

APEX 4.0

Preview



About Dimitri Gielis

- Director & Co-Founder of APEX Evangelists / Sumneva
- Oracle Consultant for over 4 years
- OBUG APEX SIG Leader
- 'Dimitri.Gielis@AE' in the Application Express forums
- Presenter at IOUG, ODTUG, OOW, UKOUG, OBUG, ...
- OCP 8i/9i/10g
- Oracle ACE Director
- Named "APEX Developer of the Year 2009" by Oracle Magazine

sumnēva
Application Success

2

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

Overview

sumnēva
Application Success

3

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

APEX 4.0 EA I New Features Overview

- Improved Application Builder
- Improved Charting
- Improved Interactive Reports
- Improved Item Properties
- New Item Types
- New REST Web Services
- New Themes

4

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

APEX 4.0 EA I New Features Overview

- Integration of jQuery and jQuery UI
- Dynamic Actions
- Plug-Ins
- Advisor
- Team Development
- APEX Listener

5

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

APEX 4.0 EA 2 New Features Overview

- Improved User Interface Defaults
- Improved Administration
- Improved Tree Controls
- Improved Error Handling
- Improved Tabular Forms
- New Authentication schemes
- AJAX Client-Side Validations
- Websheets

6

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Improved Application Builder

Improved Application Builder

- New look and feel
- Improved navigation
- Improved Administration screens
- IR's everywhere
- Integrated 'Application Search' capabilities

App Builder - Component View

Home Application Builder SQL Workshop Team Development Administration Search Application

Home Application Builder Application 128 Page 1 Page 1 To do's 0 Feedback 0 Bugs 0 Comments 0

Run Utilities Create

Last Updated: DIMITRI.GELIS@APEX-EVANGELISTS.COM, 6 weeks ago

Page Rendering

Page

Page Name: Sample Application
Title: Oracle Sample Application
HTML Header:
HTML Body:
Page Group:
Template: Application default
Header Text:
Footer Text:
Build Option:
Help Text: This is the Home Page of the S Authorization: top
Cached: top

Regions

Display Point: Page Template Body (2)
10 My Orders
10 My Quotes
Flash Chart
Conditional

Display Point: Region Position 03
20 Sample ApplicationHTML
40 Tests
List

Buttons

Items

Region: My Quotes
10 P1_QUOTA
20 P1_TOTAL_SALES
Hidden
Hidden

Computations

Before Header
10 P1_QUOTA Query

Page Processing

Computations

Validations

Processes

Branches

Before Validation
10 On To Page: Unconditional

Shared Components

Tabs

Tab Set: TS1
Items
Customers
Products
Orders
Charts
Admin

Lists of Values

Breadcrumbs

Main Menu: (No corresponding region)

Lists

Tests

Templates

Page: APEX 4.0 - One Level Tabs
Region: APEX 4.0 - Reports Region
Region: APEX 4.0 - Statistic Region
Region: APEX 4.0 - DTV with ID and Attributes
List: APEX 4.0 - Vertical Unordered List with Bullets

Theme

1 Theme: 1

Security

Navigation Bar

App Builder - Tree View

Home Application Builder SQL Workshop Team Development Administration Search Application

Home Application Builder Application 128 Page 1

Page 1 Run Utilities Create

Last Updated: DIMITRI.GIELIS@APEX-EVANGELISTS.COM, 6 weeks ago
To do's: 0
Bugs: 0
Feedback: 0
Comments: 0

Page Rendering

- Sample Application
 - Before Header
 - Branches
 - Computations
 - P1_QUOTA
 - P1_TOTAL_SALES
 - After Header
 - Before Regions
 - Regions
 - Body (2)
 - My Orders
 - My Quote
 - Series
 - Dial
 - Items
 - P1_QUOTA
 - P1_TOTAL_SALES

Page Processing

- After Submit
 - Validating
 - Branches
 - Go To Page 1
 - Validations
 - Processing
 - After Processing
 - AJAX Callbacks

Shared Components

- Parent Tabs
- List of Values
- Breadcrumbs
- Lists
- Templates
- Security

Application Express 4.0.0.00.22

Workspace: DGIELIS_40 User: DIMITRI.GIELIS@APEX-EVANGELISTS.COM Language: en

Copyright © 1999, 2009, Oracle. All rights reserved.

