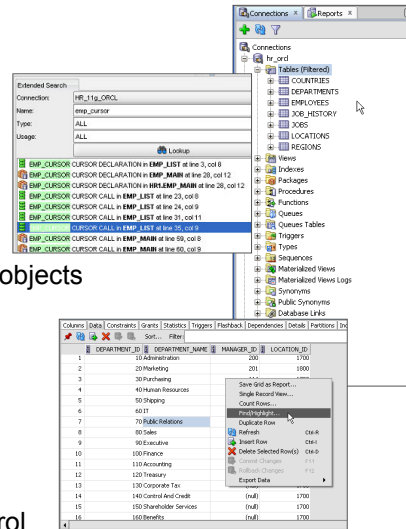


SQL Developer Features

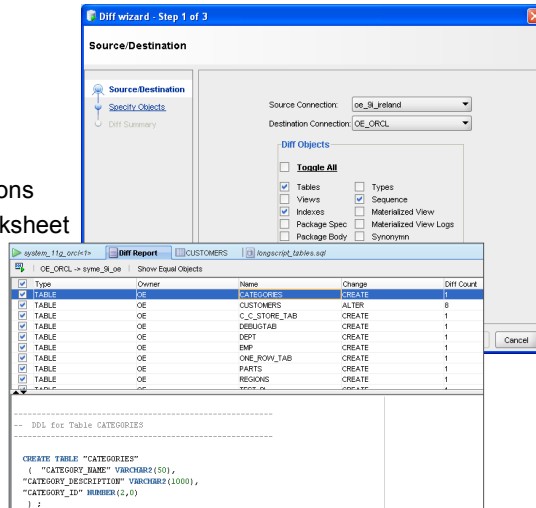
- Creating database connections
- Creating and browsing objects
- Querying and updating data
- Using the SQL Worksheet
- Running the Query Builder
- Importing data, exporting data and objects
- Creating and running PL/SQL
- Running and defining reports
- Building extensions
- Creating PL/SQL Unit Tests
- Integrating with TimesTen
- Integrating with Oracle APEX
- Working with files and version control
- Browsing and migration from third-party databases



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Schema Copy and Compare

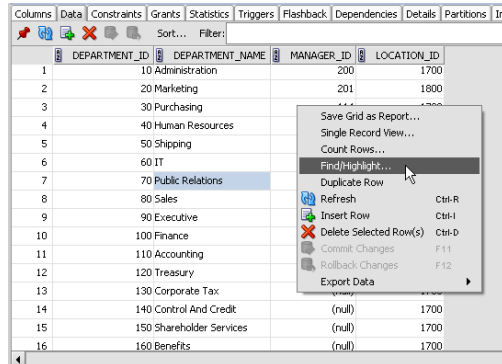
- Schema Copy
 - Create new objects
 - Truncate objects
 - Drop objects
 - Summary report of actions
 - Log output to SQL Worksheet
- Schema Compare
 - Specify object types
 - Specify objects
 - Review diff summary
 - Summary report
 - Statements sent to SQL Worksheet



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Data Grids: Querying and Updating Data

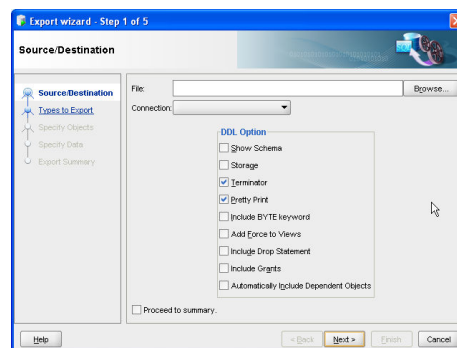
- Browse table and views data grid
 - Filter, Sort
- Context menus offer
 - Single record view
 - Duplicate row
 - Count rows
 - Save Grid as a report
 - Highlight data
- Manage columns
 - Reorder
 - Hide and show columns
 - Data filters
- Track updates in message log
- Recall filters
- Single value updates in data grid
- Clear grid settings



