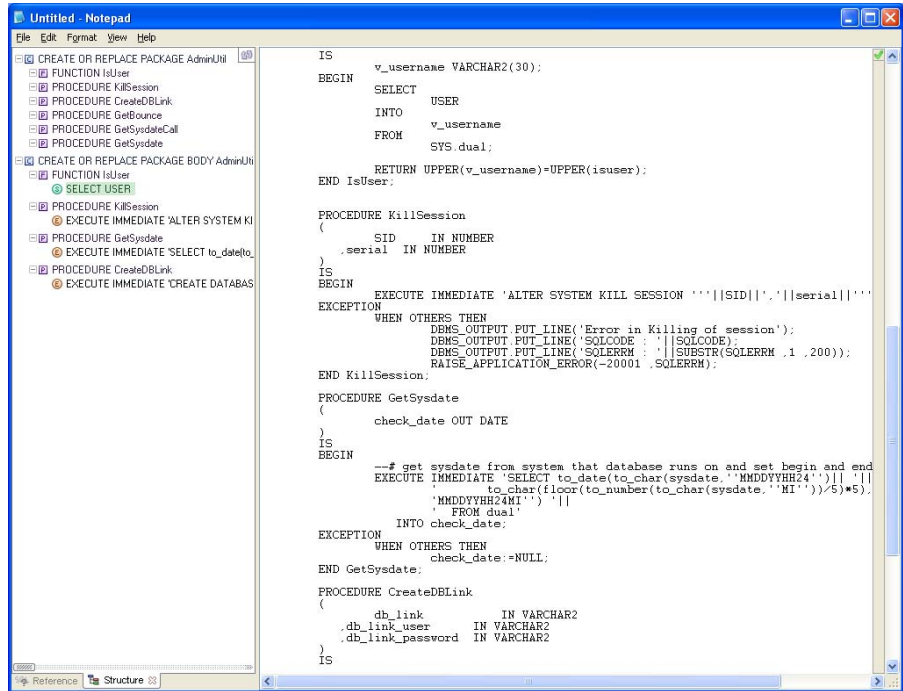
Formatting

Writing code quickly is definitely a plus for any developer. But having this same code readable is quite a different story. Many development shops have standards on how code should be formatted—helping to reduce the time required to read and understand code, as well as shorten the maintenance cycle when developers must work on code that they have not seen before. Through SQL Assistant's set of options, users can either use default formatting options or modify the templates to adhere to their particular internal requirements. Once this is done, a few clicks provide neat and readable code in a standard format.



Navigating Code

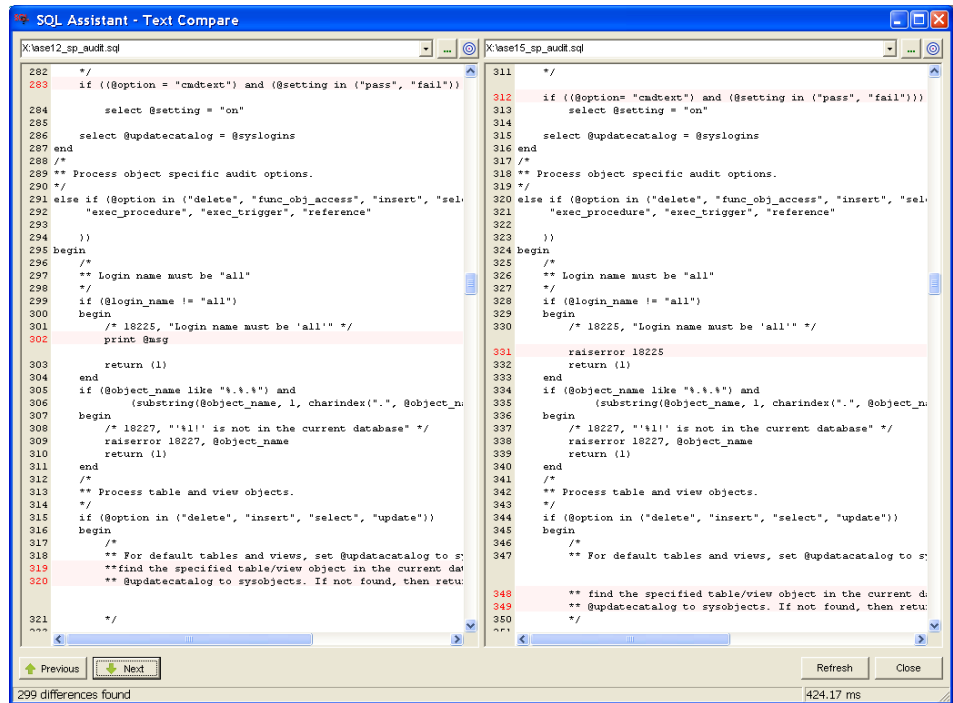
Searching code for key procedures or code sections is easily done through SQL Assistant's code structure navigation window. Here developers are provided a tree structure for the most important sections within the code that not only supplies a quick inventory of code but can be used to drill into individual sections and then jump to points in the code. Also available for code navigation is an option called bird's view that presents a miniature view of larger sections of code. You can think of this feature as pointing the user to recognizable landscape, very handy when working with very large files.



Product Review: SoftTree's SQL Assistant

Compare

Every developer has in their lifetime needed to compare code. This comparison could be between two different versions or after modification to verify changes. SQL Assistant supplies a quick and easy method to invoke a compare tool that allows developers to step through, side by side, differences in two pieces of code. Easily invoked from within the current editor session to compare highlighted text or used to source in external files. This is a definite need for any development process and having it within SQL Assistant just simplifies needing an additional tool.



