



Oracle Application Express 5.1 New Features

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- Joined Oracle Consulting in Hamburg, Germany in 1998
- Moved to Oracle in New York in 1999
- Joined Database Tools group in 2002

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- APEX on Twitter: **#ORCLAPEX**
- Blog: <http://marcsewtz.blogspot.com>

APEX 5.1 New Features

Oracle Application Express (APEX)

Database Centric Application Development



Database centric responsive
web-based apps



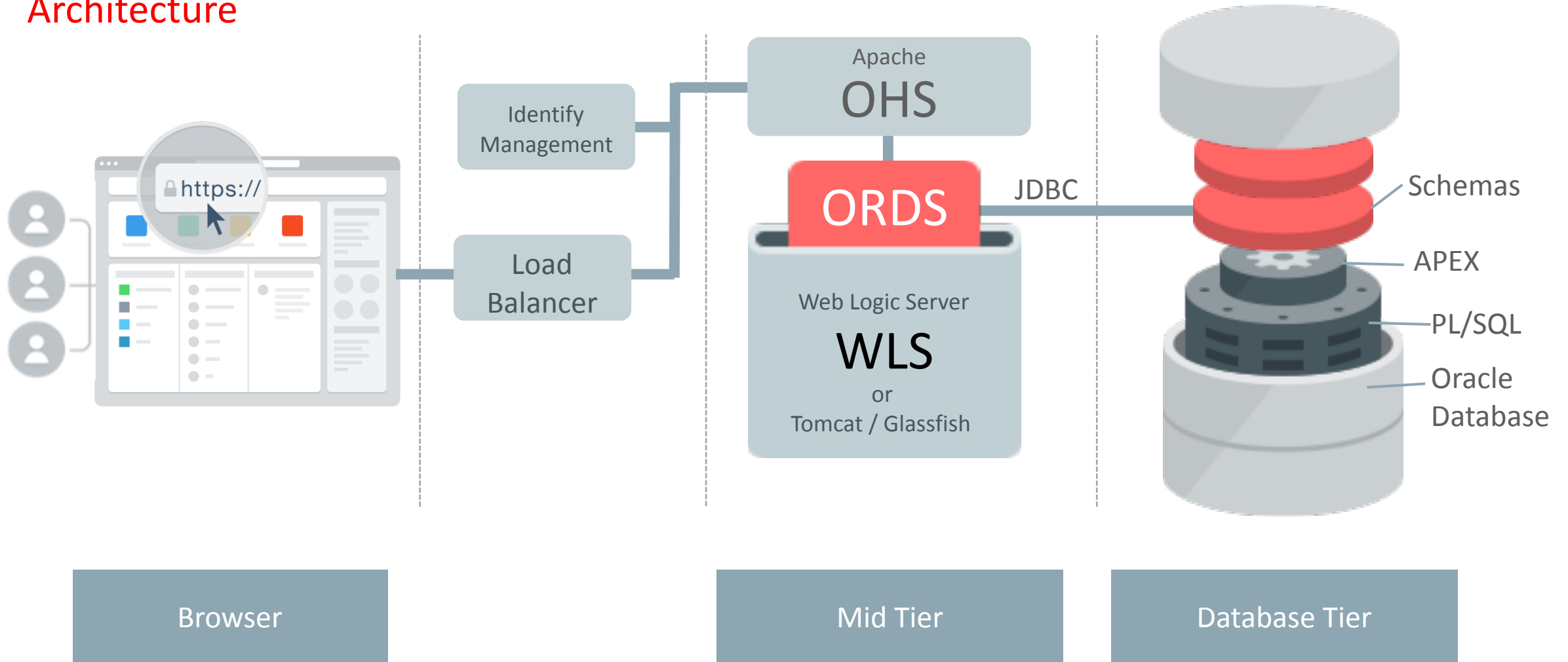
Apps that visualize and or
maintain database data



Apps that leverage the power of
SQL and PL/SQL

Oracle Application Express (APEX)

Architecture



Oracle Application Express (APEX)

