

APEX by Example

Shared Components in DG Tournament

DG tournament

This is the follow-up application of the famous [WC 2006 application](#).

In May 2006 I created the World Cup 2006 application. The goal was to make an application entirely in **APEX** (Oracle Application Express). In the beginning the application only gave an overview of the scores and the ranking of the teams. Soon the application got interactive: it allowed betting on the games and having discussions through the shoutbox. An other feature was the utilization of Webservices to show some more info about the World Cup. More than 400 people played with us. At "peak"-moments we had over 10.000 hits an hour (after the mention on [Tom Kyte's Blog](#))!

I got a lot of positive reactions, even the APEX development team of Oracle contacted me. It kept me motivated to make this follow-up application...

With this version of the application I try to open it up for other, even non-football, tournaments. My intention is to include as many (technical) features of APEX 2.2 into the application, to continuously improve it and of course, as I like the interactivity, I count on you to shout and play with this application and make it rock!

You may put your suggestions and remarks in the ShoutBox or on my [Blog](#).

I would like to thank John Scott ([shellprompt.net](#)) for the hosting and Kristel Geukens ([gg-design.be](#)) for the graphics and lay-out.

Enjoy this application,
[Dimitri Gielis](#)

My Sponsors

HOSTED BY
SHELL PROMPT

DESIGN BY
G&G DESIGN

CREATED BY
DIMITRI GIELIS

Created by Dimitri Gielis © 2006

Design by G&G Design

Games due to play		Games in progress		Games played	
	Roland Garros 2007		UEFA Champions League 2006-2007		Roland Garros 2006
	UEFA Euro 2008				World Cup 2006
	World Cup 2010				

- Ex-Oracle employee
- OCP 8i/9i/10g
- Created the World Cup 2006 APEX app
- Business Unit Manager Oracle at Ordina Belgium
- Co-founder of Apex Evangelists
- Vice President of IOUG APEX SIG



- Web Development (HTML / CSS / JavaScript)?
- PL/SQL?
- APEX v2 and earlier?
- APEX 3.0?
- APEX Shared Components?
- World Cup 2006 APEX app? DG Tournament?
- Goals
 - Overview of APEX Shared Components!
 - Focus on non frequently used Shared Components
- Non-Goals
 - Learn EVERYTHING of APEX Shared Components



- Show APEX “Shared Components” (in DGT)
 - Quick overview
 - Questions/Problems
 - Why use a particular component
 - Example in DG Tournament
 - How to integrate

- When developing an application in APEX, have you ever asked yourself?
 - How can I upload an image? Or some pdf files?
 - How can I make my application look better?
 - How can I add some menus/navigation to it?
 - How can I add another login mechanism to it?
 - How can I translate my application in French?
 - How can I develop faster?
 - How can I secure my application?

The screenshot shows the Oracle Application Express interface. The top navigation bar includes 'ORACLE Application Express', 'Home', 'Application Builder', 'SQL Workshop', and 'Utilities'. The breadcrumb trail is 'Home > Application Builder > Application 2214 > Shared Components'. The main content area is divided into several sections, each highlighted with a red box:

- Application**: Contains 'Definition' and 'Comments' links.
- Logic**: Contains 'Application Items', 'Application Processes', 'Application Computations', 'Web Service References', and 'Build Options' (highlighted with a blue box).
- Security**: Contains 'Authentication Schemes', 'Authorization Schemes', 'Session State Protection' (highlighted with a blue box), and 'Edit Security Attributes'.
- Globalization**: Contains 'Translate Application', 'Text Messages', and 'Edit Attributes'.
- Navigation**: Contains 'Tabs', 'Lists', 'Breadcrumbs', 'Trees', and 'Navigation Bar Entries'.
- User Interface**: Contains 'Themes', 'Templates', 'User Interface Defaults' (highlighted with a blue box), 'Lists of Values', and 'Shortcuts' (highlighted with a blue box).
- Reports**: Contains 'Report Queries' and 'Report Layouts'.
- Files**: Contains 'Cascading Style Sheets', 'Images', and 'Static Files'.

On the right side, there are two panels:

- Shared Components**: A text box stating 'You can use shared components on any page in an application. This page provides a list of available shared components.'
- Tasks**: A list of tasks: 'View Application Reports', 'Export Application Components', and 'Manage Supporting Objects'.

How can I keep track of who's logged in, with which privileges and specifications?

ORACLE Application Express

Home > Application Builder > Application 2214 > Shared Components

Application

- Definition
- Comments

Logic

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

Security

Globalization

- Translate Application
- Text Messages
- Edit Attributes

Navigation

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

User Interface

- Themes
- Templates
- User Interface
- Lists of Values

Reports

Files

- Cascading Style Sheets
- Images
- Static Files

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

How can I store values for the entire session?

How can I pass values from one page to five other pages?

- Maintain Session State
- Use as “Global variables”

Tip!

Be careful using this

- Assign values to application and page items
- For every page in an application (except for “on New Instance”)

UEFA Champions League 2006-2007

Home Results Your Bets Overview Bet Bet Rank Shoutbox Your Profile Logout

Logged in as **DGIELTS**

Your message

Publish

Shoutbox

Search Last Name (drop-down)

Date	From	Message
23-JAN-2007 11:28	 Dimitri Gielis	Testing this box
23-JAN-2007 00:02	 Jacob Rhoden	Hi, This is a cool example of using apex. The buttons and everything still look like the ugly apex ones (: http://www.jacobrhoden.com/
11-DEC-2006 21:17	 Dimitri Gielis	Hi Gil! Welcome to this application... Hope you enjoy it!
08-DEC-2006 13:32	 J Gil	adding my first comment just joined!
04-DEC-2006 00:31	 Andrea Colombani	Hi, I linked this site in my football-team web-site: http://rangerbresso.altervista.org Bye...
22-NOV-2006 07:22	 Administrator Administrator	Some surprises in the scores today! Anybody reading the Shoutbox? :-)

1. Create an Application Item

ORACLE Application Express

Home > Application Builder > Application 103 > Shared Components > Application Items

Application Items History

Application Item View Icons Display 15 Go Create >

APEXLIB REFERENCE ID
APEXLIB REFERENCE TYPE
FSP AFTER LOGIN URL
TDG AI BROWSER LANG
TDG AI DATE FORMAT MASK
TDG AI FIRST NAME
TDG AI FULL NAME
TDG AI PREVIOUS PAGE
TDG AI TOURNAMENT BCOLOR
TDG AI TOURNAMENT COLOR
TDG AI TOURNAMENT ID
TDG AI TOURNAMENT NAME
TDG AI TOURNAMENT TYPE
TDG AI TOURNAMENT TYPE ID
TDG AI USER ID

Existing Application Level Computations

1-15

Language: nl-be

Workspace: DGIELIS_01 User: ADMIN

Application Express 2.2.1.00.04

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Application Items
Use Application Items to maintain session state. Application Items can be set using computations, processes, or by passing values on a URL. Use "On New Instance" computations to set the value of items once for a session. Use Application Items to maintain session state that is not displayed and is not specific to any one page.

2. Populate the Application Item
(through Computations, Processes, URLs)
3. Use the Application Item in a Template, a Region, a Report, an Item, ...
 - Bind-variables -> :APP_ITEM
 - Substitution syntax -> &APP_ITEM.

Source

* Process [Download Source]

```
declare
  l_success    boolean;
  l_password   varchar2(4000);
begin
  l_password := :p20_password;
  if (:p20_hidden_password is null) or (:p20_password is not null)
  then
    l_success := tdg_fn_custom_add_user(:p20_user_name,l_password);
    :p20_hidden_password := l_password;
  end if;
end;
```

Definition

* Header

```
weight:bold;color:&TDG_AI_TOURNAMENT_BCOLOR;text-align:right;white-space:nowrap;}
.tdgttd3(color:#FFFFFF;font-family: Verdana, sans-serif; font-size: 10px; text-
decoration: none;)}
-->
</style>
<script src="/highslide/highslide.js" type="text/javascript"></script>
<script type="text/javascript">
  hs.graphicsDir = '/highslide/graphics/';
  window.onload = function() {
    hs.preloadImages(5);
  }
</script>
```

1. Create an Application Computation

ORACLE Application Express

Home > Application Builder > Application 103 > Shared Components > Application Computations > Create / Edit Application Computation

Application Computation

Cancel Delete Apply Changes

Show All Item Frequency Computation Authorization Conditions Configuration Comments

Item

Application: 103 TDG_2006

Sequence: 10

* Computation Item: TDG_AI_TOURNAMENT_NAME

Frequency

Computation Point: On New Instance (e.g. On Login)

Computation

Computation Type: SQL Query

* Computation

```
SELECT b.tournament_name
FROM (SELECT MIN (a.r), a.tournament_id, a.tournament_name
      FROM (SELECT tournament_id, tournament_name, 1 AS r
            FROM tdg_tournament
            WHERE SYSDATE BETWEEN start_date AND end_date
```

Computation Error Message

Error finding a tournament.

