



SAGE Computing Services

Consulting and customised training workshops

How Ugly is that Apex Report?

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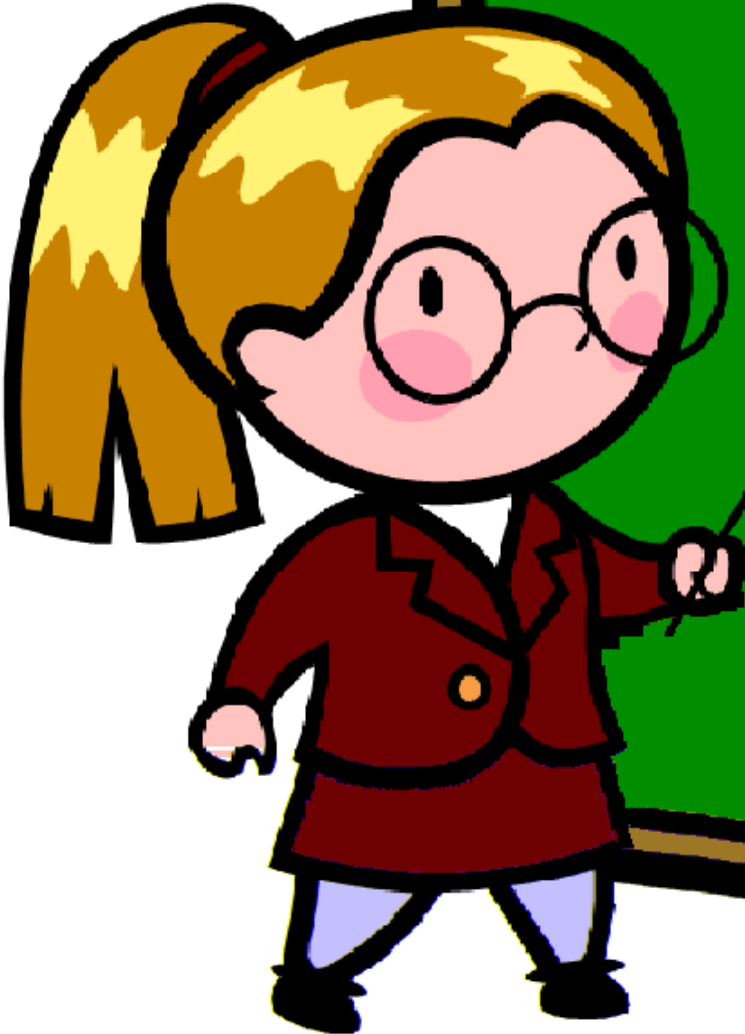
Systems Consultant