10

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumneva
Application Success

Improved Charting

sumneva
Application Success

Improved Charting

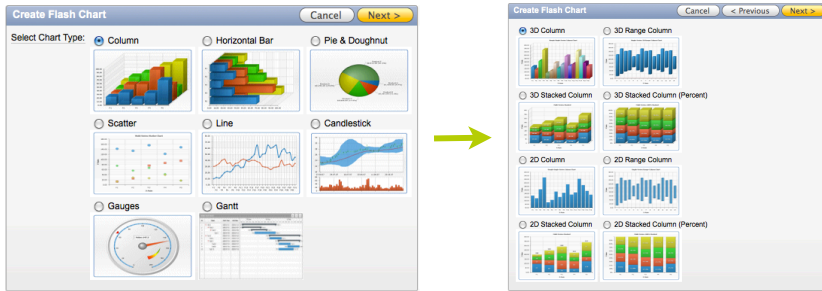
- New charting engine (AnyChart 5.1) = faster, better graphics and decreased rendering time
- Support for Maps & Gantt
- New Features:
 - Scrolling support
 - Interactive labels
 - Markers in legends
 - Multiple data markers
- All chart types can be combined within an interactive dashboard: Charts, gauges, maps, Gantt, etc.



sumneva
Application Success

Improved Charting

- Improved Wizard



13

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Improved Interactive Reports

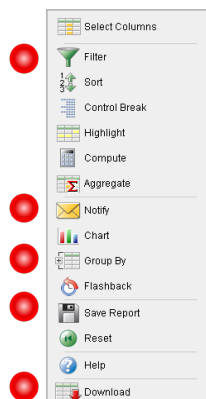
14

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Improved Interactive Reports

- Integrated Report, Icon & Detail Views
- Compound filter expressions
- Email notifications
- Group By
- Saved Reports
 - Developer Supplied
 - Personal (Existing)
 - Shared
- Download to searchable HTML



15

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Improved Interactive Reports

The screenshot displays a data table with columns: Empno, Ename, Job, Mgr, Hiredate, Sal, and Comm. The table contains 14 rows of employee data. A 'View Group By' menu is open, showing options: Select Columns, Filter, Sort, Control Break, Highlight, Compute, Aggregate, Notify, Chart, Group By, Flashback, Save Report, Reset, Help, and Download.

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm
7369	SMITH	CLERK	7902	17-DEC-80	960	-
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500
7566	JONES	MANAGER	7839	02-APR-81	3272.5	-
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-
7782	CLARK	MANAGER	7839	09-JUN-81	2817.5	-
7788	SCOTT	ANALYST	7566	09-DEC-82	3000	-
7839	dd	PRESIDENT	-	17-NOV-81	5000	-
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0
7876	ADAMS	CLERK	7788	12-JAN-83	1100	-
7900	JAMES	CLERK	7698	03-DEC-81	950	-
7902	FORD	ANALYST	7566	03-DEC-81	3000	-
7934	MILLER	CLERK	7782	23-JAN-82	1300	-

16

Copyright © 2010 Sumnēva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Improved Item Properties

17

Copyright © 2010 Sumnēva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Improved Item Properties

- Additional Attributes

The screenshot displays two sections: 'Settings' and 'Quick Picks'. The 'Settings' section includes options for Search, Only Values from List, Separator for Multi-Selection, Lazy Loading, Maximum Values in List, Automatic Fill, Select First, and Highlight Search. The 'Quick Picks' section includes a 'Show Quick Picks' dropdown and a table for 'Link Attributes' with columns for Label and Value.

Settings

Search: Contains & Ignore Case

Only Values from List: No

Separator for Multi-Selection: No

Lazy Loading: No

Maximum Values in List: No

Automatic Fill: No

Select First: Yes

Highlight Search: Yes

Validation

Required: Yes

Quick Picks

Show Quick Picks: No

Label	Value
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

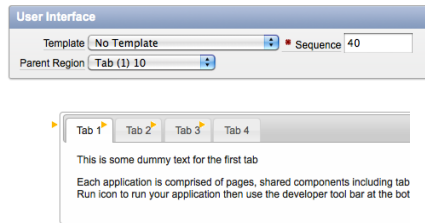
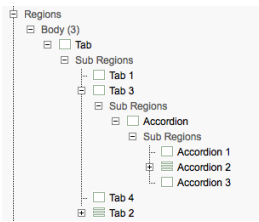
18