The screenshot shows the Oracle Application Express interface. The left sidebar contains sections for Application, Logic, Security, and Globalization. The 'Logic' section is expanded, showing 'Application Items', 'Application Processes', 'Application Computations', 'Web Service References', and 'Build Options'. The 'Application Processes' item is highlighted with a red rectangle. Two yellow callout boxes are overlaid on the interface:

- Top callout: "How can I let a specific process fire?"
- Bottom callout: "How can I use AJAX?"

The main content area shows the 'User Interface' section with 'Themes' and 'Templates'. The 'Reports' section shows 'Report Queries' and 'Report Layouts'. The 'Files' section shows 'Cascading Style Sheets', 'Images', and 'Static Files'. The right sidebar contains 'Shared Components' and 'Tasks'.

- Run PL/SQL logic at specific points

Tip!

Use this when implementing AJAX

The screenshot shows a web application interface for 'DG Tournament Betting'. The header features a soccer ball icon, the 'DG' logo, and the text 'Tournament Betting'. Below the header, a green bar lists sports: Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf. The main content area is titled 'Test' and contains two dropdown menus. The first dropdown menu is highlighted with a red box and has a red arrow pointing to it. The second dropdown menu is labeled 'Auto'. The text 'Logged in as nobody' is visible in the top right corner.

Design ©
gg-design.be

Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf

UEFA Champions League 2006-2007

Test

X - select -

Auto - select -

Logged in as nobody

1. Create an Application Process

Home > Application Builder > Application 103 > Shared Components > Application Processes > [Edit Application Process](#)

Application Process

Show All Name Source Conditions Authorization Configuration Comments Subscription

Name

Application: 103 TDG_2006

* Sequence

* Process Point

* Name

* Type

Source

* Process Text

```
ApexLib_Lov.generateLovResult (:APEXLIB_REFERENCE_TYPE, :APEXLIB_REFERENCE_ID);
```

The screenshot shows the Oracle Application Express interface. The left sidebar contains several sections: Application, Logic, Security, and Globalization. The Security section is expanded, showing links for Authentication Schemes, Authorization Schemes, Session State Protection, and Edit Security Attributes. The Session State Protection link is highlighted with a red rectangle. A yellow callout bubble points to this link with the text "How can I protect my site?". Another yellow callout bubble points to the bottom of the page with the text "Is my site secure from hackers?". The main content area shows various components like Navigation, User Interface, and Reports. The top navigation bar includes links for Home, Application Builder, SQL Workshop, and Utilities.

ORACLE® Application Express

Home > Application Builder > Application 2214 > Shared Components

Page 1

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

- Translate Application
- Text Messages
- Edit Attributes

Navigation

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

User Interface

- Themes
- Templates

Reports

- Report Queries
- Report Layouts

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

How can I protect my site?

Is my site secure from hackers?

Security!! → URL Tampering

Change

f?p=103:10:240848379705417::NO::P10 USER ID:70

To

f?p=103:10:240848379705417::NO::P10 USER ID:71

Question:

- Are you allowed to see this information?
- How to prevent URL Tampering?

LIVE DEMO



Tournament Betting

Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf

Design © gg-design.be

UEFA Champions League 2006-2007

Country | Image | T. Type | User | Mails | Logout

Session state protection violation: This may be caused by manual alteration of a URL containing a checksum or by using a link with an incorrect or missing checksum. If you are unsure what caused this error, please contact the application administrator for assistance.

Admin ▼ Editor ▼ User ▼

Logged in as ADMIN

User Detail

Cancel

Delete

Apply Changes

User Name

DGIELIS

Password

Confirm Password

First Name

Dimitri

Last Name

Gielis

Email

dimitri.gielis@telenet.be

User Image



Remove Image

1. Go to Session State Protection

ORACLE Application Express

Home > Application Builder > Application 103 > Shared Components > Session State Protection

Application: 103 - TDG_2006

Session State Protection: Disabled

Page Item Application Item

Set Protection >

Session State Protection

Enabling Session State Protection can prevent hackers from tampering with the URLs within your application. URL tampering can adversely affect program logic, session state contents, and information privacy.

To enable, disable, or configure Session State Protection using a wizard, click **Set Protection**.

Home > Application Builder > Application 103 > Shared Components > Session State Protection > Set Application Protection

Application: 103 - TDG_2006

Session State Protection: Disabled

Select Action

Select Page and Item Attributes

Confirm and Apply

Set Session State Protection Attributes

Cancel Next >

Use this wizard to enable or disable Session State Protection and set page and item security attributes for the entire application. After running the wizard, you can also configure page and item security attributes manually by clicking the appropriate icon on the Session State Protection page.

Select Action:

☐ Disable ☒ Enable ☐ Configure

Page Level Session State Protection Summary

Page Item Session State Protection Summary

Application Item Session State Protection Summary

2. Enable Session State Protection

Home > Application Builder > Application 103 > Shared Components > Session State Protection > **Enable**

Select Action

▼

Select Page and Item Attributes

▼

Confirm and Apply

Application: 103 - TDG_2006

Session State Protection: Disabled

Enable

Cancel

< Previous

Enable Session State Protection

 Confirm your request to enable Session State Protection. This action will not alter page or item attributes.

Home > Application Builder > Application 103 > Shared Components > **Session State Protection**

Session State Protection enabled.

Application: 103 - TDG_2006

Session State Protection: **Enabled**


Page


Item


Application Item

Set Protection >

3. Overview of Session State Protection by Pages

Home > Application Builder > Application 103 > Shared Components > Session State Protection > Session State Protection by Page

Application: 103 - TDG_2006
Session State Protection: Enabled

Page Display 15 Page Access Protection - Show All - Go

Page	Name	Page Access Protection	Page Items
0	Default	Unrestricted	1
1	DG Tournament	Unrestricted	1
2	Countries	Unrestricted	0
3	Tournament Types	Unrestricted	0
4	Tournament Rules	Unrestricted	0
5	Tournament Rule Detail	Unrestricted	4
6	Shoutbox	Unrestricted	8
7	Images	Unrestricted	4
8	Image Detail	Unrestricted	7
9	Users	Unrestricted	3
10	User Detail	Unrestricted	28
11	Football Matches - Result	Unrestricted	9
12	Teams	Unrestricted	0
13	Matches	Unrestricted	1
14	Mails	Unrestricted	8

row(s) 1 - 15 of 33

4. Change the Page Access Protection and Item SSP

Home > Application Builder > Application 103 > Shared Components > Session State Protection > Set Page and Item Protection

Application: 103 - TDG_2006
Session State Protection: Enabled
Page: 10
Name: User Detail

Page Access Protection: Arguments Must Have Checksum 

Item Type ☒ Data Entry Items ☐ Display-Only Items

Item Name	Region	Sequence	Label	Item Session State Protection
P10_USER_ID	User Detail	1	User Id	Unrestricted
P10_USER_NAME	User Detail	20	User Name	Unrestricted
P10_HIDDEN_PASSWORD	User Detail	25	Password	Unrestricted
P10_PASSWORD	User Detail	30	Password	Unrestricted
P10_CONFIRM_PASSWORD	User Detail	35	Confirm Password	Unrestricted
P10_FIRST_NAME	User Detail	40	First Name	Unrestricted
P10_LAST_NAME	User Detail	50	Last Name	Unrestricted
P10_EMAIL	User Detail	60	Email	Unrestricted
P10_LOCATION	User Detail	70	Location	Unrestricted
P10_COUNTRY_ID	User Detail	75	Country	Unrestricted

4. The url of the APEX application looks now like this:

f?p=103:10:240848379705417::NO::P10_USER_ID:70&cs=3831E8EB49
8FF406064BE08337E72A9DF —————→ Checksum

5. Try to change the user_id from 70 to 71 → you get a message the session state protection is violated

ORACLE Application Express

Home > Application Builder > Application 2214 > Shared Components

Page 1

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

- Translate Application
- Text Messages
- Edit Attributes

Navigation

- Tabs
- Lists
- Breadcrumbs
- Trees

Reports

- Report Queries
- Report Layouts

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

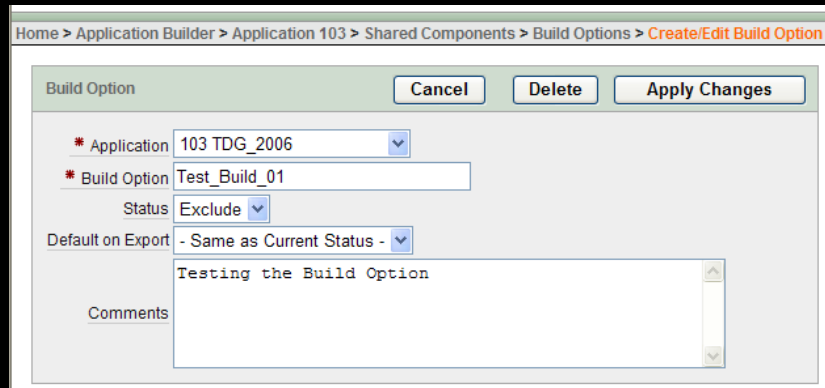
How can I add a new feature without affecting others?