Agenda

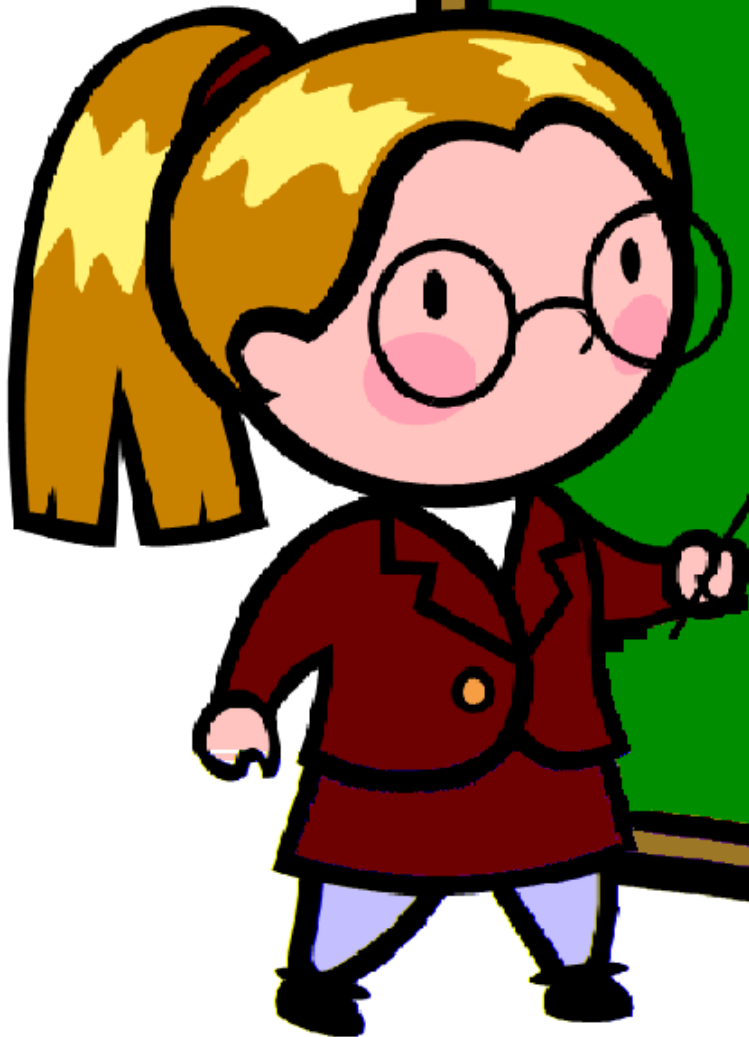
- What should we use for reporting?
- Why print it?
- Printing pages
- Extracting to Excel
- Reports Regions
- Report Queries and Layouts
- BI Publisher
- Mail Merge
- Apache FOP and alternatives

True or False?

Users don't
want hard
copy
reports
anyway



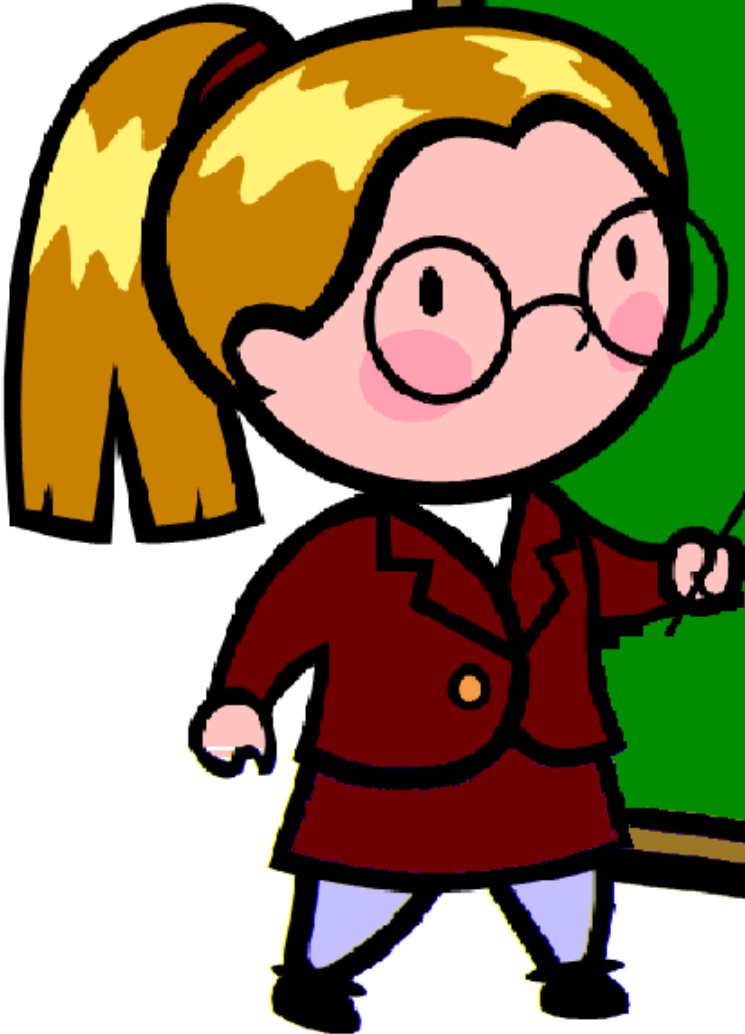
True or False?