Declarative Development



282K lines
ORDS



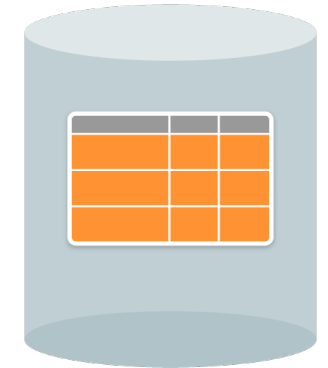
58K lines,
24.8K for UT



42K lines
excluding open source



486K lines



471 Tables

REST Data Services

Mid tier

Application Express (APEX)

Database tier APEX 5.0

- Declarative development provided by significant custom and open source code
- Shields customers from maintaining and modernizing code

Oracle REST Data Services (ORDS), Universal Theme (UT), JavaScript (JS)

Oracle Application Express (APEX)

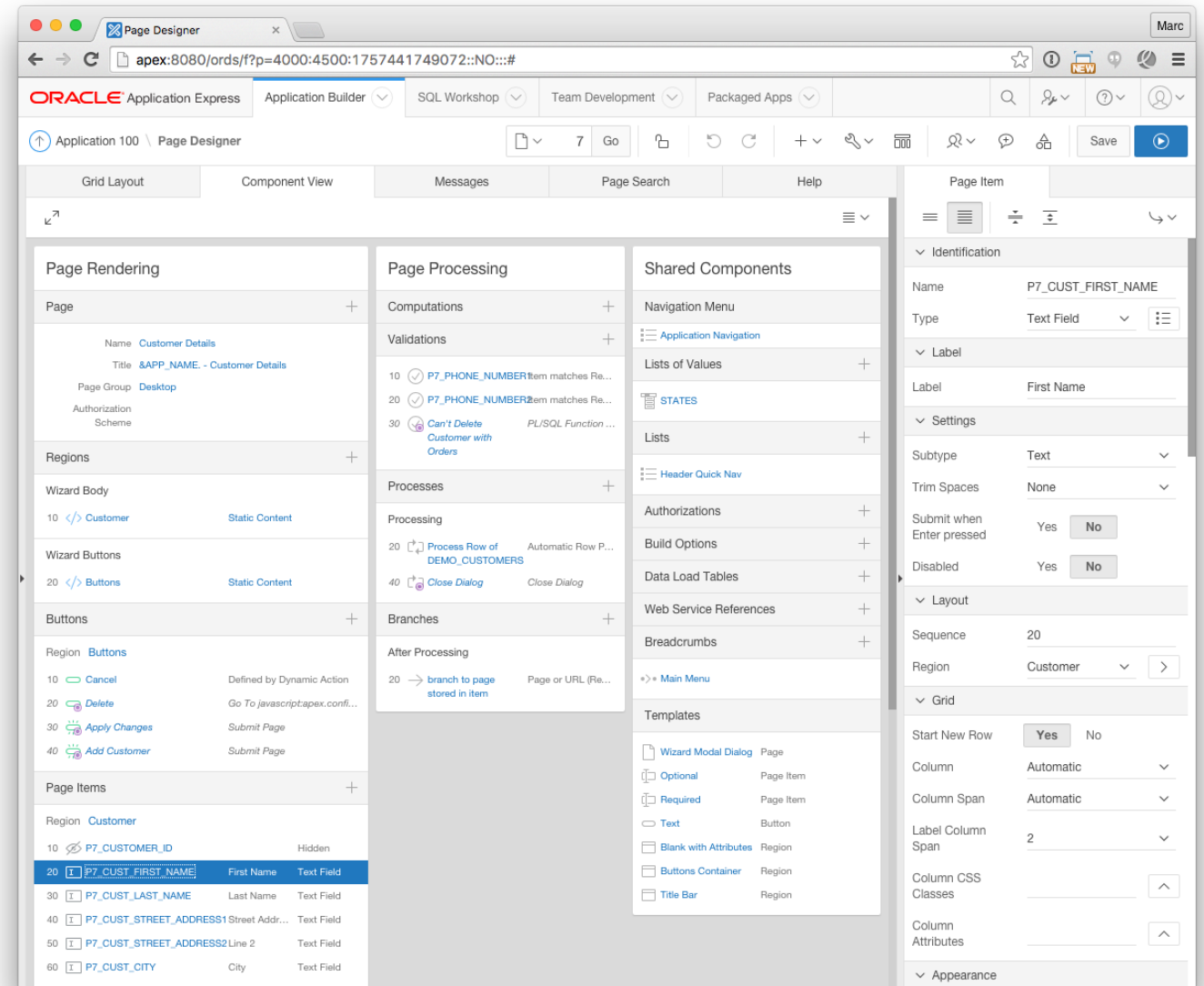
Open Source Included

- 960-gs (grid system)
- bgiframe (IE Z-issues)
- ckeditor
- codemirror
- d3
- font-awesome