How can I develop in production without showing the changes?

- Exclude/Include specific functionalities within an application
- For every attribute

LIVE DEMO

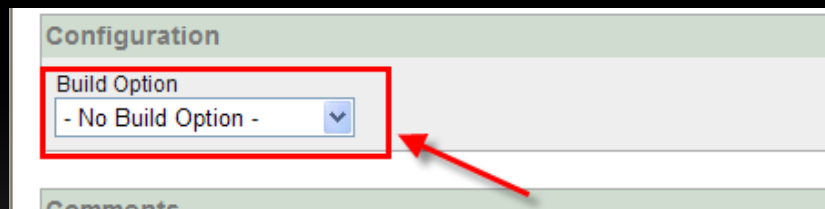
1. Two possible values: INCLUDE and EXCLUDE



The screenshot shows the 'Create/Edit Build Option' dialog box. The breadcrumb trail at the top reads: 'Home > Application Builder > Application 103 > Shared Components > Build Options > Create/Edit Build Option'. The dialog has three buttons at the top: 'Cancel', 'Delete', and 'Apply Changes'. The form contains the following fields:

- * Application: 103 TDG_2006 (dropdown)
- * Build Option: Test_Build_01 (text input)
- Status: Exclude (dropdown)
- Default on Export: - Same as Current Status - (dropdown)
- Comments: Testing the Build Option (text area)

2. The Build Option in an item



The screenshot shows a 'Configuration' section with a 'Build Option' dropdown menu. The dropdown is currently set to '- No Build Option -'. A red rectangle highlights the dropdown, and a red arrow points to it from the right.

ORACLE Application Express

Home > Application Builder > Application 2214 > Shared Components

Page 1

Application

- Definition
- Comments

Logic

- Application Items
- Application Processes

Security

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

Globalization

- Translate Application
- Text Messages
- Edit Attributes

Navigation

- Navigation Bar Entries

User Interface

- Shortcuts

Reports

- Report Layouts

Files

- Cascading Style Sheets
- Images

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

Do I always need to type that whole javascript/text?

How can I reuse HTML & PLSQL code?

Where should I specify Reusable Components?

- Improve development
- Reusable components

The screenshot shows a web application interface for 'DG Tournament Betting'. The header features a soccer ball icon, the text 'DG Tournament Betting', and a list of sports: Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf. Below this is a green bar with 'UEFA Champions League 2006-2007' and a 'Design © gg-design.be' credit. The main content area is titled 'Test' and includes a dropdown menu for 'Antigua and Barbuda', an 'Auto' dropdown, and a 'Build Option' input field. A rich text editor toolbar is visible, containing various icons for text formatting, alignment, and insertion. The editor area is labeled 'Fckeditor'. The footer contains the text 'Created by Dimitri Gielis © 2006', '0.05', and 'Design by G&G Design'. The user is logged in as 'nobody'.

Design © gg-design.be

Logged in as nobody

Test

X Antigua and Barbuda

Auto - select -

Build Option

Source

Style Format Font Size

Fckeditor

Created by Dimitri Gielis © 2006 0.05 Design by G&G Design

1. An example of a Shortcut (used in “EDITOR”)

Home > Application Builder > Application 103 > Shared Components > Shortcuts > **Edit Shortcut**

Shortcut Cancel Delete Apply Changes

Show All | Name | Subscription | Source | Configuration | Comments

Name

* Name EDITOR

Subscription

Reference Master Shortcut From  ☒ Refresh

This is the "master" copy of this shortcut.

No shortcuts subscribe to this shortcut.

Source

* Type HTML Text

Shortcut

```
<script type="text/javascript">
var #CURRENT_FORM_ELEMENT#FCKeditor = new FCKeditor('#CURRENT_ITEM_NAME#');
#CURRENT_FORM_ELEMENT#FCKeditor.BasePath = '/fckeditor/';
#CURRENT_FORM_ELEMENT#FCKeditor.Height = 300;
#CURRENT_FORM_ELEMENT#FCKeditor.Width = 500;
#CURRENT_FORM_ELEMENT#FCKeditor.ToolbarSet = "Default";
#CURRENT_FORM_ELEMENT#FCKeditor.Config["AutoDetectLanguage"] = false;
#CURRENT_FORM_ELEMENT#FCKeditor.Config["DefaultLanguage"]
= "&BROWSER_LANGUAGE.";
#CURRENT_FORM_ELEMENT#FCKeditor.ReplaceTextarea();
</script>
```

Error Text

LIVE DEMO

(integration of the FCK Editor with the use of Shortcuts

- See also my whitepaper)

(in APEX 3.0 the FCK Editor is out of the box)

The screenshot shows the Oracle Application Express interface. The top navigation bar includes 'ORACLE Application Express', 'Home', 'Application Builder', 'SQL Workshop', and 'Utilities'. The breadcrumb trail is 'Home > Application Builder > Application 2214 > Shared Components'. The left sidebar contains sections for '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), and 'Globalization' (Translate Application, Text Messages, Edit Attributes). The main content area shows the 'User Interface' menu with options: 'User Interface Defaults', 'Lists of Values', and 'Shortcuts'. The 'User Interface Defaults' option is highlighted with a red rectangle. A yellow callout bubble points to this option with the text 'How can I develop faster?'. Another yellow callout bubble at the bottom contains the text 'Why does APEX always create a Textarea instead of a Textbox!?'.

ORACLE Application Express

Home > Application Builder > Application 2214 > Shared Components

Application

- Definition
- Comments

Logic

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Globalization

- Translate Application
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- Edit Attributes

Navigation

- Navigation
- Lists
- Breadcrumbs

User Interface

- User Interface Defaults
- Lists of Values
- Shortcuts

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

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- View Application Reports
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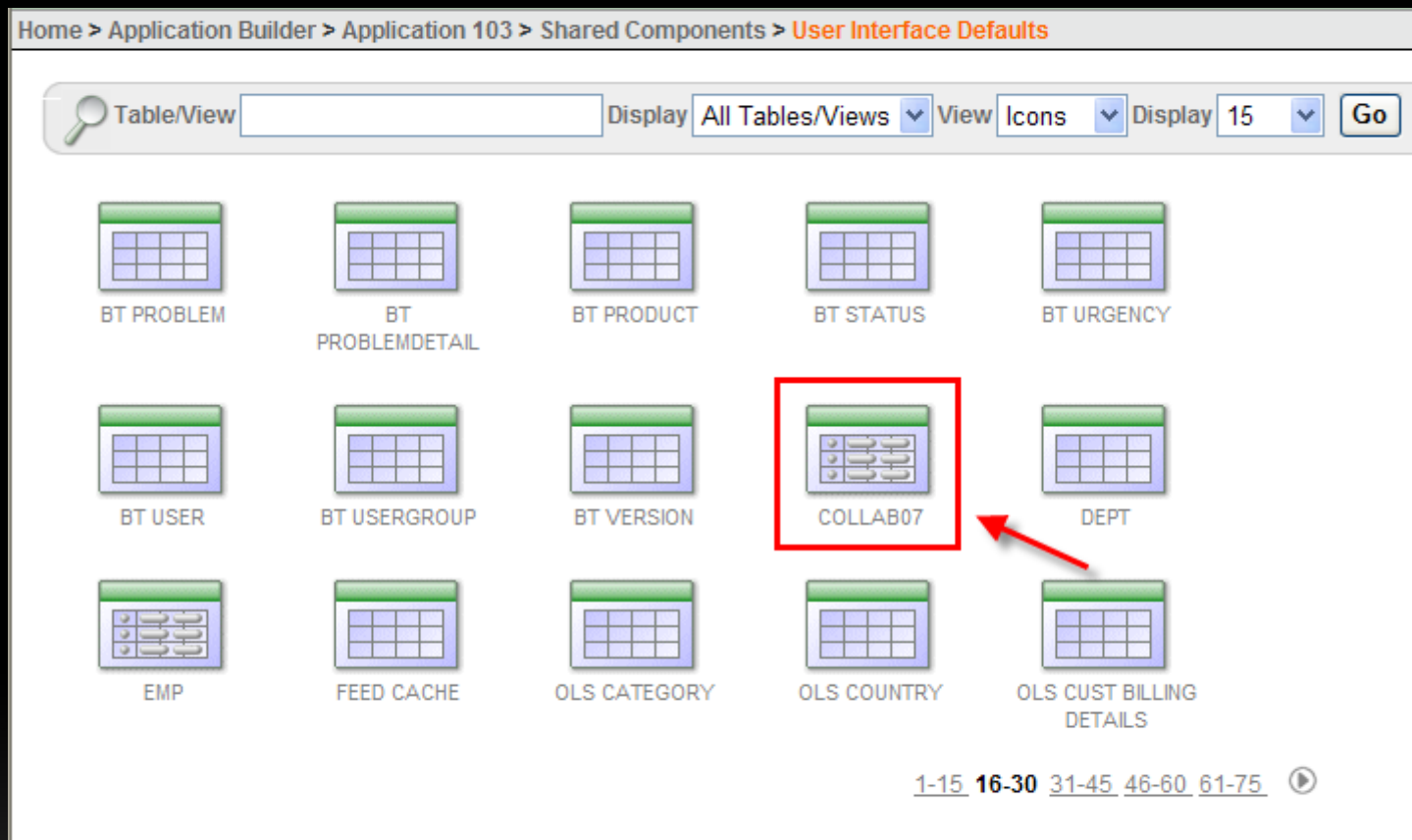
How can I develop faster?

