ORACLE

Top 10 Oracle SQL Developer Tips and Tricks

December 17, 2013

Marc Sewtz

Senior Software Development Manager Oracle Application Express Oracle America Inc., New York, NY



The following is intended to outline Oracle's general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Marc Sewtz

Senior Software Development Manager Oracle Application Express / Database Tools



- Joined Database Tools group in 2002
- Twitter: @msewtz
- Blog: http://marcsewtz.blogspot.com



Agenda

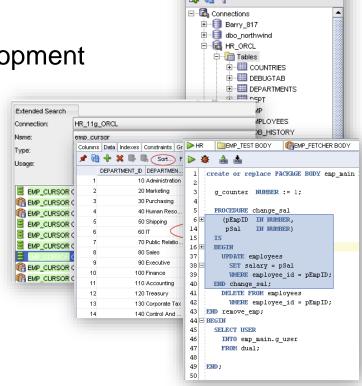
- Overview
- Top 10 Tips & Tricks
- Demonstration
- SQL Developer 4.0 New Features



Oracle SQL Developer Overview

Overview

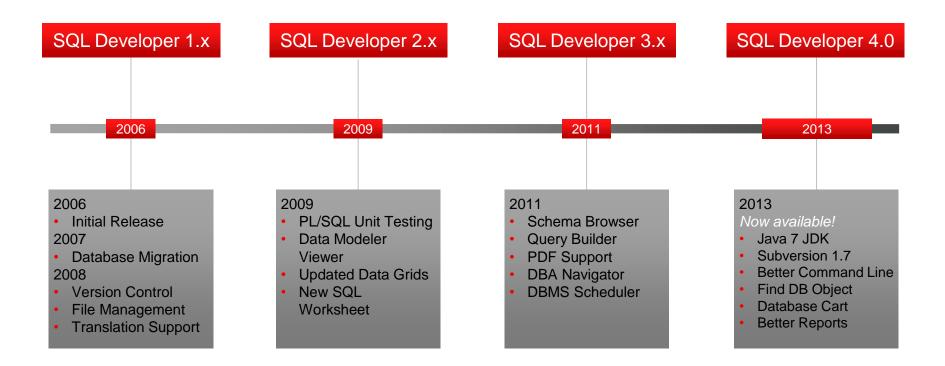
- Free graphical tool for Database Development
- Enhances productivity and simplifies database development tasks
- Browse database objects
- Run SQL Statements and Scripts
- Edit and Debug PL/SQL
- Run provided reports and create custom reports



Connections

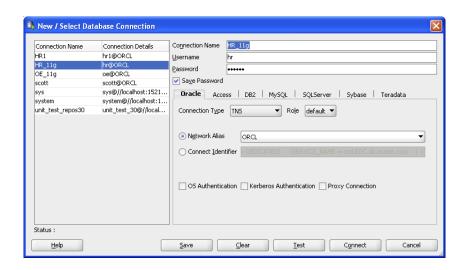
Reports

Release History



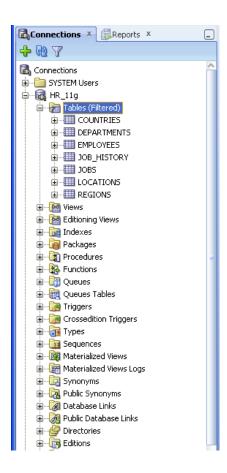
Database Connections

- Connection Support
 - Basic, TNS, LDAP, Advanced
 - External authentication
 - Proxy connections
 - Third-party database
 - Kerberos Authentication
- Create, save and test
- Import and export
- Cloud Connections



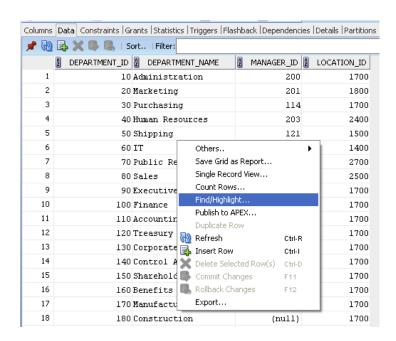
Creating and Browsing Objects

- Connection Navigator
- Tree based object browser
- Context menu utilities
- Create and edit database objects
 - Tables, Views, Indexes, Sequences
 - Packages, Procedures, Functions, Triggers, Types
 - Directories, Database Links (includes Public)
 - Application Express
 - ... and more



Data Grids: Querying and Updating Data

- Browse table and views.
- Filter, Sort
- Context menus offer
 - Single record view
 - Duplicate row
 - Count rows
 - Save Grid as a report
- Manage columns
- Single value updates