- hammer
- jquery
- jquery-autocomplete
- jquery-colorpicker
- jquery-flot
- jquery-fullcalendar
- jquery-jstree
- jquery-migrate
- jquery-mobile
- jquery-mobile-nestedlists
- jquery-qtip2
- jquery-quicksand
- jquery-ui
- jquery-validate
- justgage
- less.js
- modernizr
- oraclejet
- raphaeljs
- respond-js
- selectivizr
- twitter-bootstrap

Oracle Application Express - 5.1

Page Designer & Component View

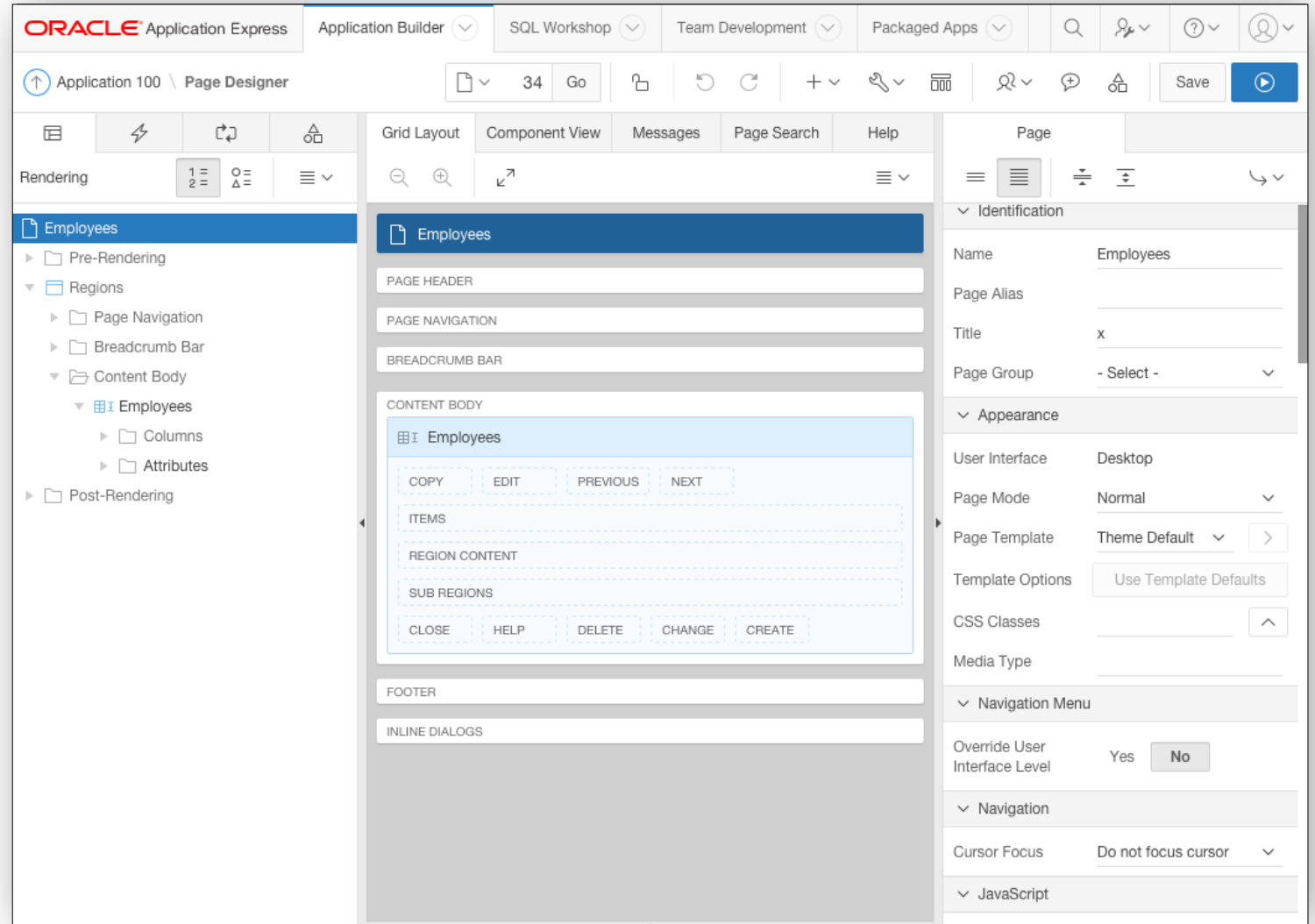
- 2-Column Mode
- Integrated 'Component View'
- Create component prompt for key information
- Property Editor multi-tab mode
- Property Editor search capability
- Style and contrast enhancements