Printing reports
will accelerate
climate change, is
morally
irresponsible and
you will go to hell
if you do it

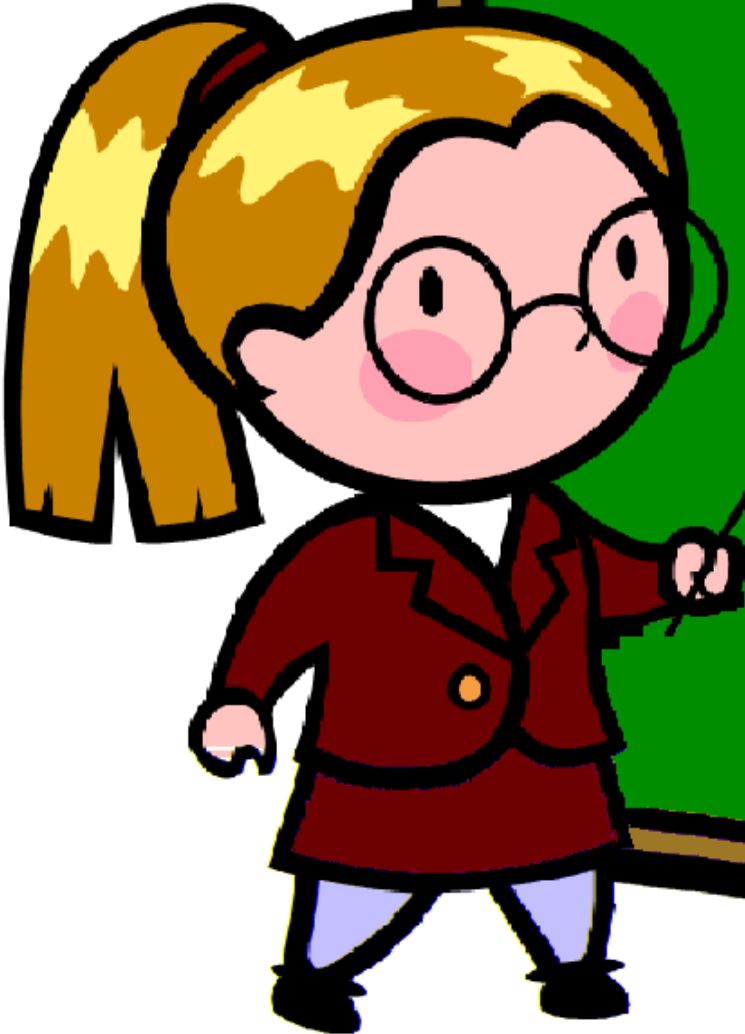
True or False?