Copyright © 2010 Sumnēva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Improved Item Properties

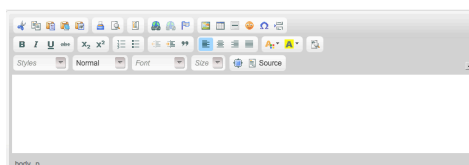
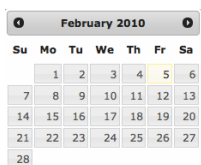
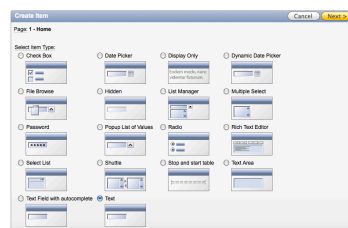
- Sub Regions



New Item Types

New Item Types

- Resizable Text Area
- Javascript Date picker
- Text Field with autocomplete
- Rich Text Editor: CK Editor



New REST Web Services

22

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

New REST Web Services

- Incorporating new declarative APEX component
- Utilise a simpler architecture than SOAP
- Typically parameters are passed to a REST Web service as part of the URL and an XML is returned
- Many popular public Web services provided by Google, Yahoo, Amazon and PayPal use REST
- Some Web Service providers use the REST architecture exclusively

Create Web Service Reference Cancel Next >

What type of Web reference would you like to create? ☒ REST ☐ Based on WSDL ☐ Manual

23

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

New REST Web Services

- Samples by Jason Straub

Product Search Logout

Product Search Submit

Search: vera

Category: Electronics

Results

ASIN #	TITLE	Image	LINK
B00142MUEC	Parasonic Viera TH-46P28SU 46-Inch 1080p Plasma HDTV		[Add to WishList]
B001DSYH80	Parasonic Viera TH-58P2800U 58-Inch 1080p Plasma HDTV		[Add to WishList]
B0015E4YQS	Parasonic VIERA X1 Series TC-P42X1 42-Inch 720p Plasma HDTV		[Add to WishList]
B0015H7QUU	Parasonic VIERA X1 Series TC-P50X1 50-Inch 720p Plasma HDTV		[Add to WishList]
B001U3VJTY	Parasonic VIERA S1 Series TC-P50S1 50-Inch 1080p Plasma HDTV		[Add to WishList]

24

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

New Themes

25

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

New Themes - Theme I

- Cleaner look

Sample Application Logout Print

Welcome: DIMITRI.GIELIS@APEX-EVANGELISTS.COM [Home](#) [Customers](#) [Products](#) [Orders](#) [Charts](#)

[Home](#) > [Customers](#) > Add/Modify Customers

Add/Modify Customers Cancel Delete Apply Changes

First Name

Last Name

Street Address

Street Address 2

City

State

Postal Code

Email

Phone Number

Alt Phone Number

Credit Limit

Orders for this Customer

Order #1	Order Date	Sales Rep	Product Name	Unit Price	Quantity	Extended Price
	14-DEC-09	DEMO	3.2 GHz Desktop PC	\$1,200.00	1	\$1,200.00
	Order Total:					\$1,200.00
	Total for All Orders:					\$1,200.00

1 - 1

26

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Integration of jQuery & jQuery UI

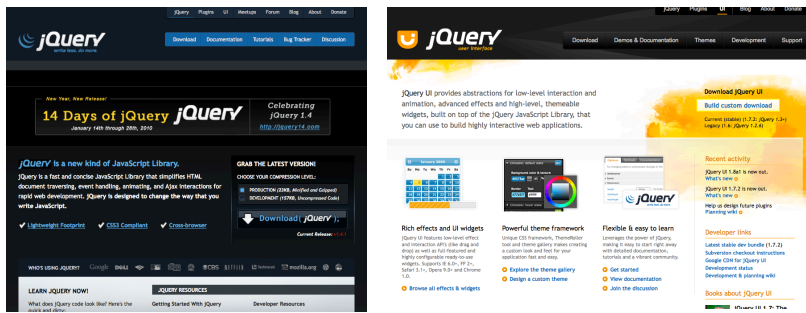
27

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Integration of JQuery and JQuery UI