Why does APEX always create a Textarea instead of a Textbox!?

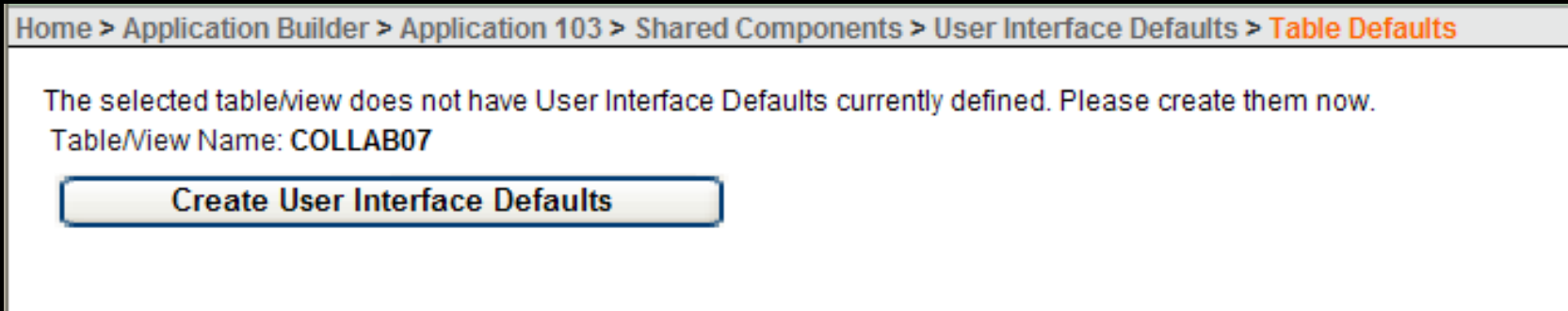
- Develop faster
- Set defaults for items
- Cross Application

LIVE DEMO

1. The Tables and Views in your Schema



2. Select a table
No defaults? → Enable them



3. Two possible views: Overview and ...

Home > Application Builder > Application 103 > Shared Components > User Interface Defaults > **Table Defaults**

User Interface Defaults created.

Table/View Name: **COLLAB07 (table)**

Form Region Title:

Report Region Title:

Column Name	Label	Include in Reports	Report Sequence ▲	Searchable	Group By	Aggregate By	Include in Forms	Form Sequence	Required
PERSON_NAME	Person Name	✓	1	✓	-	-	✓	1	✓
PERSON_EMAIL	Person Email	✓	2	✓	-	-	✓	2	-
D1504	D1504	✓	3	✓	-	-	✓	3	-
D1604	D1604	✓	4	✓	-	-	✓	4	-
D1704	D1704	✓	5	✓	-	-	✓	5	-
D1804	D1804	✓	6	✓	-	-	✓	6	-
D1904	D1904	✓	7	✓	-	-	✓	7	-

row(s) 1 - 7 of 7

3. ... Grid Edit

Home > Application Builder > Application 103 > Shared Components > User Interface Defaults > Table Defaults

Table/View Name: **COLLAB07 (table)**

Form Region Title:

Report Region Title:

Column Name	Label	Include in Reports	Report Sequence ▲	Searchable	Group By	Aggregate By	Include in Forms	Form Sequence	Required
PERSON_NAME	Person Name	Yes ▼	1	Yes ▼	No ▼	No ▼	Yes ▼	1	Yes ▼
PERSON_EMAIL	Person Email	Yes ▼	2	Yes ▼	No ▼	No ▼	Yes ▼	2	No ▼
D1504	D1504	Yes ▼	3	Yes ▼	No ▼	No ▼	Yes ▼	3	No ▼
D1604	D1604	Yes ▼	4	Yes ▼	No ▼	No ▼	Yes ▼	4	No ▼
D1704	D1704	Yes ▼	5	Yes ▼	No ▼	No ▼	Yes ▼	5	No ▼
D1804	D1804	Yes ▼	6	Yes ▼	No ▼	No ▼	Yes ▼	6	No ▼
D1904	D1904	Yes ▼	7	Yes ▼	No ▼	No ▼	Yes ▼	7	No ▼

row(s) 1 - 7 of 7

Home > Application Builder > Application 103 > Shared Components > User Interface Defaults > Table Defaults > Column Defaults

Column Definition List of Values

Column: 1 of 7

Show All Schema and Table Label Default Report Defaults Tabular Form Default Form Defaults

Schema and Table

Schema: DGIELIS
Table/View Name: COLLAB07 (table)
Column Name: PERSON_NAME
[View Database Column Definition](#)

Label Default

Used in reports and forms.
Label: Person Name
[Person Name]

Report Defaults

Display: ☒ Yes ☐ No

Display Sequence: 1

Display As: Standard Report Column (display-only, does not save state)

Mask: [Mask]

Alignment: ☒ Left ☐ Center ☐ Right

Searchable: ☒ Yes ☐ No

Group By: ☐ Yes ☒ No

Aggregate By: ☐ Yes ☒ No

Tabular Form Default

Display As: Text Area

Form Defaults

Display: ☒ Yes ☐ No

Display Sequence: 1

Display As: Textarea

[Text] [Text Area] [Select List] [Radio] [Popup List of Values] [Checkbox] [Date] [Hidden]

Mask: [Mask]

Default Value: [Default Value]

Width: 60 maxWidth: 500 Height: 4

Required: ☒ Yes ☐ No

Help Text: [Help Text]

 Audit Information

The screenshot displays the Oracle Application Express web interface. The top navigation bar includes 'ORACLE Application Express' and tabs for 'Home', 'Application Builder', 'SQL Workshop', and 'Utilities'. The breadcrumb trail reads 'Home > Application Builder > Application 2214 > Shared Components'. The left sidebar contains sections for '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), and 'Globalization' (Translate Application, Text Messages, Edit Attributes). The main content area is titled 'Navigation' and lists 'Tabs' and 'Interface' components. The 'Interface' section includes 'Themes', 'Templates', 'User Interface Defaults', 'Lists of Values', and 'Shortcuts'. A red rectangular box highlights the 'Web Service References' icon in the Logic section of the left sidebar. Two yellow callout boxes are overlaid on the image: one pointing to the 'Web Service References' icon with the text 'How can I use data from another website?' and another pointing to the 'User Interface Defaults' icon with the text 'How can I integrate my site with another one?'. On the right side, there are panels for 'Shared Components' and 'Reports'.

ORACLE Application Express

Home > Application Builder > Application 2214 > 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

- Translate Application
- Text Messages
- Edit Attributes

Navigation

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

Shared Components

You can use shared components on any page in an application. This page shows a list of shared components.

Reports

Application Reports

- Components
- Manage Supporting Objects

- Access a Web service
- The Web service performs an action and sends back a response
- Based on SOAP



Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf

Design © gg-design.be

[World Cup 2006](#)
[Home](#)
[Results](#)
[Bet Rank](#)
[Shoutbox](#)
[Login](#)

Logged in as nobody

All WC 2006 Games

Round	Play Date ▲	Time	Home Team	Flag H	Visitor Team	Flag V	R	Score	YC	RC	City
Round 1	2006-06-09	18:00:00	Germany		Costa Rica		W	4-2	1	0	Munich
Round 1	2006-06-09	21:00:00	Poland		Ecuador		L	0-2	3	0	Gelsenkirchen
Round 1	2006-06-10	15:00:00	England		Paraguay		W	1-0	3	0	Frankfurt
Round 1	2006-06-10	18:00:00	Trinidad and Tobago		Sweden		E	0-0	2	1	Dortmund
Round 1	2006-06-10	21:00:00	Argentina		Côte d'Ivoire		W	2-1	5	0	Hamburg
Round 1	2006-06-11	15:00:00	Serbia and Montenegro		Netherlands		L	0-1	6	0	Leipzig
Round 1	2006-06-11	18:00:00	Mexico		Iran		W	3-1	3	0	Nuremberg
Round 1	2006-06-11	21:00:00	Angola		Portugal		L	0-1	5	0	Cologne
Round 1	2006-06-12	15:00:00	Australia		Japan		W	3-1	7	0	Kaiserslautern
Round 1	2006-06-12	18:00:00	USA		Czech Republic		L	0-3	6	0	Gelsenkirchen
Round 1	2006-06-12	21:00:00	Italy		Ghana		W	2-0	5	0	Hannover
Round 1	2006-06-13	15:00:00	Korea Republic		Togo		W	2-1	4	1	Frankfurt
Round 1	2006-06-13	18:00:00	France		Switzerland		E	0-0	8	0	Stuttgart
Round 1	2006-06-13	21:00:00	Brazil		Croatia		W	1-0	4	0	Berlin
Round 1	2006-06-14	15:00:00	Spain		Ukraine		W	4-0	2	1	Leipzig