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Exporting and Importing

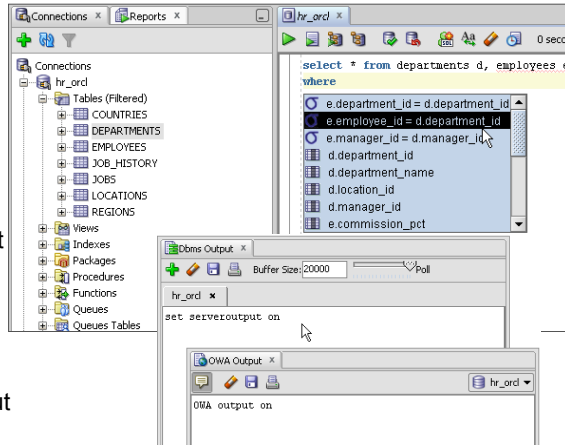
- Context menu DDL and data export
 - Text, CSV, Insert, Loader, XML, HTML, XLS
- Import Data
 - MS Excel data import
 - Create table on import
- Export wizard
 - Parameters to include:
 - Schema owner
 - Drop statements
 - Storage syntax
 - Inline constraints syntax
 - Export data
 - Export grants
 - Export opens in SQL Worksheet



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Using the SQL Worksheet

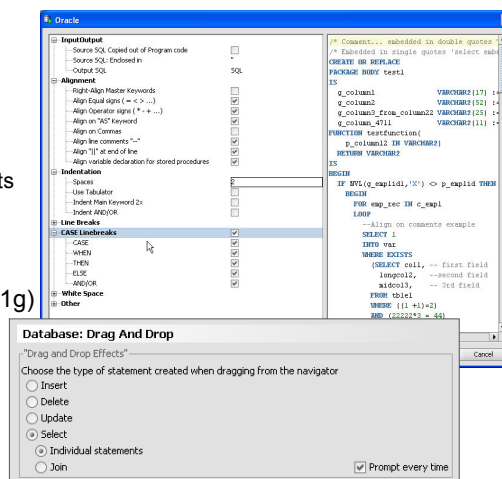
- Execute queries, scripts
 - Single statement execution
 - Script execution
- Editing statements
 - Syntax highlighting
 - Code insight
 - Code formatting
 - Bind variable support
- Supporting windows
 - Command history
 - Explain Plan
 - Autotrace
 - HTP and OWA output
- SQL*Plus commands



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SQL Worksheet

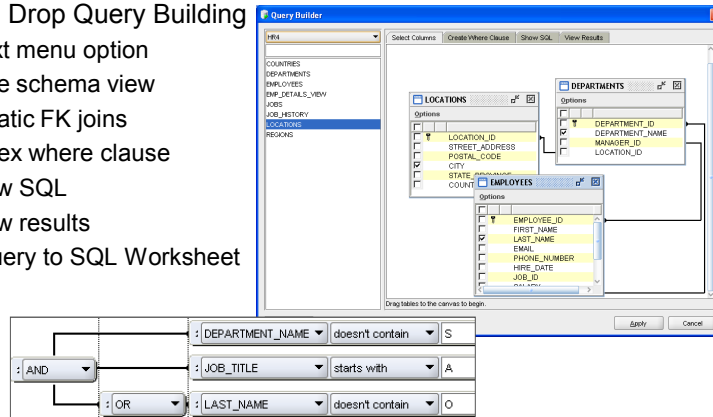
- SQL Formatter
 - Preview layout
- Code refactoring options
- Code insight
- Drag and Drop choices
 - Select for individual statements
 - Select and join
 - Insert, update, delete
- Recall window sizing
- Flashback(Oracle Database 11g)
- Multiple unshared worksheets
 - Ctrl-shift-N
- Dockable SQL History
- Code templates
- Code snippets



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SQL Query Builder

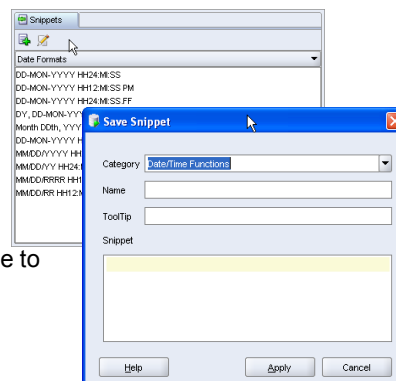
- Drag and Drop Query Building
 - Context menu option
 - Multiple schema view
 - Automatic FK joins
 - Complex where clause
 - Preview SQL
 - Preview results
 - Add query to SQL Worksheet