- Popular light-weight Javascript Framework



28

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumneva
Application Success

New Dynamic Actions

29

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumneva
Application Success

Dynamic Actions

- Provides a way to define client-side behavior declaratively within Application Express, without the need to know JavaScript
- Simple Wizard to create
 - Select Page Item
 - Select Condition (e.g. equal to, greater than, is null, etc.)
 - Enter value
 - Select Action (Show, Hide, Enable, Show Item Row)
 - Enter list of items
 - Add Condition (Optional)

30

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumneva
Application Success

Dynamic Actions

- Sample application by Anthony Rayner

Welcome: DIMITRI.GIELIS@APEX-EVANGELISTS.COM

Examples

- Disable / Enable
- Hide / Show
- Set Value (SQL)
- Set Value (PL/SQL)
- Stripe Report
- Set CSS
- Slider Sliding
- Drag and Drop

Information

This page contains 1 dynamic action called 'JOB EQUALS SALESMAN'. This fires whenever a different 'Job' is selected from the radio buttons and checks if the value is equal to 'SALESMAN'. If it is equal to 'SALESMAN' the 'Commission' page item is enabled, otherwise it is disabled.

It uses 2 native actions ('Enable' and 'Disable').

Disable / Enable

Cancel Delete Apply Changes

Name:

Job: ☐ ANALYST
☐ CLERK
☒ MANAGER
☐ PRESIDENT
☐ SALESMAN

Manager:

Hiredate:

Salary:

Commission:

Department:

New Plug-ins

Plug-Ins

- Easy way to enhance the existing built-in functionality of Oracle APEX with new item types, region types, dynamic actions, etc.
- Developers use in similar fashion to native widgets
- Wizard support and declarative setting of attributes
- Included in APEX application export
- By providing this plug-in system in APEX, we want to engage the APEX community to create a rich ecosystem around Oracle APEX

Plug-ins

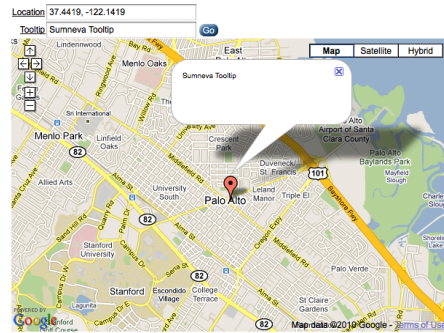
- Sample application by Patrick Wolf

Sample Application

APEX_PUBLIC_USER Logged

Home Customers Products Orders Charts **Plug-ins** Sub Regions

Google Map



sumnēva
Application Success

34

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

New Apex Advisor

sumnēva
Application Success

35

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

Advisor

- Performs checks on your application
 - Programming Errors
 - Security Issues
 - QA and BP

ORACLE® Application Express

Welcome DIMITRI.GIELIS@APEX-EV

Home Application Builder SQL Workshop Team Development Administration

Home Application Builder Application 12807 Utilities Advisor

Page

Perform Check

Checks to Perform

- | | | |
|---|--|---|
| ☒ References with Substitution Syntax | ☒ References with Column Syntax | ☒ References with Bind Variable Syntax |
| ☒ Referenced item is on current page | ☒ Referenced item is page item of target page | ☒ Declarative references of Application/Page Items/IR Filter |
| ☒ References of Page Item in a String | ☒ Referenced Page Number Exists | ☒ Clear Cache Page Number equals Target- or Current Page |
| ☒ Is Valid SQL/PLSQL Code | ☒ Target Page Authorization equals current Component authorization | ☒ Target Page Authorization is also set for current Component |
| ☒ Fetch/DML/RR* Processes are valid | ☒ Inappropriate use of Substitution Syntax | ☒ V Function used in SQL Statement |
| ☒ Hardcoded Application Id | ☒ Unconditional Branch before other branches | ☒ Associated Item of Validations |
| ☒ Length of item name | ☒ Referenced Button in When Button Pressed exists | ☒ Report has default order |
| ☒ Page Item has Help Text | | |