Only Oracle
dinosaurs
still use
Oracle
Reports

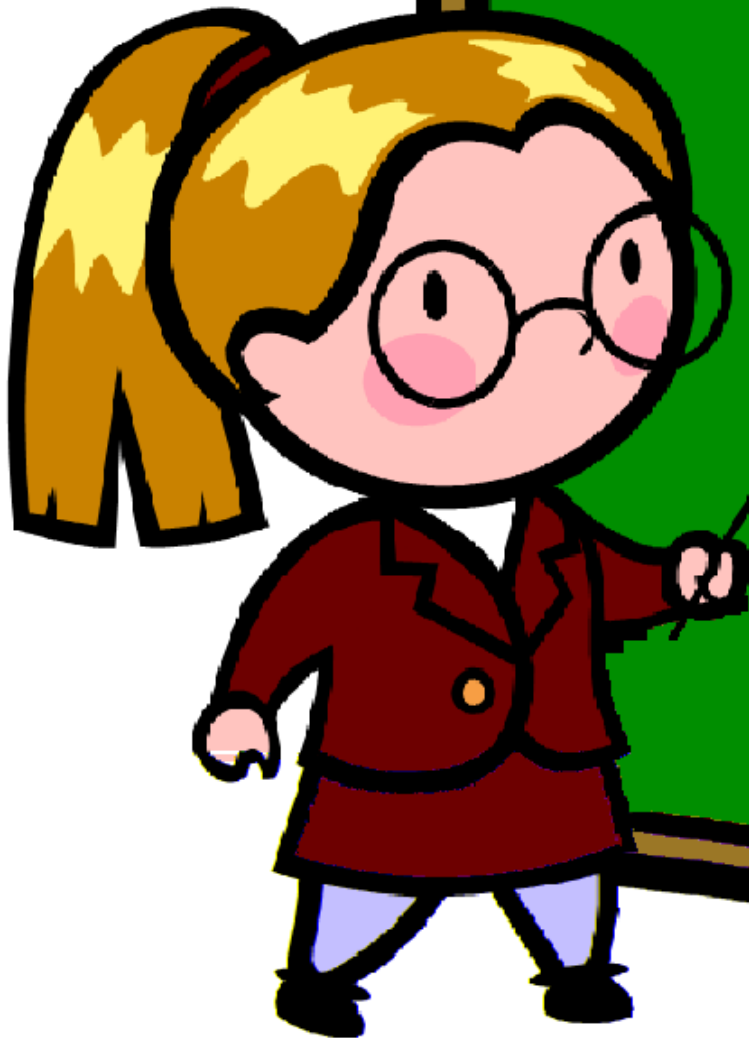


True or False?