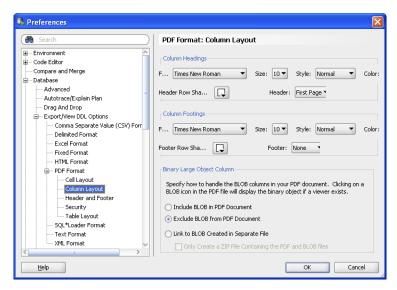
Exporting and Importing

- Context menu DDL and data export
 - Text, CSV, Insert, Loader, XML, HTML, XLS, PDF
- Import Data
 - MS Excel data import
 - Create table on import
- Export wizard
 - Parameters to include schema owner, drop statements, storage syntax, inline constraints syntax, export data, export grants
- Bulk upload to Database Cloud using Cart functionality



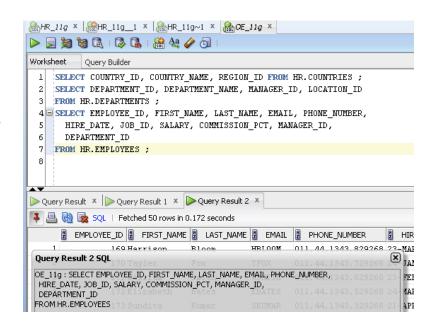
Exporting to PDF

- New data format support for PDF
 - Configure PDF file format using preferences
 - Customizable Layouts
 - Provides security to encrypt and password-protect
 - Provides option to include BLOBs



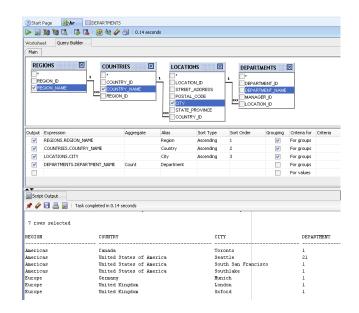
SQL Worksheet

- Execute queries and scripts
- Command support for SQL*Plus and SQL and PL/SQL
- Code insight
- Code refactoring options
- Syntax highlighting
- Supporting windows for
 - SQL Tuning Advisor, Explain Plan and Auto trace
 - HTP and OWA output



Query Builder

- Drag and drop query building
 - Integrated with SQL worksheet
 - Multiple object selection
 - Switch from Query Builder and Worksheet
 - Repeated tables
 - Union, intersect, minus and sub queries
 - Aggregates, Alias, Order By, Group By, Where clauses



File Based Development

- SQL Developer supports file based development
 - Explore files in the Files navigator
 - Open files in the SQL Worksheet
 - Place files under version control
 - Execute against a connection
 - Syntax formatting

```
Oracle SQL Developer: D:\Working\SQLDev_example_scripts\GenScripts\createHRpack.sql
File Edit Yiew Navigate Run Versioning Tools Help
Connections X Reports X Files X
                                  ☐ AHR_11g × ☐ createHRpack.sql ×
码 ×
                                     SQL Worksheet History
                                     ⊳ 🗦 🐚 🐚 👢 | 👺 👢 | 🙈 🗛 🥢 👩

<u>★</u> BuildScripts

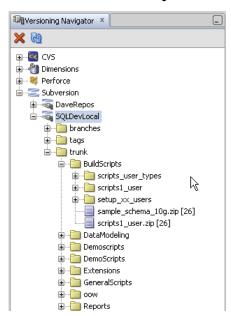
                                     Worksheet Ouery Builder
       1 DROP PROCEDURE raise_amount;
       DROP FUNCTION get sal;
       CREATE OR REPLACE PACKAGE hr pack
       5 IS
       PROCEDURE raise amount
       (p id IN employees.employee id%TYPE,
       ⊕ P OBE
                                            p_raise_amt IN NUMBER default 0);
       9 FUNCTION get_sal
                                           (p id IN employees.employee id%TYPE,
       in SOLDev example scripts
                                            p increment IN NUMBER := 1)

→ ■ BigTabs

                                            RETURN NUMBER:
          13 END hr pack;
          GenScripts
                                      14
               Cr_Usr.sql
               cr8 matviews.sql
                                      16 CREATE OR REPLACE PACKAGE BODY hr pack
               cr8_plsql.sql
               createHRpack.sql
                                          PROCEDURE raise amount
               debug body.sal
                                            (p id IN employees.employee id%TYPE,
               debug_def.sql
                                            p_raise_amt IN NUMBER default 0)
               debugtab.sql
```