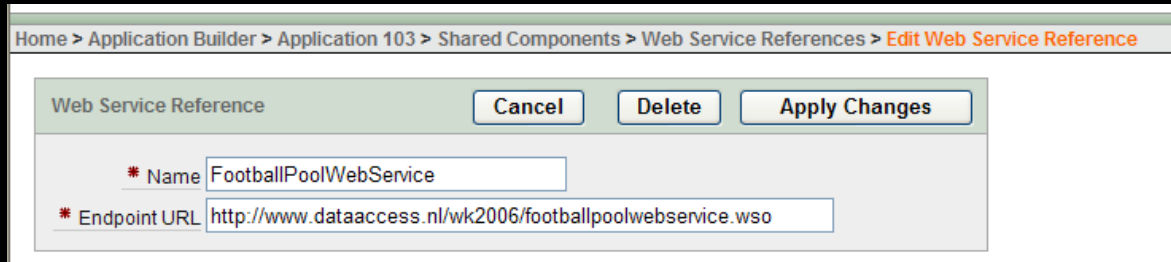
row(s) 1 - 15 of 64 [Next >](#)

Extra Info

- Possible Results: (U)known, (W)ins, (L)oses, (E)qual/Draw
- This page uses the Webservices of [DataAccess](#)

Bet Hints [Get Bets](#)

1. Providing the URL of a Webservice



Home > Application Builder > Application 103 > Shared Components > Web Service References > Edit Web Service Reference

Web Service Reference Cancel Delete Apply Changes

* Name: FootballPoolWebService

* Endpoint URL: http://www.dataaccess.nl/wk2006/footballpoolwebservice.wso

2. Access the Webservice (xml) by (in a report)



Source

Region Source

```
select
  extractValue(value
    (t), '/*/sDescription', 'xmlns="http://www.dataaccess.nl/wk2006"') "Round"
    , extractValue(value
    (t), '/*/dPlayDate', 'xmlns="http://www.dataaccess.nl/wk2006"') "Play Date"
    , extractValue(value
    (t), '/*/tPlayTime', 'xmlns="http://www.dataaccess.nl/wk2006"') "Play Time"
    , extractValue(value
    (t), '/*/Team1/sName', 'xmlns="http://www.dataaccess.nl/wk2006"') "Home Team"
  ...
  from wwv_flow_collections c
    , table(xmlsequence(extract(xmltype.createxml
    (c.clob001), '//AllGamesResult/tGamesInfo', 'xmlns="http://www.dataaccess.nl/wk2006"')) t
  where c.collection_name = 'P19_ALLGAMES_RESULTS'
```

The screenshot shows the Oracle Application Express interface. The top navigation bar includes links for Home, Application Builder, SQL Workshop, and Utilities. The breadcrumb trail indicates the current location: Home > Application Builder > Application 2214 > Shared Components. The left sidebar contains sections for 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), and Globalization (Translate Application, Text Messages, Edit Attributes). The main content area displays the 'Shared Components' page, which lists various components available for use in an application. A red rectangular box highlights the 'Navigation' section, which includes links for Tabs, Lists, Breadcrumbs, Trees, and Navigation. A yellow callout box with a question mark icon points to the 'Navigation' link, containing the text: 'How can I add navigation to my application?'. Other sections visible include Reports (Report Queries, Report Layouts) and Files (Cascading Style Sheets, Images, Static Files). The right sidebar contains a 'Shared Components' section with a description and a 'Tasks' section with links to View Application Reports and Export Application Components.

ORACLE® Application Express

Home > Application Builder > Application 2214 > Shared Components

Page 1

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

- Translate Application
- Text Messages
- Edit Attributes

Navigation

- Tabs
- Lists
- Breadcrumbs
- Trees
- Navigation

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components

Reports

- Report Queries
- Report Layouts

Files

- Cascading Style Sheets
- Images
- Static Files

Shortcuts

How can I add navigation to my application?

- Navigation between pages
- One or two-level tabs



DGT Tournament

This is the follow-up application of the famous [WC 2006 application](#).

In May 2006 I created the World Cup 2006 application. The goal was to make an application entirely in **APEX** (Oracle Application Express). In the beginning the application only gave an overview of the scores and the ranking of the teams. Soon the application got interactive: it allowed betting on the games and having discussions through the shoutbox. An other feature was the utilization of Webservices to show some more info about the World Cup. More than 400 people played with us. At "peak"-moments we had over 10.000 hits an hour (after the mention on [Tom Kyte's Blog](#))!

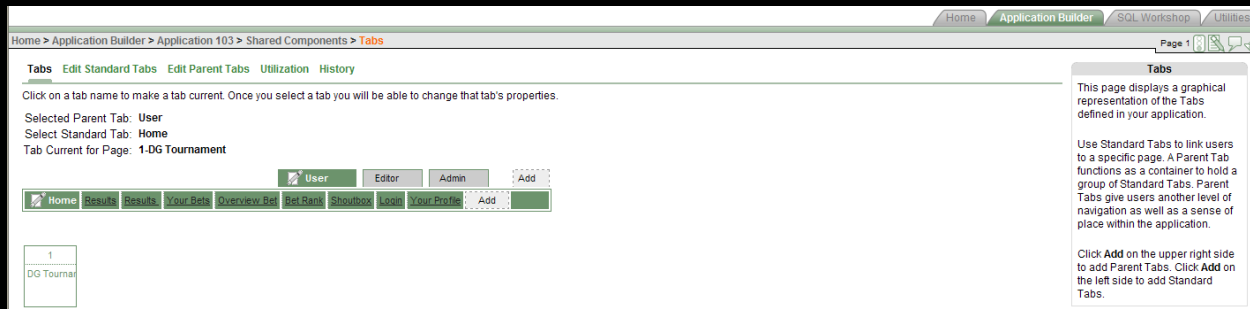
I got a lot of positive reactions, even the APEX development team of Oracle contacted me. It kept me motivated to make this follow-up

Games due to play	
	Roland Garros 2007
	UEFA Euro 2008
	World Cup 2010

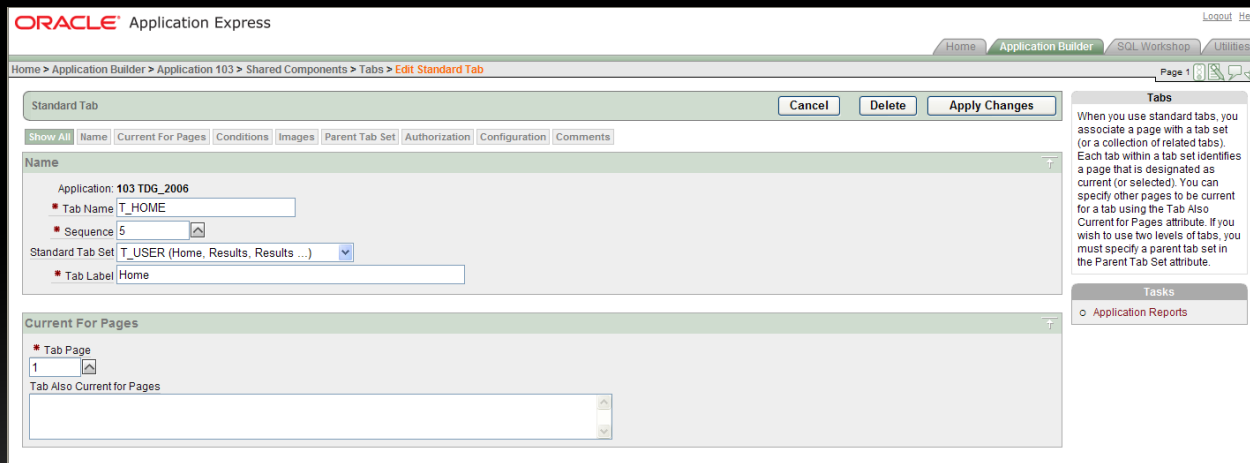
Games in progress	
	UEFA Champions League 2006-2007

Games played	
	Roland Garros 2006
	World Cup 2006

1. Creation of tabs: choice between 1 or 2-level tabs



2. Specify the pages linked to a Tab, Parent Tab, logo, ...



ORACLE Application Express

Home > Application Builder > Application 2214 > Shared Components

Page 1

Application

- Definition
- Comments

Logic

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

Globalization

- Translate Application
- Text Messages
- Edit Attributes

Navigation

- Navigation (highlighted with a red box)
- Lists
- Breadcrumbs
- Trees

User Interface

- Themes
- Templates
- User Interface
- Lists of Value
- Shortcuts

Reports

- Report Queries
- Report Layouts

Files

- Cascading Style Sheets
- Images
- Static Files

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

How can I make drop down / DHTML menus?