Jdeveloper /
ADF Faces
has nothing
to offer in
reporting

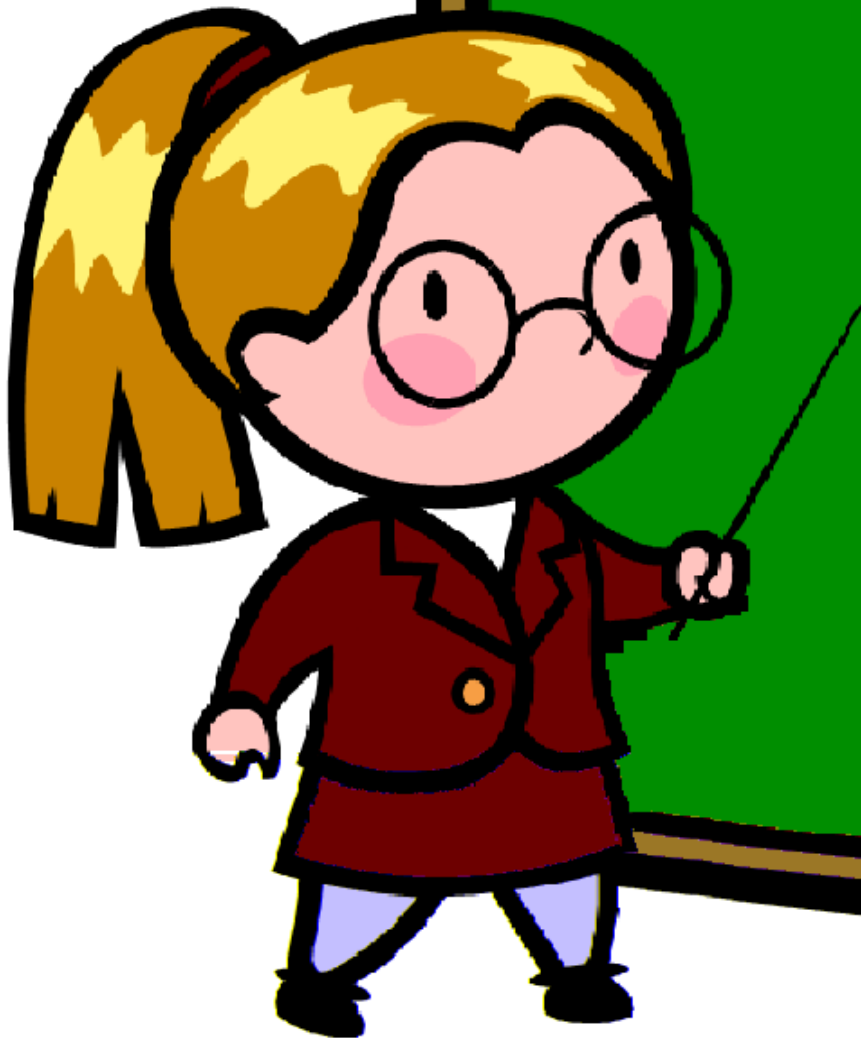


True or False?



You have to
sell your
firstborn into
slavery to
afford BI
Publisher

True or False?



Apex
reports
are really
basic

What's installed

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>set JAVA_HOME=C:\ora\jdev10133\jdk

C:\Documents and Settings\Administrator>cd C:\ora\cocoon\apache-tomcat-6.0.18\bin

C:\ora\cocoon\apache-tomcat-6.0.18\bin>startup
Using CATALINA_BASE:   C:\ora\cocoon\apache-tomcat-6.0.18
Using CATALINA_HOME:   C:\ora\cocoon\apache-tomcat-6.0.18
Using CATALINA_TMPDIR: C:\ora\cocoon\apache-tomcat-6.0.18\temp
Using JRE_HOME:        C:\ora\jdev10133\jdk
C:\ora\cocoon\apache-tomcat-6.0.18\bin>

C:\WINDOWS\system32\cmd.exe - java -jar oc4j.jar
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>set JAVA_HOME=C:\ora\jdev10133\jdk