Integrated Version Control Support

- Integrated support for versioning and source control systems
 - Subversion
- Use Check for Updates to add:
 - CVS (Concurrent Versions System)
 - Perforce
 - Serena Dimensions
- Access using
 - View > Team > Versioning Navigator
 - Versioning menu



Top 10 Oracle SQL Developer Tips and Tricks

#10 Configure Your Preferences

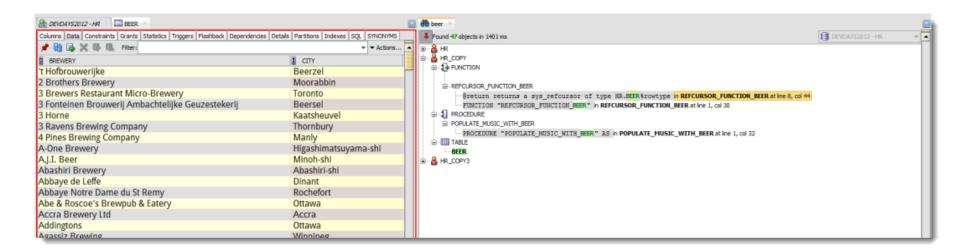
- Make things look nice
- I ook & Feel
- Disable unused extensions.
- Automatic can be 'bad'
- I like 'more' grids

```
O - O - & -
                           BEER_TAPI × BEER_TAPI Body × BDEMO1 ×
                           Code Grants Dependencies References Errors Details Profiles
 - Ba 🕾 🖶
⊟-- 🔂 hr
                                                        부습 🐞 🍪 • 🕨 🌞 📓
  ⊞- mables (Filtered)
                              1 ⊟ create or replace
  PACKAGE BEER_tapi
  IS

⊕-  Indexes

                                 type BEER_tapi_rec
  🖹 📠 Packages
                                     record
     ⊞-  BEER_TAPI Body
                                          STATE BEER.STATE%type,
           ins upo
                                          COUNTRY BEER. COUNTRY%type .
              upd
                                          ID BEER IDXtype ,
           -2∏ del
                             11
                                          CITY BEER CITY%type
         BEER_tapi_rec
                             12
                                          BREWERY BEER. BREWERY%type );
         39 BEER_tapi_tab
                             13
                                 type BEER_tapi_tab
                             14
                             15
                                     TABLE OF BEER_tapi_rec:
         upd
                             16
                                     -- insert
         al del
                             17 B PROCEDURE ins(
     p_STATE IN BEER.STATE%type DEFAULT NULL ,
     p_COUNTRY IN BEER.COUNTRY%type DEFAULT NULL ,
                             20
                                                   IN BEER.ID%type DEFAULT NULL .
     21
                                                  IN BEER.CITY%type DEFAULT NULL .
                                          p_BREWERY IN BEER.BREWERY%type ):
     -- update
                             24 B PROCEDURE upd
  🖮 🎒 Procedures
                                          p_STATE IN BEER.STATE%type DEFAULT NULL ,
  🖹 - 😘 Functions
                                          p_COUNTRY IN BEER.COUNTRY%type DEFAULT NULL .
  🖮 🛅 Queues
                                                  IN BEER.ID%type DEFAULT NULL .
  28
                                          p_CITY IN BEER.CITY%type DEFAULT NULL ,
  ⊞ Triggers
                             29
                                          p BREWERY IN BEER, BREWERY%type ):
  30
                                 PROCEDURE del (
```

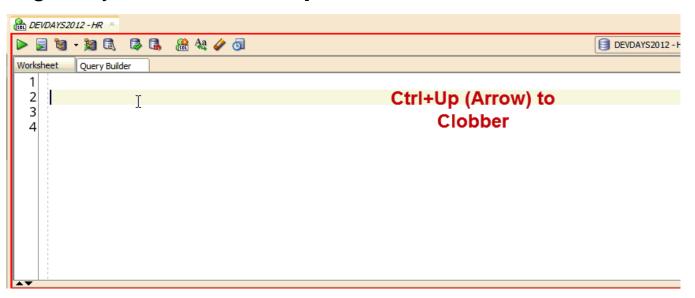
#9 Split Editors | New Editor Tab Groups



- Right Click in the Editor Tab:
 - Split gives you two independent views of the editor
 - New Tab Group lets you see multiple editors at once

#8 Recall Previous SQL via the Keyboard

 Cycle through your recent SQL statements just using these magic key strokes! Ctrl+Up or Ctrl+Down.