Oracle Application Express 5.1

Simplified Wizards

- Listened to the community: some wizards way too long!
- Fewer steps, more defaults
- Attributes no longer exposed can be easily edited in Page Designer post-creation
- Consistency across component types



Oracle Application Express 5.1

Interactive Grid

- Long-standing customer requests to enhance Tabular Forms:
 - Support multiple tabular forms on a single page
 - Cascading LOVs
 - Dynamic Action Support
 - Lift 32k limitation on report rows

The screenshot displays the Oracle APEX 5.1 Interactive Grid interface. The browser window shows the URL 'apex:8080/ords/f?p=100:36:1757441749072:'. The application title is 'Sample Database Application'. The main content area is titled 'Employees' and contains a table with the following data:

<input type="checkbox"/>	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
<input type="checkbox"/>	KING	PRESIDENT		17-NOV-81	5000		10
<input type="checkbox"/>	BLAKE	MANAGER	7839	01-MAY-81	2850		30
<input type="checkbox"/>	CLARK	MANAGER	7839	09-JUN-81	2450		10
<input type="checkbox"/>	JONES	MANAGER	7839	02-APR-81	2975		20
<input type="checkbox"/>	SCOTT	ANALYST	7566	09-DEC-82	3000		20
<input type="checkbox"/>	FORD	ANALYST	7566	03-DEC-81	3000		20
<input type="checkbox"/>	SMITH	CLERK	7902	17-DEC-80	800		20
<input type="checkbox"/>	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
<input type="checkbox"/>	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
<input type="checkbox"/>	MARTIN	SALESMAN	7698	28-SEP-81	1250	1401	30

At the bottom right of the grid, there is a pagination control showing 'row(s) 1 - 10 of 14' and a 'Next' button. Below the grid, there are 'Cancel', 'Delete', and 'Submit' buttons. The bottom toolbar includes icons for Home, Application 100, Edit Page 36, Session, View Debug, Debug, Show Grid, Quick Edit, and Theme Roller.

Oracle Application Express 5.1

Interactive Grid

- Modern, rich & interactive multi-row editing component
- Master > Detail > Detail and Parent > Child > Grand Child
- Use of existing Item types
- Declarative support for Cascading LOVs and Dynamic Actions
- Upgrade utility for Tabular Forms and Interactive Reports

The screenshot shows the Oracle APEX 5.1 Interactive Grid interface for an 'Employees' table. The grid is displayed in a browser window with the URL 'apex:8080/ords/f?p=100:37:10551478376296:'. The table has the following columns: Empno, Ename, Job, Mgr, Hiredate, Sal, Comm, and Deptno. The data is as follows:

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7788	SCOTT	ANALYST	7566	09-DEC-82	3000	-	20
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1401	30
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	12-JAN-83	1100	-	20
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10