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Code Snippets and Templates

- Code Snippets
 - Drag and drop code from snippet categories to SQL Worksheet or code editor
 - Start typing to invoke code insight
 - Create new
 - Categories
 - Snippets
- Code Templates
 - Add ID and code in preferences
 - In SQL Worksheet, start typing code to invoke code insight



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Working with PL/SQL

- Create and edit PL/SQL code
 - Code editor
 - Syntax highlighting
 - Code formatter
 - Code insight (auto complete)
 - Code folding
 - Query Builder
 - Code snippets and Templates
- Use dialogs to create
 - Procedures, functions, triggers
 - Package spec & body
- Compile and run PL/SQL
- Debug
 - Remote debug with environment variable SET ORA_DEBUG_JDWP

```

1 create or replace PACKAGE BODY emp_main AS
2
3   g_counter NUMBER := 1;
4
5   PROCEDURE change_sal
6   (pEmpID IN NUMBER,
7    pSal IN NUMBER)
8   IS
9   BEGIN
10  UPDATE employees
11  SET salary = pSal
12  WHERE employee_id = pEmpID;
13  END change_sal;
14
15  DELETE FROM employees
16  WHERE employee_id = pEmpID;
17  END remove_emp;
18  BEGIN
19  SELECT USER
20  INTO emp_main.g_user
21  FROM dual;
22  END;
23
24
25
26
27
28
29
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```

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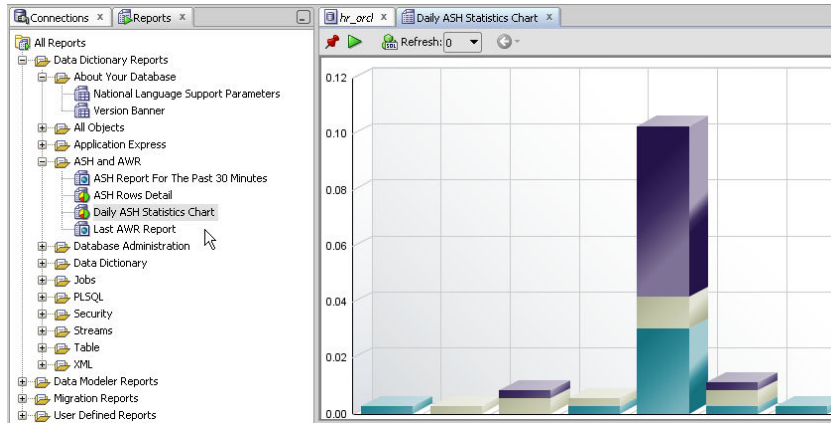
Creating and Running Reports

- Shipped Reports
 - DBA
 - System
 - Oracle APEX
 - Migration
- User Defined
 - Charts
 - Gauges
 - Master/detail
 - Drill down
 - Script
 - HTML
 - Code

Parameter	Value
NLS_CALENDAR	GREGORIAN
NLS_CHARACTERSET	WE8MSWIN1252
NLS_COMP	BINARY
NLS_CURRENCY	£
NLS_DATE_FORMAT	DD-MON-RR
NLS_DATE_LANGUAGE	ENGLISH
NLS_DUAL_CURRENCY	€
NLS_ISO_CURRENCY	UNITED KINGDOM
NLS_LANGUAGE	ENGLISH
NLS_LENGTH_SEMANTICS	BYTE
NLS_NCHAR_CHARACTERSET	AL16UTF16
NLS_NCHAR_CONV_EXCP	FALSE
NLS_NUMERIC_CHARACTERS	.,
NLS_SORT	BINARY

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ASH and AWR Reports



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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

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Files' navigator displays a directory tree with folders like 'working', 'BulkScripts', and 'GenScripts'. A file named 'cr8_plsq.sql' is selected. On the right, the 'SQL Worksheet' displays the SQL code for this file, which includes a package definition and a function body. The code is as follows:

```
create or replace
PACKAGE LocalVar_pkg1 AS
  n NUMBER;
  TYPE t1 IS RECORD (a NUMBER);
  v1 t1;
  TYPE t2 IS TABLE OF t1 INDEX BY PLS_INTEGER;
  v2 t2;
  FUNCTION f1 (p1 NUMBER) RETURN t1;
  FUNCTION f2 (q1 NUMBER) RETURN t2;
END LocalVar_pkg1;

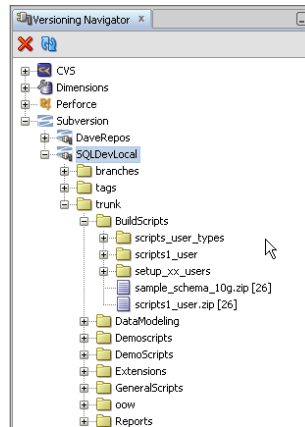
/

create or replace PACKAGE BODY LocalVar_pkg1 AS
  FUNCTION f1 (p1 NUMBER) RETURN t1 IS
    n NUMBER;
  BEGIN
    -- (1) unqualified name
    n := n;
    -- (2) dot-separated chain of identifiers
    -- (package name used as scope qualifier
    -- followed by variable name)
```

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Integrated Version Control Support

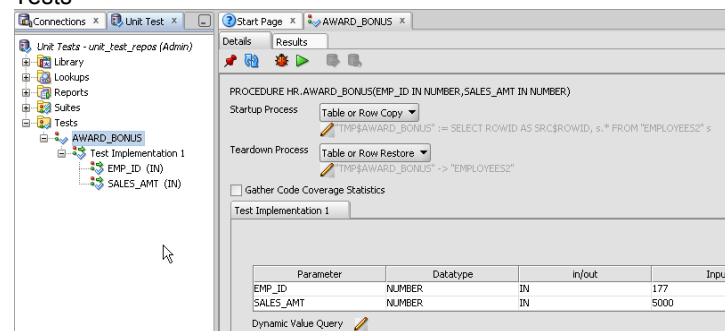
- SQL Developer provides integrated support for versioning and source control systems
 - Subversion
- Use Check for Updates to add integrated support for
 - CVS (Concurrent Versions System)
 - Perforce
 - Serena Dimensions
- Access using
 - View > Team > Versioning Navigator
 - Versioning menu



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PL/SQL Unit Testing

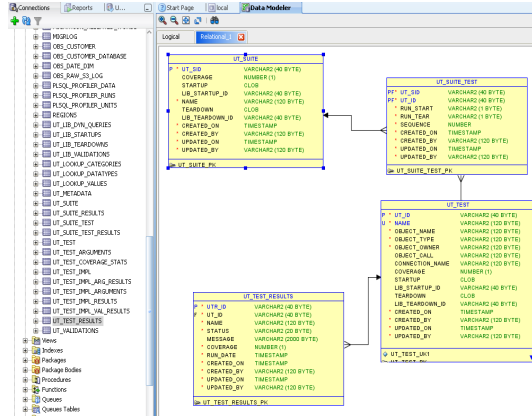
- Library
- Static and dynamic lookups
- Reports
- Suites
- Tests
- Multi user repository based
- Code coverage
- Use the command line
- Target any database



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Integrated Data Modeling

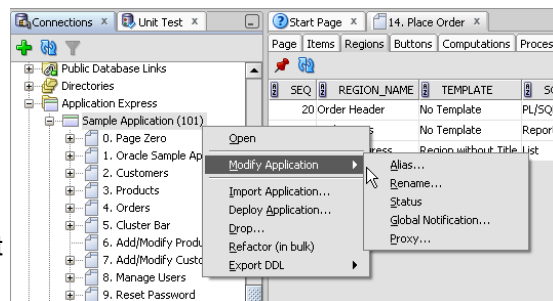
- Open existing models
- Drag and drop tables to create relational model
- View Design Rules
- Inspect all properties
- Browse with thumbnail view
- Read only



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SQL Developer and Oracle APEX 3.0.1+

- Connect to and browse all Oracle APEX applications associated with a database schema
 - Application level
 - Page level
- Run reports on:
 - Workspaces
 - Applications
 - Pages
 - Schemas
- Context menu support
 - Importing, exporting
 - Deploying
 - Dropping
 - Modifying applications



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