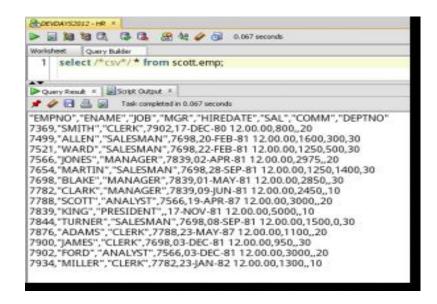
#7 Extend SQL Developer With Extensions

- Write your own (XML + SQL)
- Check for Updates
- Extension Exchange
- Free and commercial Extensions

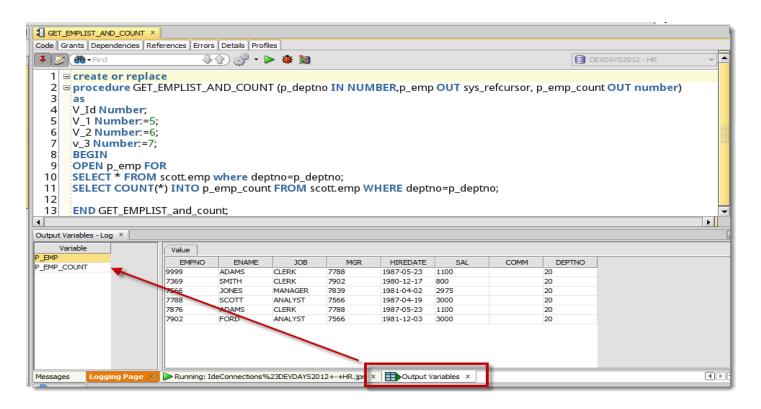


#6 Formatted Query Results

- Format query results directly to XML, CSV, HTML, etc.
- Add Comment /*csv*/ /*xml*/ /*html*/
- Execute via F5 (Script)
- Comment labels match grid export formatter labels
- ONLY works in SQL Dev

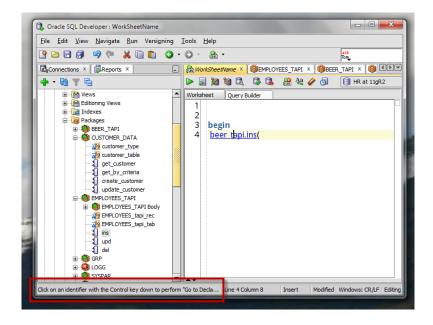


#5 Viewing PL/SQL Output (Include Ref Cursors)

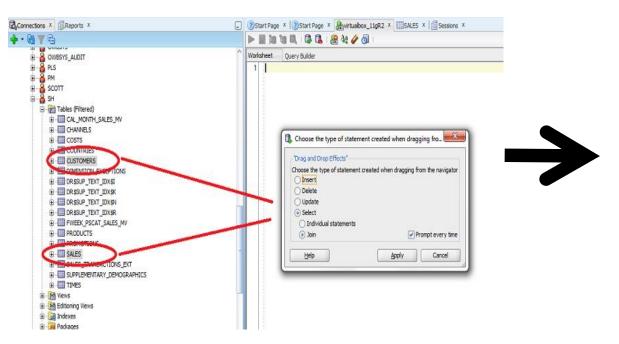


#4 Object Search to Quick Open an Object

- Ctrl+Click, Shift+F4
 - Hold down Ctrl...
 - Mouse over object text...
 - Click to open object editor OR SHIFT+F4 OR View > Find DB Object



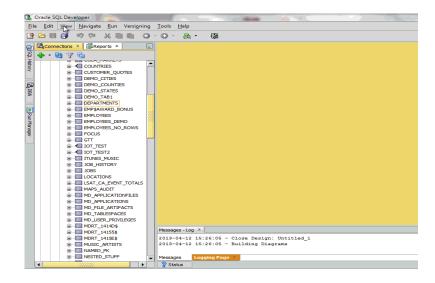
#3 Drag & Drop Multiple Tables to Worksheet



```
Start Page X Start Page X Sessions
Start Page X Sessions
Worksheet Query Builder
 1 SELECT B.PROD ID.
    B.CUST_ID,
     B.TIME ID.
      B.CHANNEL ID,
      B.PROMO_ID,
      B. QUANTITY SOLD.
      B.AMOUNT SOLD,
      A.CUST ID.
      A. CUST FIRST NAME,
      A. CUST LAST NAME,
      A. CUST GENDER.
     A.CUST YEAR OF BIRTH,
     A.CUST MARITAL STATUS,
      A. CUST STREET ADDRESS.
     A. CUST POSTAL CODE,
16
      A.CUST_CITY,
      A. CUST CITY ID.
      A. CUST STATE PROVINCE,
      A. CUST_STATE_PROVINCE_ID,
     A. COUNTRY ID.
      A.CUST MAIN PHONE NUMBER,
     A.CUST_INCOME_LEVEL,
     A.CUST CREDIT LIMIT.
24
     A.CUST EMAIL,
25
     A.CUST TOTAL.
      A. CUST TOTAL ID.
      A.CUST SRC ID,
      A.CUST_EFF_FROM,
      A. CUST EFF TO,
     A. CUST_VALID
    FROM SH. SALES B.
      SH. CUSTOMERS A
33 WHERE A.CUST_ID = B.CUST_ID;
```