Oracle Application Express 5.1

Interactive Grid

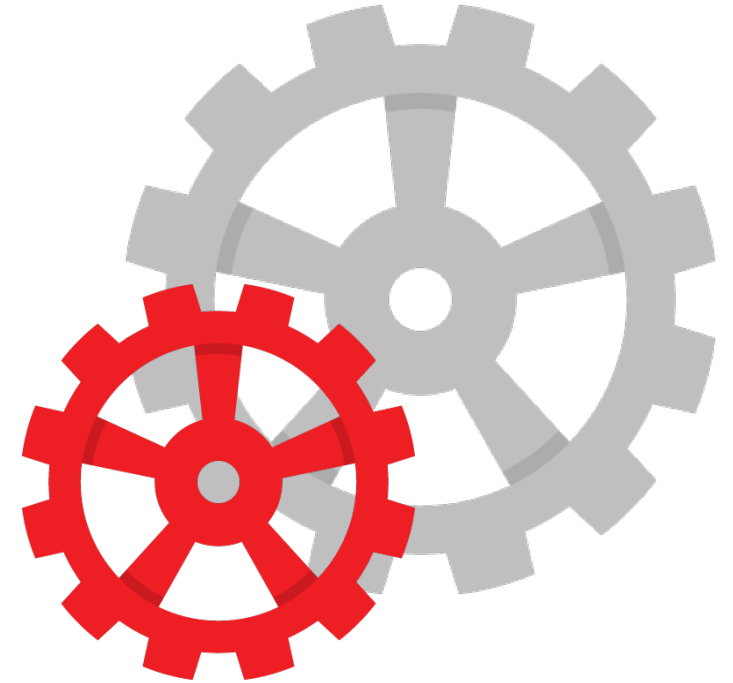
- Modern design:
 - Fast & Responsive
 - JSON-based, lightweight Ajax communications
 - Widget based (using jQuery UI Widget Factory)
 - Fixed headers and columns
 - Infinite scrolling
 - RTL support
 - Accessible, with outstanding keyboard support



Oracle Application Express 5.1

Interactive Grid - Architecture Changes

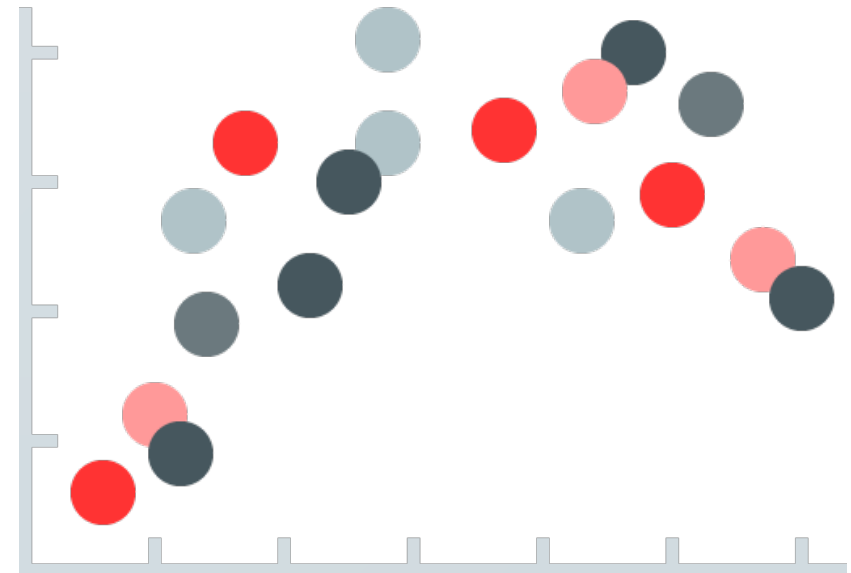
- Removal of limitations like 32k bytes per row
- Form input fields used to be mapped to p_t001-200 and p_v001-200
- Now all item values are stored in JSON document
- Allows for > 200 page items
- Multiple file uploads
- Possible future enhancements
 - Dynamic action refresh of regions containing page items (like PL/SQL regions)
 - Removal of 32k limit of page item values



Oracle Application Express 5.1

JET Charts

- Based on Oracle JET Data Visualization Components
- Declarative
- Responsive and accessible
- Migration facility for existing charts
- Same chart types as 5.0 + new charts
- Advanced customization available through documented JavaScript APIs
- No 32k limit for the data or configuration