How can I add navigation to my application?

- Navigation between pages
- Shared collection of links



Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf

Design © gg-design.be

Home Results Overview Bet Bet Rank Shoutbox Logout

Admin Editor User

DGT

This is the f WC 2006 application.

In May 2006 I created the world cup 2006 application. The goal was to make an application entirely in APEX (Oracle Application Express). In the beginning the application only gave an overview of the scores and the ranking of the teams. Soon the application got interactive: it allowed betting on the games and having discussions through the shoutbox. An other feature was the utilization of Webservices to show some more info about the World Cup. More than 400 people played with us. At "peak"-moments we had over 10.000 hits an hour (after the mention on Tom Kyte's Blog)!

I got a lot of positive reactions, even the APEX development team of Oracle contacted me. It kept me motivated to make this follow-up application...

Games due to play	
	Roland Garros 2007
	UEFA Euro 2008
	World Cup 2010

Games in progress	
	UEFA Champions League 2006-2007

Games played	
	Roland Garros 2006
	World Cup 2006

1. A List exist out of List Entries

Home > Application Builder > Application 103 > Shared Components > Lists > **List Entries**

Template: DHTML Menu with Sublist

List Entries

Sequence	Name	Target	Conditional	Build Option	Last Updated
10	Admin	-	-	-	5 months ago
3	Countries	f?p=&APP_ID.:2:&SESSION.::&DEBUG.:::	-	-	5 months ago
10	Tournament Types	f?p=&APP_ID.:3:&SESSION.::&DEBUG.:::	-	-	5 months ago
15	Images	f?p=&APP_ID.:7:&SESSION.::&DEBUG.:::	-	-	5 months ago
20	Users	f?p=&APP_ID.:9:&SESSION.::&DEBUG.:::	-	-	5 months ago
30	Mails	f?p=&APP_ID.:14:&SESSION.::&DEBUG.:::	-	-	4 months ago
200	Editor	-	-	-	5 months ago
210	Tournament Rules	f?p=&APP_ID.:4:&SESSION.::&DEBUG.:::	-	-	5 months ago
220	Teams	f?p=&APP_ID.:12:&SESSION.::&DEBUG.:::	-	-	5 months ago
230	Matches	f?p=&APP_ID.:13:&SESSION.::&DEBUG.:::	✓	-	4 months ago
235	Matches	f?p=&APP_ID.:28:&SESSION.::&DEBUG.:::	✓	-	4 months ago
240	Latest News	f?p=&APP_ID.:21:&SESSION.::&DEBUG.:::	-	-	5 months ago
250	Tournaments	f?p=&APP_ID.:24:&SESSION.::&DEBUG.:::	-	-	5 months ago
500	User	-	-	-	4 months ago
510	Home	f?p=&APP_ID.:1:&SESSION.::&DEBUG.:::	-	-	4 months ago
515	Results	f?p=&APP_ID.:11:&SESSION.::&DEBUG.:::	✓	-	4 months ago
516	Results	f?p=&APP_ID.:26:&SESSION.::&DEBUG.:::	✓	-	4 months ago
520	Your Bets	f?p=&APP_ID.:17:&SESSION.::&DEBUG.:::	-	-	4 months ago
530	Overview Bet	f?p=&APP_ID.:16:&SESSION.::&DEBUG.:::	-	-	4 months ago
540	Bet Rank	f?p=&APP_ID.:15:&SESSION.::&DEBUG.:::	-	-	4 months ago
560	Shoutbox	f?p=&APP_ID.:6:&SESSION.::&DEBUG.:::	-	-	4 months ago
570	Your Profile	f?p=&APP_ID.:20:&SESSION.::&DEBUG.:::	-	-	4 months ago

row(s) 1 - 22 of 22

2. Create a new List Entry

The screenshot displays the 'Create / Edit List Entry' dialog in the Oracle APEX Application Builder. The breadcrumb trail at the top indicates the path: Home > Application Builder > Application 103 > Shared Components > Lists > List Entries > Create / Edit List Entry. The dialog title is 'List Entry: 8 of 22 Name: Tournament Rules'. It features buttons for 'Cancel', 'Delete', 'Apply Changes', and navigation arrows. Below the title bar are tabs for 'Show All', 'Entry', 'Target', 'Current List Entry', 'Conditions', 'Authorization', 'Configuration', 'Click Counting', and 'User Defined Attributes'. The 'Entry' tab is active, showing fields for 'List TDG List', 'Parent List Entry' (set to 'Editor'), 'Sequence' (210), 'Image', and 'Attributes'. A 'List Entry Label' section contains the text 'Tournament Rules'. The 'Target' tab is also visible, showing 'Target type' set to 'Page in this Application', 'Page' set to 4, and options for 'Request', 'Clear Cache', 'Set these items', 'With these values', and 'URL Target'. The 'Current List Entry' tab is at the bottom, showing 'List Entry Current for Pages Type' set to 'Colon Delimited Page List' and 'List Entry Current for Condition'. On the right side, there is a 'Tasks' section with a link to 'Change Parent List' and a 'List Entries' list containing various entries like '10-Admin', '3..Countries', '10...Tournament Types', etc.

ORACLE Application Express

Home > Application Builder > Application 2214 > Shared Components

Application

- Definition
- Comments

Logic

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

Navigation

- Navigation Bar Entries

User Interface

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

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

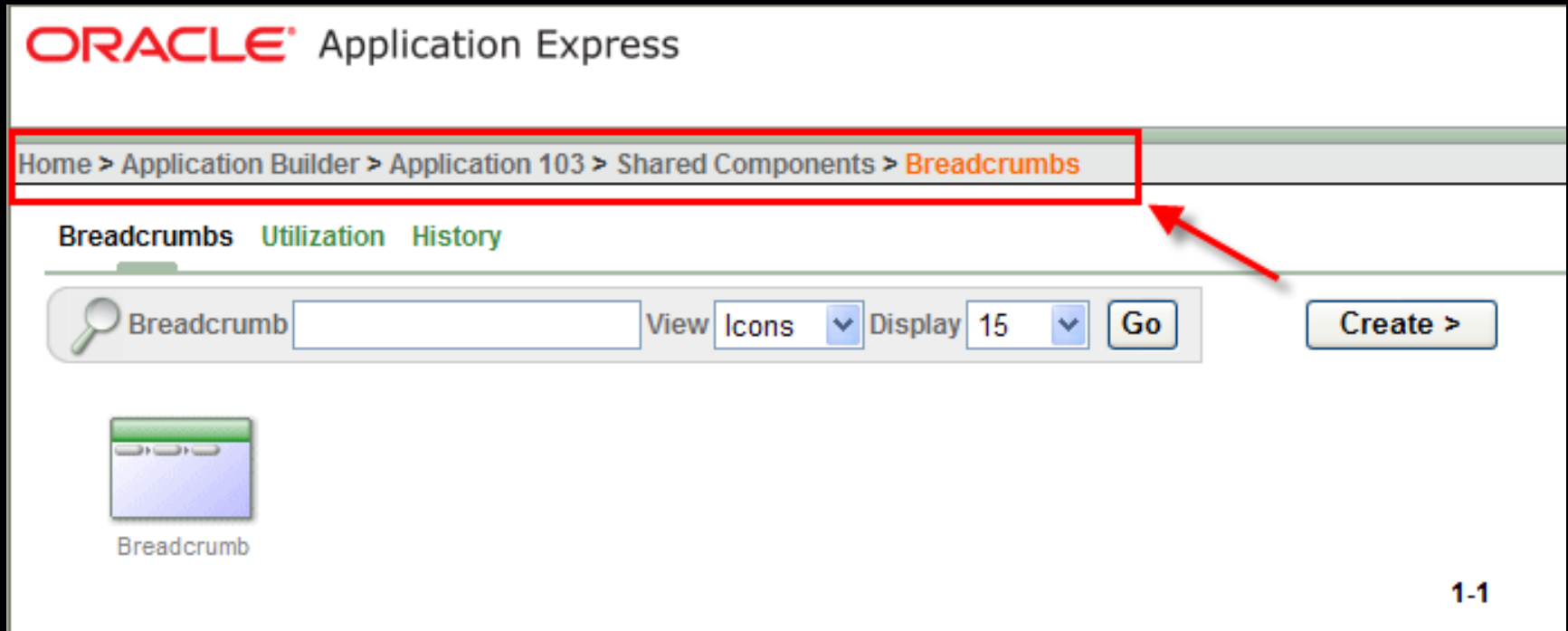
Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

How can I add navigation (breadcrumbs) to my application?