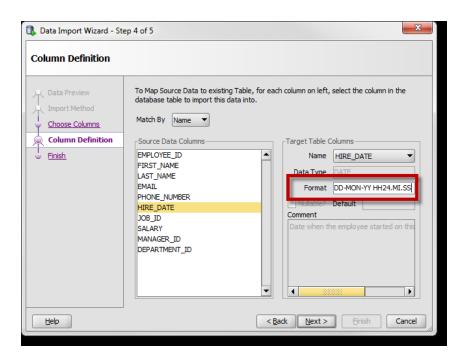
#3 Drag & Drop Multiple Tables to a Model

- Shift, Select, Drag, Drop OR
- Ctrl+Select, Drag..
- Ctrl walks the dependency tree
- Preview DDL, save, export, etc.



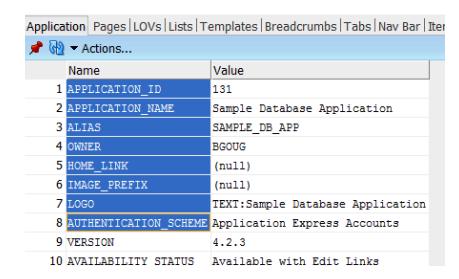
#2 Excel Export and Import

- Export data to Excel
- Import from Excel to table
 - Existing
 - Build New One
- CSV Exports are Faster



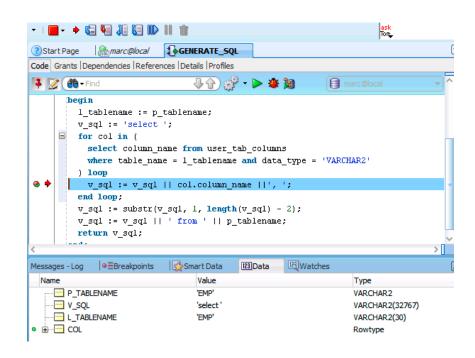
#1 APEX Integration

- Report on APEX meta data
- Gather statistics on APEX apps
- Review application details
- Import and Deploy applications
- Export applications and pages
- Publish reports to APEX



#1 APEX Integration - Remote Debugging

- Remote Debug APEX Apps from SQL Developer
- Compile PL/SQL function for Debug
- Enable Remote Debugging in SQL Developer
- Load APEX page in browser
- Trace execution in SQL Dev



Oracle SQL Developer 4.0 New Features

- JDK 1.7
 - Support for JDK 7 and above
- Database Performance Monitoring
 - Interface for Oracle Database Enterprise Edition's Diagnostic pack
 - Automatic Database Diagnostic Monitor (ADDM)
 - Active Session History (ASH)
 - Accessible from the DBA panel
 - Manage snapshots, baselines, and baseline templates

- Find Database Object Search
 - Redesigned database search
 - New tree layout allows for searches on
 - multiple schemas,
 - object types,
 - identifier types
 - usages.
 - History of searches stored for later access

- Command Line
 - Command Line extended to Reporting and Cart
 - Run Reports and generate into HTML
 - Cart commands offer the ability to export objects and data
 - Apply predefined DDL generation options and data formats

New Features

Reports

- Create new report dialog with tree layout for easier navigation
- Advanced option to instantly create Child and Drill Down reports
- More chart types
- Charts can be previewed in design mode
- HTML Report can be generated for any report

- UI Enhancements
 - Enhanced Look and Feel
 - Set window border color dynamically for database connections
 - New floating Editor and Navigation windows
- Data Modeler 4.0
 - Support for 12c IDENTITY columns
 - Masking of sensitive data with redaction policy definitions at table and column level
 - Create Transparent Sensitive Data Protection (TSDP) policies



Hardware and Software

ORACLE®

Engineered to Work Together

ORACLE®