Create Dynamic Code

Having to work/jump from one RDBMS to another can make remembering syntax differences difficult. For those environments that require the development of two different code bases or migration tasks between databases, SQL Assistant provides the answer in an option that has the ability to take SQL code and convert that code to another platform. Conversion to Oracle, SQL Server, DB2, or a variety of programming languages is as easy as highlighting the code and selecting Copy SQL Code As some other format. This puts the code in an edit buffer that can be pasted in your current edit session or another. A common SQL statement from Oracle; `SELECT * FROM DUAL;` quickly produces the following sampling of code bases, with more available:

Dynamic SQL (PL/SQL)

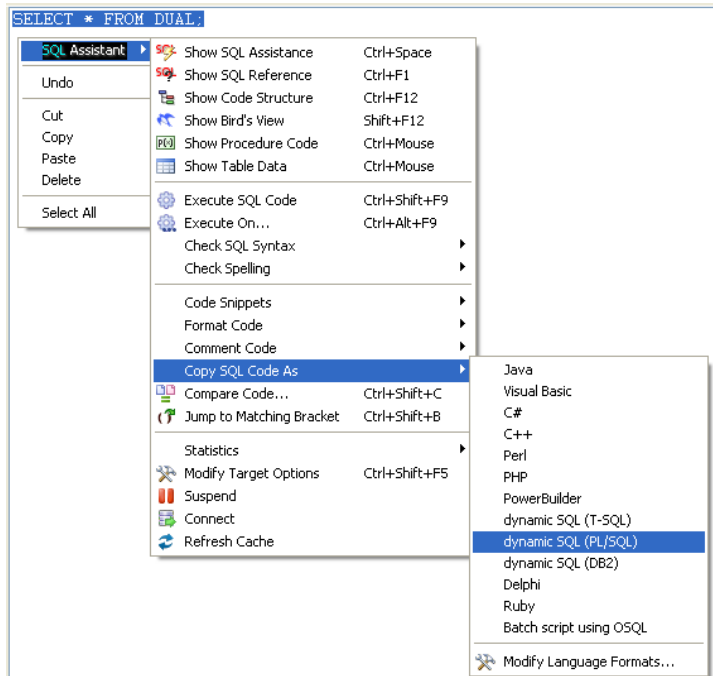
```
DECLARE
  v_sql nvarchar2(4000);
BEGIN
  v_sql := 'SELECT * FROM DUAL;';
  EXECUTE IMMEDIATE v_sql;
END;
```

Dynamic SQL (T-SQL)

```
DECLARE @sql nvarchar(4000)
SET @sql = 'SELECT * FROM DUAL;'
EXEC(@sql)
```

Dynamic SQL (DB2)

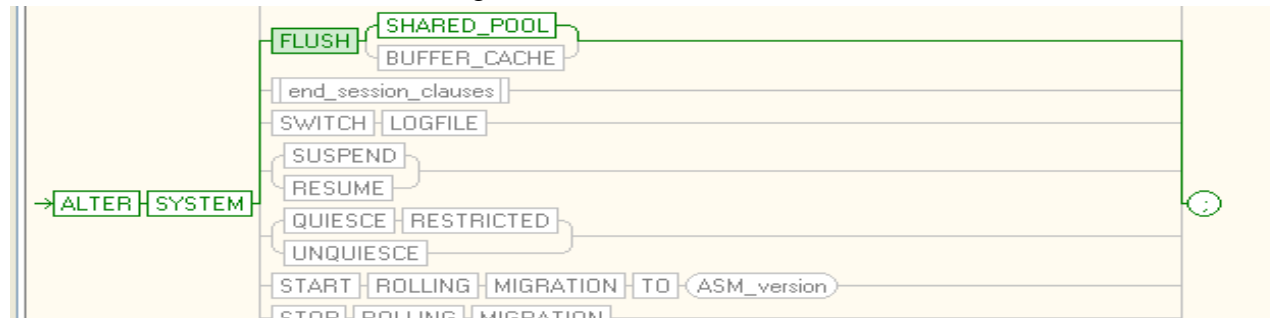
```
DECLARE v_sql varchar(4000);
SET v_sql = 'SELECT * FROM DUAL;';
EXECUTE IMMEDIATE v_sql;
```



Product Review: SoftTree's SQL Assistant

SQL Reference

Keeping track of all the DDL, DML, and DCL for a database is nearly impossible. Factor in different versions and it is impossible. SQL Assistant's SQL Reference is a gem to say the least. From the SQL Reference navigation panel a user can drill down into an area of interest and select the reference needed—producing a hover window that shows the complete reference for the item selected. Not only is the SQL Reference a source for command structures, it actually allows the user to click forward and backward through that structure and build commands in real time.



Improvement areas

It was difficult to find areas that were lacking within SQL Assistant. These couple improvements are purely my own specific wish list.

- While it is difficult to have a complete online and context sensitive reference, there might be a benefit to link syntax to some form of context sensitive help system
- I'm an old vi junky, it would be nice to see this product integrated with gvim

Conclusion

SQL Assistant easily integrates and improves your development environment—supercharging my simple notepad experience. At the core, SQL Assistant offers a robust method to complete SQL. Developers and DBAs no longer have to spend wasted time looking up obscure object names and command structures—offering users the ability to be more productive.

But there is so much more. SQL Assistant is very rich in configuration options and use cases that prove its viability to ease the development cycle and produce code quickly. This review only touched the surface of some of these features. Intelligent code reference, compare, formatting, navigation, result set, and user modifiable options all provide a robust and complete development environment and warrant exploring in further detail.