sumnēva
Application Success

36

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

New Team Development

37

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Team Development

- Manage application development

The screenshot shows the Oracle Application Express Team Development page. At the top, there's a navigation bar with links for Home, Application Builder, SQL Workshop, Team Development (selected), and Administration. A search bar is also present. Below the navigation bar, a welcome message states: "Welcome to Oracle Application Express 4.0 Early Adopter (EA) hosted on Amazon EC2. Please review the APEX 4.0 New Feature Descriptions. Please use the Feedback link in the top right hand corner of each page to provide comments. *** NEW *** Go here to review Early Adopter Feedback." The main workspace contains five icons: Features (lightbulb), Milestones (calendar), To Do (checklist), Bugs (ladybug), and Feedback (speech bubble). Below these icons is a "News" section with a "Reset" button. At the bottom, there are filters for "Assignee" (set to "All") and "Release" (set to "Show All Releases"), along with an "Application" filter set to "All Applications". A "Set" button is next to these filters. On the right side, there's an "About" section explaining that Team Development facilitates the management of the application development process, and a "Team Actions" section with links for Manage Links, Manage News, Manage Preferences, Release Summary, and Utilities.

38

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

New APEX Listener

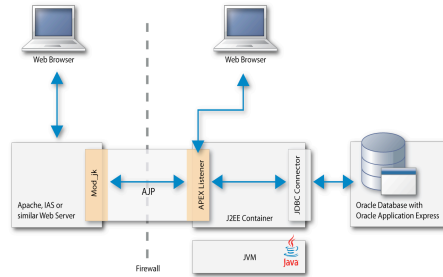
39

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

APEX Listener

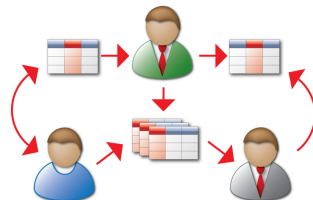
- Java based
- mod_plsql replacement
- Support latest APEX releases
- File system caching *
- FOP transformations to PDF *
- Improved file upload *
- To be certified against Web Logic, Tomcat and OC4J
- Extensible
- Workload Capture *



New Web Sheets

Websheets

- Editable data grid
- Single point of truth
- Multi-user data tracking
- Designed for Business Users
- No programming required
- Multi-tenanted and self-service
- Incorporates “sharing” model (ACL)
- Includes validations, LOVs, column typing
- Consolidates data within an Oracle Database



Websheets

The screenshot shows the Oracle Websheets application interface. At the top, there's a header with 'ORACLE Websheets' and a 'my organization' link. Below the header, a breadcrumb trail reads 'Workgroups > Workgroup test > my organization'. A search bar and a 'Rows: 15' dropdown are visible. The main area displays a table with columns: EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, DEPTNO, Country, and Attachments. The table contains 15 rows of employee data. A context menu is open over the table, showing options like Properties, Column, Show Checkboxes, Change, Sharing, Delete, History, and Export. A sub-menu is also visible, showing options like Add, Remove, Properties, List of Values, and Column Groups.

43

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Why Websheets

- Designed so “anyone” can build & deploy web based data entry and reporting applications
- Experienced APEX developers can develop even faster
- Broadening the APEX Community
 - No need to create Tables, Triggers, Sequences
 - Simplified declarations
- “Builder” integrated with “Runtime”
- Integrated attachments, tags, notes...

44

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

APEX Applications vs Websheets

	APEX Applications	Websheets
Database Objects	Created using SQL Workshop	Automatically managed (APEX\$ tables)
Primary Key Management	Triggers and sequences	Automatically managed
Validations	Created using wizards	Defined using runtime UI
Report Layout	Created using SQL	Defined using runtime UI
List of Values	SQL or Static	Defined using runtime UI
Page Flow	Controlled by branches	Limited
Form Layout	Items and regions	Column groups
Look and Feel	Themes and templates	Basic control

45

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

Summary

- Continues the APEX Vision
- Express-ier
- Declarative Web 2.0 Magic
- Greater Extensibility

46

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

More Information

- Website Sumneva
 - <http://sumneva.com>
- Email
 - dimitri@sumneva.com
- OBUG APEX SIG - register for free
 - <http://www.obug.be/sig.aspx>
 - <http://www.obug.nl/sig.aspx>

47

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

APEX Training in Utrecht

- **3-5 March 2010** - 3 days
 - Introduction to Oracle APEX I
- **6-7 March 2010** - 2 days
 - Introduction to Oracle APEX II
- **10-12 March 2010** - 3 days
 - Advanced Oracle APEX

www.sumneva.com/training

48

Copyright © 2010 Sumneva - All Rights Reserved - <http://sumneva.com> - info@sumneva.com

sumnēva
Application Success

sumnēva

Application Success

<http://sumneva.com>