C:\Documents and Settings\Administrator>set ORACLE_HOME=C:\ora\oc4j10133

C:\Documents and Settings\Administrator>cd C:\ora\oc4j10133\j2ee\home

C:\ora\oc4j10133\j2ee\home>java -jar oc4j.jar
2008-09-17 19:14:46.718 NOTIFICATION JMSServer[]: OC4J JMS server recovering transactions (commit 0) (rollback 0) (prepared 0).
2008-09-17 19:14:46.718 NOTIFICATION JMSServer[]: OC4J JMS server recovering local transactions Queue[jms/Oc4jJmsExceptionQueue].
08/09/17 19:14:55 Oracle Containers for J2EE 10g (10.1.3.3.0) initialized
```

Tomcat:
Cocoon

OC4J:
Apache FOP
BI Publisher



DEMO 1

Classic Reports

Printing report regions/pages

Download of regions to Excel

DEMO 2

Interactive reports

Dashboard style reporting

Download of regions to Excel with Template

Interactive Reports

Issues with interactive reports

Report Regions v Report Queries

The screenshot displays the Sage Application Builder interface. On the left, the 'Regions' panel shows a list of regions: 'Customer Sales' (HTML) and ' :' (Report Print). An arrow points from the ' :' region to the main configuration area. The main area is titled 'Print Attributes' and contains several sections: 'Region Definition' (Region Name: ' :'), 'Printing' (Enable Report Printing: Yes, Link Label: Print using Apache FOP, Response Header: Report Settings, View File As: Attachment, File Name: customersales, Output Format: Derive from Item, Item: P16_FORMAT, Report Layout: Default Report Layout, Print Server Override: http://sage5.sagecomputing.com.au:8888/fop/apex_fop.jsp, Print URL: f?p=&APP_ID.:16:&SESSION.:FLOW_XMLP_OUTPUT_R4776602442933370), 'Page Attributes' (Paper Size: Letter, Orientation: Landscape, Units: Inches, Width: 11, Height: 8.5, Border Width: .5, Border Color: [color swatches]), and 'Page Header' (Font: Helvetica, Font Weight: Bold, Font Size: 16, Font Color: #330099, Alignment: center, Page Header: Customer Sales Report).

Report Region

Displayed in page

Declarative page layout

Print Server override

Report layout

Report Queries

Shared Components Page Definition Page Definition

ORACLE Application Express

Home Application Builder

Home > Application Builder > Application 143 > Shared Components

Application

- Definition
- Comments

Logic

- Application Items
- Application Processes
- Application Computations
- Web Service References
- Build Options

Security

- Authentication Schemes
- Authorization Schemes
- Session State Protection
- Edit Security Attributes

Globalization

Navigation

- Navigation Bar Entries
- Trees
- Breadcrumbs
- Lists
- Navigation Bar Entries

User Interface

- Themes
- Templates
- User Interface Defaults
- Lists of Values
- Shortcuts

Reports

- Report Queries
- Report Layouts

Report Queries

Report Query

- No print server override
- Report layout
- Add session state
- Multiple Queries
- Invoke using URL

Home > Application Builder > Application 143 > Shared Components > Report Queries > Edit Report Query

Page 16

Edit Report Query

Cancel Delete Apply Changes

Show All Attributes Source Queries Session State

Report Query Attributes

Report Query Name: Customer Sales (With Session State)

Report Layout: genericcustlayout

Output Format: Derive from Item (dropdown) Item

P2_FORMAT (dropdown)

View File As: Attachment (dropdown)

Print URL:
?p=&APP_ID:0:&SESSION:PRINT_REPORT=Customer%20Sales%20(With%20Se:

Source Queries

Source for Report Layout: ☒ XML Data ☐ XML Schema Download Test Report

Source Queries