How can I create a wizard like application?

- Hierarchical navigation to any number of levels
- Breadcrumb entries are associated with pages



1. Select the breadcrumb entry

Home > Application Builder > Application 103 > Shared Components > Breadcrumbs > **Breadcrumb Entries**

Hierarchical View **Tabular View**

 Breadcrumb Name or Target Page

Breadcrumb Entries

Name	Sequence	Page
TDG_COUNTRY	10	2
TDG_TOURNAMENT_TYPE	20	3

row(s) 1 - 2 of 2

2. Edit/Create a new breadcrumb entry

Home > Application Builder > Application 103 > Shared Components > Breadcrumbs > Breadcrumb Entries > Create/Edit Breadcrumb Entry

Breadcrumb Entry: TDG_COUNTRY [Cancel] [Delete] [Apply Changes]

Show All | Breadcrumb | Entry | Target | Conditions | Authorization | Configuration

Breadcrumb

Breadcrumb: Breadcrumb
* Page: 2
[1]

Entry

Sequence: 10
Parent Entry: - Select Parent -
* Short Name: TDG_COUNTRY
Long Name:

Target

Target is a: Page in this Application
Page: 2 (reset pagination for this page)
Request:
Clear Cache: (comma separated page numbers)
Set these items: (comma separated name list)
With these values: (comma separated value list)
URL Target:

The screenshot shows the Oracle Application Express interface. The breadcrumb trail is 'Home > Application Builder > Application 2214 > Shared Components'. The left sidebar has sections for 'Application' (Definition, Comments), 'Logic' (Application Items, Application Processes, Application Computations, Web Service References, Build Options), and 'Security' (Authentication Schemes, Authorization Schemes). The main content area is titled 'User Interface' and contains a list of items: Themes, Templates, User Interface Defaults, Lists of Values, Shortcuts, Report Queries, Report Layouts, Cascading Style Sheets, Images, and Static Files. A red rectangular box highlights the 'User Interface Defaults' icon, which is a small icon representing a navigation tree. A yellow speech bubble points to this icon with the text 'How can I add navigation (tree) to my application?'. Another yellow speech bubble points to the main content area with the text 'How can I add a hierarchy between values?'. On the right side, there are sections for 'Shared Components' and 'Tasks' (View Application Reports, Export Application Components, Manage Supporting Objects).

ORACLE® Application Express

Home > Application Builder > Application 2214 > Shared Components

Application

- Definition
- Comments

Logic

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

Security

- Authentication Schemes
- Authorization Schemes

User Interface

- Themes
- Templates
- User Interface Defaults
- Lists of Values
- Shortcuts
- Report Queries
- Report Layouts
- Cascading Style Sheets
- Images
- Static Files

Shared Components

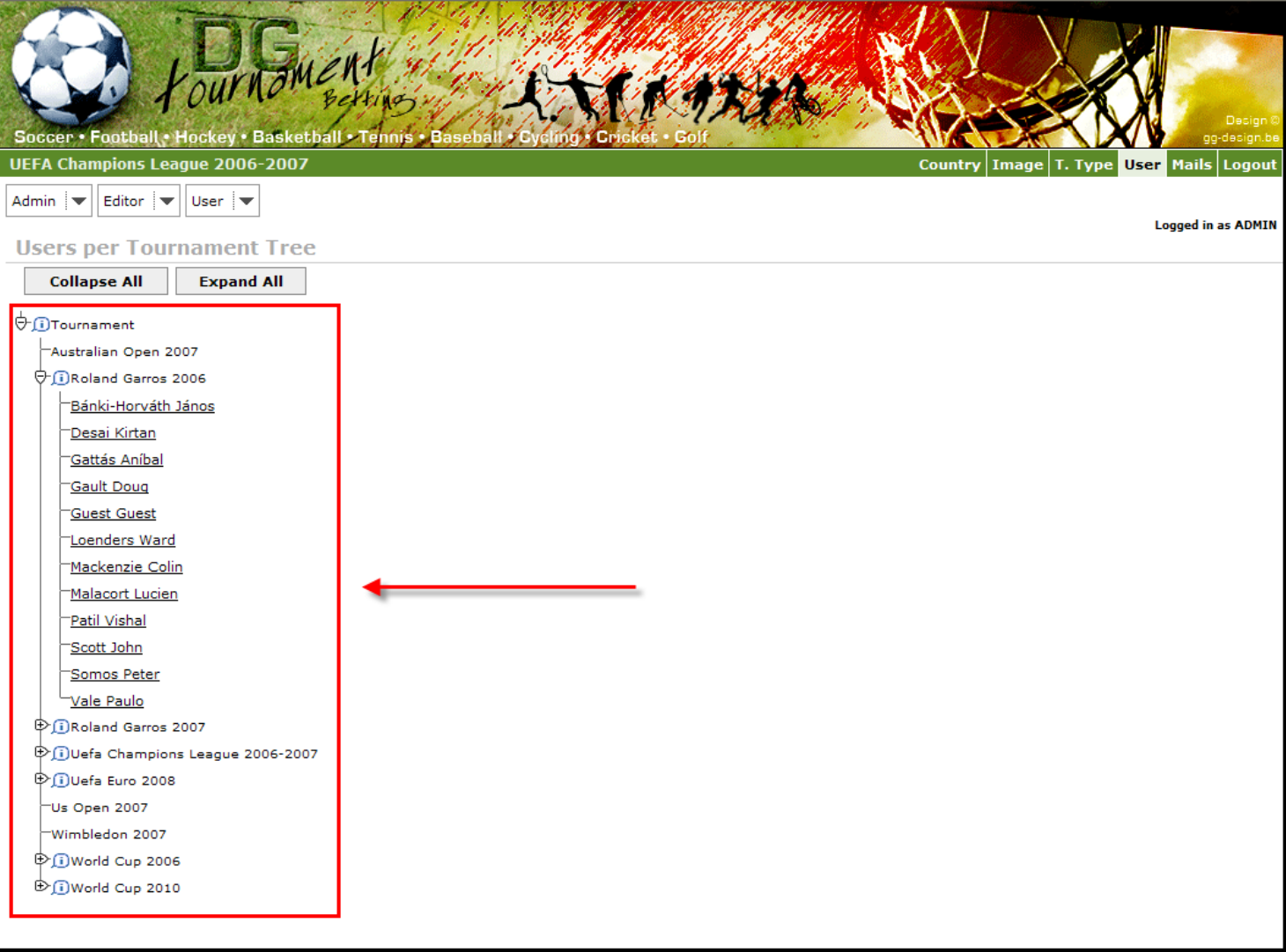
Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

How can I add a hierarchy between values?

How can I add navigation (tree) to my application?

- Hierarchical navigation mechanism
(multiple level data)



The screenshot displays the DGT (Design Tree) interface for the UEFA Champions League 2006-2007. The interface includes a header with a soccer ball logo, the text "DGT Tournament Betting", and a list of sports: Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf. Below the header is a navigation bar with links for Country, Image, T. Type, User, Mails, and Logout. The main content area shows the "Users per Tournament Tree" with buttons for "Collapse All" and "Expand All". The tree structure is as follows:

- Tournament
 - Australian Open 2007
 - Roland Garros 2006
 - Bánki-Horváth János
 - Desai Kirtan
 - Gattás Anibal
 - Gault Doug
 - Guest Guest
 - Loenders Ward
 - Mackenzie Colin
 - Malacort Lucien
 - Patil Vishal
 - Scott John
 - Somos Peter
 - Vale Paulo
 - Roland Garros 2007
 - Uefa Champions League 2006-2007
 - Uefa Euro 2008
 - Us Open 2007
 - Wimbledon 2007
 - World Cup 2006
 - World Cup 2010

A red box highlights the "Tournament" node, and a red arrow points to the right, indicating the next step in the navigation process.

Created by Dimitri Gielis © 2006 0.13 Design by G&G Design

1. An example of a Tree based on a Select

Home > Application Builder > Application 103 > Shared Components > Trees > [Edit Tree](#)

Tree

Show All Name Query Before and After Static Node Templates Dynamic Templates Node Text Template Link Templates

Name

Application: 103 TDG_2006

* Tree Name

* Tree Type

* Max Levels

* Application Item

Query

* Tree Query

```
SELECT ut.USER_ID AS id,
       t.TOURNAMENT_ID AS pid,
       INITCAP(u.LAST_NAME) || ' ' || INITCAP(u.FIRST_NAME) AS name,
       'f?p=%APP_ID.:10:%SESSION.:NO::P10_USER_ID:' || u.USER_ID AS link,
       null AS a1,
       null AS a2
FROM TDG_USER u, TDG_USER_TOURNAMENT_GROUP ut, TDG_TOURNAMENT t
WHERE u.user_id = ut.user_id
      AND ut.tournament_id = t.tournament_id
UNION
SELECT "TOURNAMENT_ID" AS id,
       0 AS pid,
       INITCAP("TOURNAMENT_NAME") AS name,
       null AS link,
       null AS a1,
       null AS a2
FROM TDG_TOURNAMENT
UNION
SELECT 0 AS id,
       0 AS pid,
```

Syntax: select id, pid, name, link, a1, a2 from ... where ... order by ...