Oracle Application Express 5.1

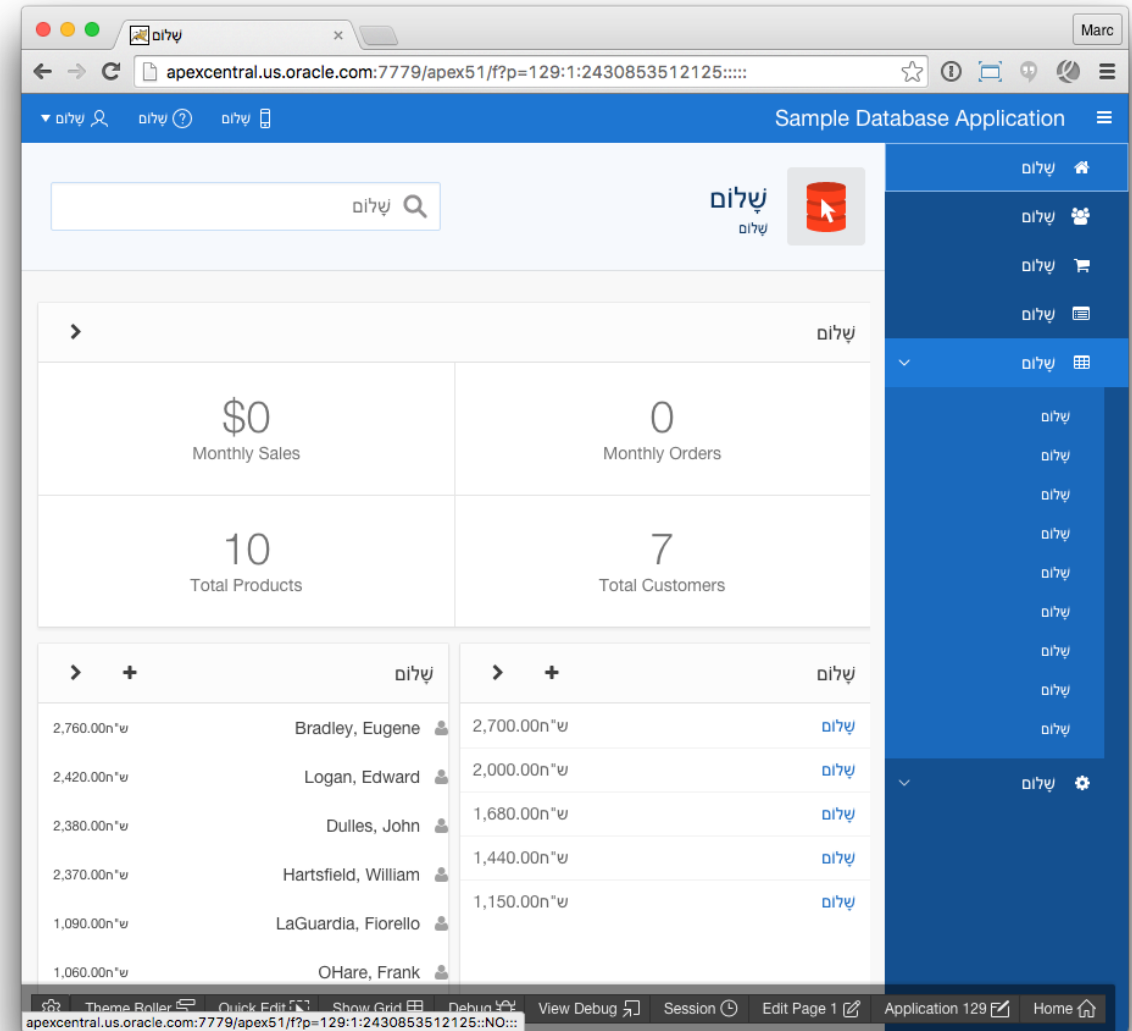
JET Charts



Oracle Application Express 5.1

Universal Theme - Right to Left Support

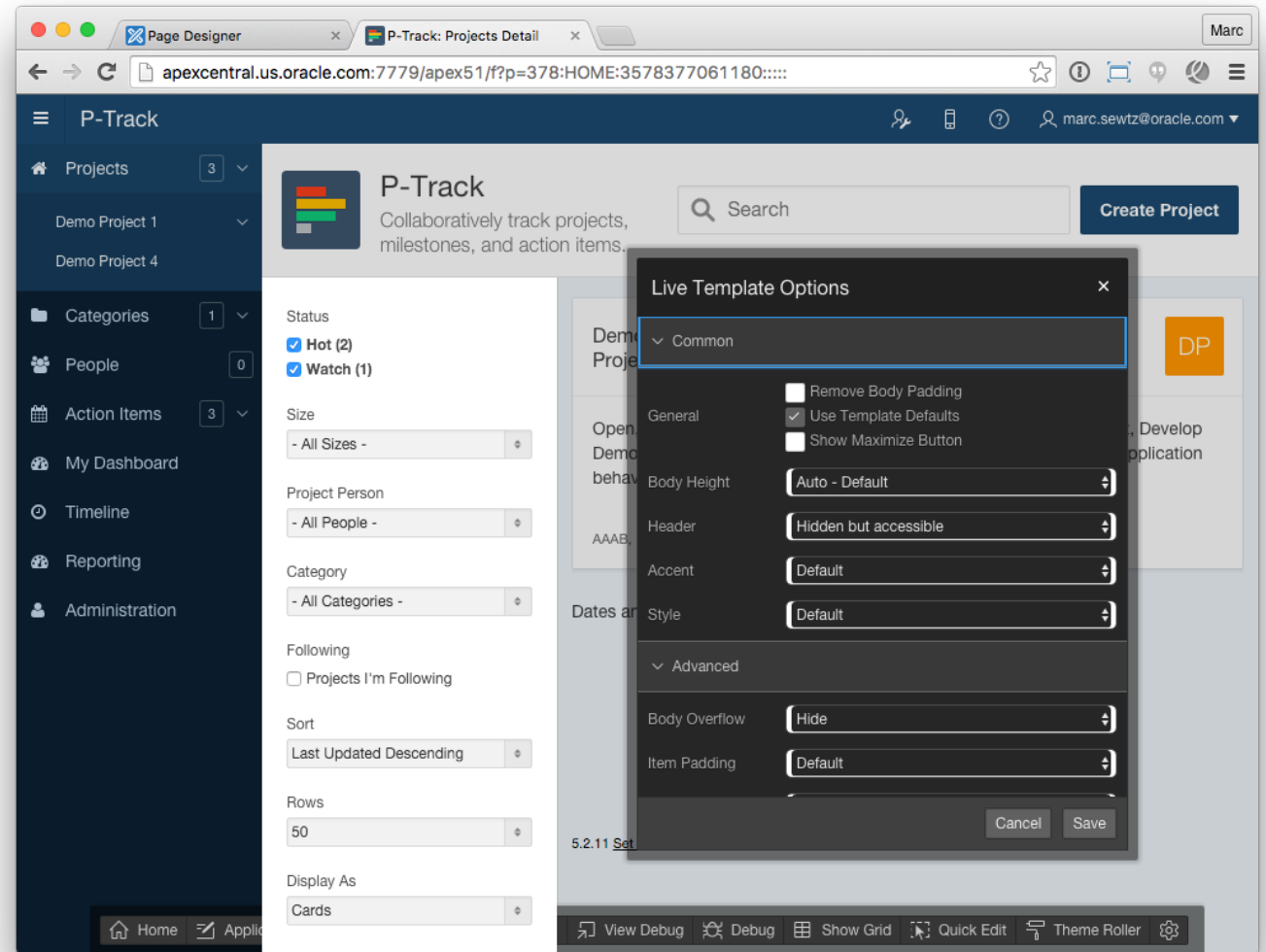
- APEX 5.1 adds support for right-to-left scripts, such as Arabic and Hebrew
- Available with Universal Theme
- Set “Document Direction” in globalization attributes und translation language mapping



Oracle Application Express 5.1

Live Template Options

- Apply Template Options at Runtime
- Instantly see impact on selected component
- Enabled via Quick Edit



Oracle Application Express 5.1

Packaged Applications

- Pre-Built Business Productivity Applications and Sample Applications
- Installable with only a few clicks using a browser based interface
- Production-ready applications including Project Management, Customer Tracker, Data Reporter, various Sample Applications
- Packaged Application Gallery and Administration interface can be configured as Packaged-App-only workspace
- Packaged Apps updated to use new JET charts and Interactive Grids



Demo

APEX 5.1 New Features

Integrated Cloud

Applications & Platform Services

ORACLE®