```
select ORDER_ID ,  
ORDER_TOTAL ,  
ORDER_TIMESTAMP ,  
ORDER_ITEM_ID ,  
UNIT_PRICE ,
```

Add Query

Session State

Session State ☒ Include application and session information

Select Items

P2_CUSTOMER_ID
P2_CUST_FIRST_NAME
P2_CUST_LAST_NAME
P2_CUST_STREET_ADDRESS1
P2_CUST_STREET_ADDRESS2
P2_CUST_CITY
P2_CUST_STATE
P2_CUST_POSTAL_CODE

Report Queries

Report queries are rendered using a custom built RTF layout, if no report layout is selected, a generic report layout is used. Report queries can be downloaded as PDF documents, Word documents (RTF based), Excel Spreadsheets (HTML based) or as HTML files. This download format can be pre-defined on this page, or can be derived at runtime based on an application item.

Report Layouts

Report Layout

XSL-FO or RTF

Generic or Named Columns

Modify generic layout

The screenshot displays the 'Edit Report Layout' window in the Sage Accounting Services Application Builder. The breadcrumb trail at the top reads: 'Home > Application Builder > Application 143 > Shared Components > Report Layouts > Edit Report Layout'.

At the top of the window, there are buttons for 'Cancel', 'Delete', and 'Apply Changes'. Below these is a 'Show All' button and a tabbed interface with 'Report Layout Attributes', 'Report Layout', and 'Comments' tabs. The 'Report Layout Attributes' tab is currently active.

The 'Report Layout Attributes' section shows the 'Report Layout Name' as 'generic' and the 'Report Layout Type' as 'Generic Columns (XSL-FO)'. Below this is the 'Report Layout' section, which contains the XSL-FO code for the report template. The code includes a page template with XML declarations, variable definitions for XDOFOPOS, XDOFOPOS2, XDOFOTOTAL, and XDOFOOSTOTAL, and a table structure for the report columns.

The 'Report Column Heading' section shows the XSL-FO code for the column heading, and the 'Column Template' section shows the XSL-FO code for the column template.

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Customer Sales Report

Customer Sales

Customer Include Product Name? ☐ Print Format [Download to CSV](#) | [Print using Apache FOP](#)

Customer: Albert, Lambert

Address	Phone Number	Id	Order Total	Order Date	Item Id	Unit Price	Quantity
10701 Lambert International Blvd. St. Louis MO 63145	314-555-4022	9	\$450.00	23-JUL-08	15	\$250.00	1
		9	\$450.00	23-JUL-08	14	\$200.00	1
		8	\$40.00	28-JUL-08	13	\$40.00	1

Customer: Edward "Butch", OHare

Address	Phone Number	Id	Order Total	Order Date	Item Id	Unit Price	Quantity
10000 West OHare Chicago IL 60666	773-555-7693	6	\$250.00	07-AUG-08	10	\$250.00	1

Customer: Edward, Logan

Address	Phone Number	Id	Order Total	Order Date	Item Id	Unit Price	Quantity
1 Harborside Drive East Boston MA 02128	617-555-3295	4	\$750.00	17-AUG-08	8	\$250.00	1
		5	\$40.00	12-AUG-08	9	\$40.00	1
		4	\$750.00	17-AUG-08	7	\$500.00	1

Customer: Eugene, Bradley

Address	Phone Number	Id	Order Total	Order Date	Item Id	Unit Price	Quantity
Schoephoester Road Windsor Locks CT 06096	860-555-1835	10	\$500.00	18-JUL-08	16	\$500.00	1

Customer: Fiorello, LaGuardia

Address	Phone Number	Id	Order Total	Order Date	Item Id	Unit Price	Quantity
---------	--------------	----	-------------	------------	---------	------------	----------

The screenshot displays the SAP Page Designer 'Action' configuration window. The 'Target type' is set to 'Page in this Application' and the 'Page' is '0'. The 'Request' field is configured with 'PRINT_REPORT=CustomerSales'. A red arrow points from a text box stating 'REQUEST is call to Report Query' to the 'Request' field. The interface also shows 'Page Rendering' settings, 'Regions', 'Buttons', 'Items', 'Computations', and 'Processes' on the left, and 'Breadcrumbs', 'Lists', 'Templates', 'Theme', 'Security', and 'Navigation Bar' on the right.

REQUEST is call to Report Query

Customer Sales

[Print](#)

Customer: Albert, Lambert



Customer

First Name:

Last Name:

Street Address1:

Street Address2:

City:

State:

Post Code:

Phone Number:

Print Settings

Print Server ☐ Apache FOP
☐ Tomcat/Cocoon
☐ BI publisher

Print Format PDF



Report Query Customer Sales (With Session State)



Report Layout TwoQueriesand SessionState(RTF)



Display As Attachment



Calling Reports – Print API

Home > Application Builder > Application 143 > Page 2

Page 2 View Definition Go Run Copy Delete Create >

Page Rendering

Items

Region: Customer Sales

- 10 P2_CUST Select List with Submit Conditional
- 40 P2_PRINT Display as Text (does not save state) Never

Region: Customer

- 1 P2_CUSTOMER_ID Hidden
- 20 P2_CUST_FIRST_NAME Display as Text (saves state)
- 30 P2_CUST_LAST_NAME Display as Text (saves state)
- 40 P2_CUST_STREET_ADDRESS1 Display as Text (saves state)
- 50 P2_CUST_STREET_ADDRESS2 Display as Text (saves state)
- 60 P2_CUST_CITY Display as Text (saves state)
- 70 P2_CUST_STATE Display as Text (saves state)
- 80 P2_CUST_POSTAL_CODE Display as Text (saves state)
- 90 P2_PHONE_NUMBER1 Display as Text (saves state)

Region: Print Settings

- 48 P2_FOP Radiogroup
- 50 P2_FORMAT Select List
- 70 P2_QUERY Select List
- 80 P2_LAYOUT Select List
- 100 P2_DISP Select List

16 Items

Page Processing

Computations

After Submit:

- 10 P2_CUSTOMER_ID Unconditional

Validations

Processes

Branches

After Processing

- 1 Go To Page 0 Conditional
- 99 Go To Page 2 Unconditional

Branch to Page zero
to display the Query

Calling Reports – Print API

Home > Application Builder > Application 143 > Shared Component

Application Processes Utilization History

Application Process View Details

Sequence	Point	Name
1	On Load After Header (page template header)	showreport

Home > Application Builder > Application 143 > Shared Components > Application Processes > Edit

Application Process

Show All Name Source Conditions Authorization Configuration Comments Subscription

Name

Application: 143 AUSOUG2008

* Sequence

* Process Point

* Name

* Type

Source

* Process Text

```
BEGIN

APEX_UTIL.DOWNLOAD_PRINT_DOCUMENT (
  p_file_name=>'custreport',
  p_content_disposition=>:P2_DISP,
  p_application_id=>:APP_ID,
  p_report_query_name=>:P2_QUERY,
  p_report_layout_name=>:P2_LAYOUT,
  p_report_layout_type=>'xsl-fo',
  p_document_format=>:P2_FORMAT,
  p_print_server =>:P2_FOP);

END;
```

Print API
displays report

DEMO 3

Print Report Region – Apache FOP

Print Report Query – Apache FOP

Print report to Word - Cocoon

Printing

- Apache FOP

- Distributed with Apex
- Officially requires OC4J 10.1.3.2
- Works on other versions
- Supports PDF

- Tomcat / Cocoon

- Open Source
- Supports PDF
- Supports Word

Bi Publisher why do I need it?

- Complex multipart reports
- Charts
- User defined templates
- Because America is in recession and the nice people at Oracle need the money

DEMO 4

BI Publisher

DEMO 5

Mail Merge Custom XSL Template

Issues/Capability?

- Print page
- Print single query
- Print multiple queries/complex reports
- Output PDF
- Output Word
- Allow user defined templates

Report Servers

Default Apex
install

OC4J/Apache
FOP

Tomcat / Cocoon

BI publisher

Customer Sales Report

Name	Address	Phone Number	Id	Order Total	Order Date	Item Id	Unit Price	Quantity
Albert, Lambert	10701 Lambert International Blvd. St.	314-555-4022	9	\$450.00	23-JUL-08	15	\$250.00	1

Customer Orders

Item No	Unit Price	Quantity	Product Id	Product Name	Category
13	40	1	3	Bluetooth Headset	Phones
14	200	1	6	512 MB DIMM	Computer
15	250	1	4	PDA Cell Phone	Phones

Products

Id	Product Name	Description	Avail	List price
9	Ultra Slim Laptop	The power of a desktop in a portable design	Y	1999
10	Stereo Headphones	Noise-cancelling headphones perfect for the traveler	Y	150
1	3.2 GHz Desktop PC	All the options, this machine is loaded!	Y	1200
2	MP3 Player	Store up to 1000 songs and take them with you	Y	199
3	Bluetooth Headset	Hands-Free without the wires!	Y	40
4	PDA Cell Phone	Combine your cell phone and PDA into one device	Y	250

Options for Reporting?

- Oracle Reports (if you already have it) for complex printed reports
- Apex for dashboard style reporting on screen and simple reports in pdf
- Coccon/FOP for outputs to word and pdf
- Apex/Word for simple user driven mail merge
- Bi Publisher if you need the users to create the templates, e.g for Word documents (and you have really smart users)



SAGE Computing Services

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Questions?

Presentations are available from our website:

<http://www.sagecomputing.com.au>

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SAGE Computing Services

(Unrepentant Marketing)

Register for the Next
Application Express V3.1 course:
29th – 31st October

Call in at the Sage Computing Services exhibition booth, or contact Penny

penny@sagecomputing.com.au

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