1. All column names must use aliases shown above (e.g. id, pid, name, link, a1, a2)
2. You must select at least 4 columns (e.g. id, pid, name, link)
3. All PID (parent ID) referenced must also be ID's
4. Ordering controls only the items of a single node

Example:
select empno id, mgr pid, ename name, null link
from emp
order by ename

The screenshot shows the Oracle Application Express interface. The top navigation bar includes links for Home, Application Builder, SQL Workshop, and Utilities. The main content area is divided into several panes. On the left, there are sections for Application, Logic, Security, and Globalization. The central pane is titled 'Navigation' and contains a list of items: Themes, Templates, User Interface Defaults, Lists of Values, and Shortcuts. A yellow callout bubble with the text 'How can I add navigation to my application?' points to the 'Navigation' pane. A red rectangle highlights the 'Navigation' pane. On the right, there are sections for Shared Components and Tasks.

ORACLE® Application Express

Home > Application Builder > Application 2214 > Shared Components

Page 1

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

- Translate Application
- Text Messages
- Edit Attributes

Navigation

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

User Interface

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

Reports

- Report Queries
- Report Layouts

Files

- Cascading Style Sheets
- Images
- Static Files

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

- Hypertext link based navigation
- Typical use for Login / Logout / Help

ORACLE Application Express

Home > Application Builder > Application 103 > Shared Components > **Navigation Bar Entries**

Page 23

Navigation Bar Entries Grid Edit Subscription History

Navigation Bar Entry View Icons Display 15 Go

Copy Create >

Logout

Navigation Bar Entries

Navigation Bar Entries provide hypertext link based navigation. Placement is determined by page templates.

1-1

1. Create/Edit a Navigation Bar Entry

The screenshot shows the 'Edit Navigation Bar Entry' form in Oracle APEX. The breadcrumb trail is: Home > Application Builder > Application 103 > Shared Components > Navigation Bar Entries > Edit Navigation Bar Entry. The form has tabs for 'Sequence', 'Subscription', 'Image Attributes', 'Target', 'Conditions', 'Authorization', 'Configuration', and 'Comments'. The 'Sequence' tab is active, showing fields for 'Sequence' (200), 'Begins On New Line' (No), and 'Cell Column Span' (1). The 'Subscription' tab shows a 'Reference Master Navigation Bar From' field and a 'Refresh' checkbox. The 'Image Attributes' tab shows fields for 'Image', 'Icon Subtext' (Logout), 'Icon Image Alt' (Logout), 'Image Height' (32), and 'Width' (32). The 'Target' tab shows 'Target type' (URL), 'Page' (1), 'Request', 'Clear Cache', 'Set these items', 'With these values', and 'URL Target' (f\$LOGOUT_URL.).

Navigation Bar Entry: 1 of 1 Cancel Delete Apply Changes

Show All | Sequence | Subscription | Image Attributes | Target | Conditions | Authorization | Configuration | Comments

Sequence

* Sequence 200

Begins On New Line No

Cell Column Span 1

Subscription

Reference Master Navigation Bar From ☒ Refresh

This is the "master" copy of this Navigation Bar.
No Navigation Bars subscribe to this Navigation Bar.

Image Attributes

Image

Icon Subtext Logout

Icon Image Alt Logout

Image Height 32

Width 32

Target

Target type URL

* Page (☐ reset pagination for this page) (☐ Printer Friendly)

Request

Clear Cache (comma separated page numbers)

Set these items (comma separated name list)

With these values (comma separated value list)

* URL Target

f\$LOGOUT_URL.

The screenshot shows the Oracle Application Express interface. The left-hand navigation pane is expanded to the 'Security' section, which contains links for 'Authentication Schemes', 'Authorization Schemes', 'Session State Protection', and 'Edit Security Attributes'. A red rectangular box is drawn around the 'Authentication Schemes' link. The main content area shows the 'User Interface' section with links for 'Themes', 'Templates', 'User Interface Defaults', 'Lists of Values', and 'Shortcuts'. The right-hand pane shows 'Shared Components' and 'Tasks'.

ORACLE® Application Express

Home > Application Builder > Application 2214 > Shared Components

Page 1

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

- Translate Application
- Text Messages
- Edit Attributes

Navigation

User Interface

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

Rep

Static Files

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

How can I add a logon page to my application?

How can I give people access to my application?

- Get access to the application
- Identify users
- Deferent Authentication methods
 - Open Door Credentials
 - Application Express Account Credentials
 - Database Account Credentials
 - LDAP Directory Credentials
 - Single Sign On (SSO)
 - Custom made function
 - ...

DG Tournament Betting

Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf

Design © gg-design.be

[Home](#) [Results](#) [Bet Rank](#) [Shoutbox](#) [Login](#)

Login to DG Tournament

User Name

Password

No account yet? Register for free [here](#)
Forgot login info? Click [here](#)
Want to try? Login with: guest/apexisit

Created by Dimitri Gielis © 2006

0.07

Design by G&G Design

1. Authentication on a page

Home > Application Builder > Application 103 > Page 9 > [Edit Page](#)

Page Attributes: 10 of 33

Show All Name Display Attributes Header and Footer HTML Header On Load **Security** Duplicate Configuration Error Help Comments

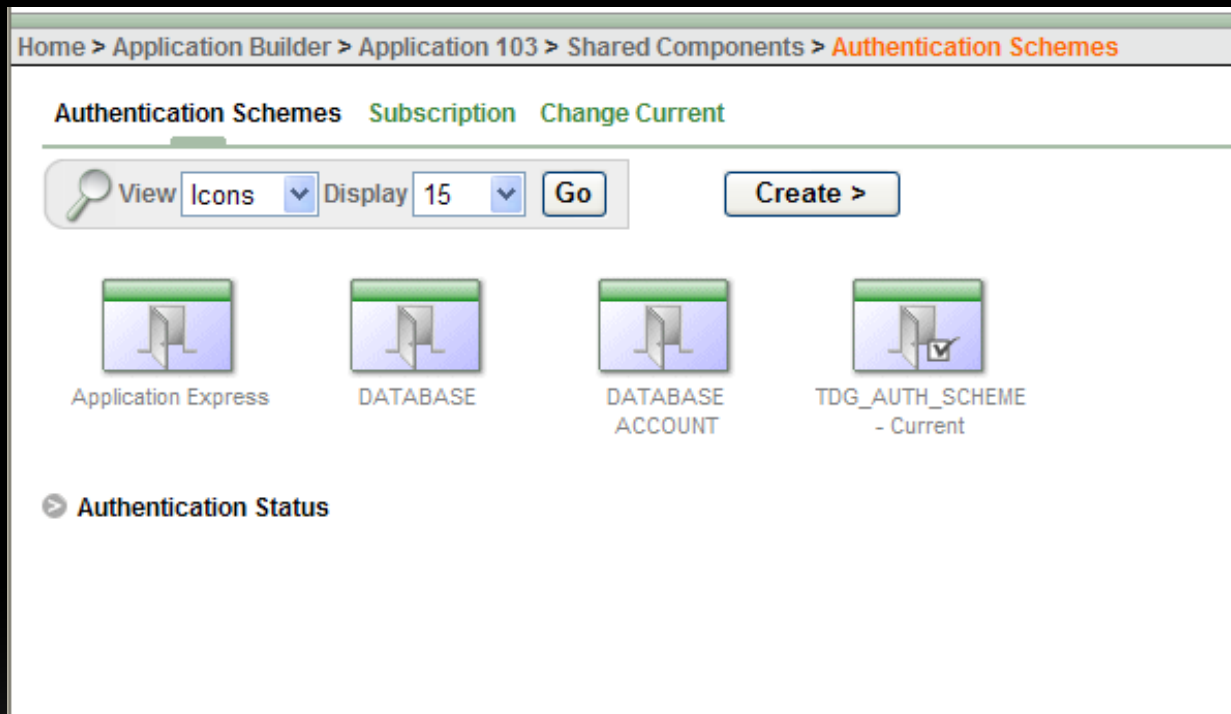
Security

Authorization Scheme TDG_Admin ▼

Authentication Page Requires Authentication ▼



2. Authentication Schemes in DG Tournament (the one with the flag is used)



3. Create a new scheme based on a pre-configured scheme from the gallery

Home > Application Builder > Application 208 > Shared Components > Authentication Schemes > Create Authentication Scheme

Create Authentication Scheme

Cancel < Previous Next >

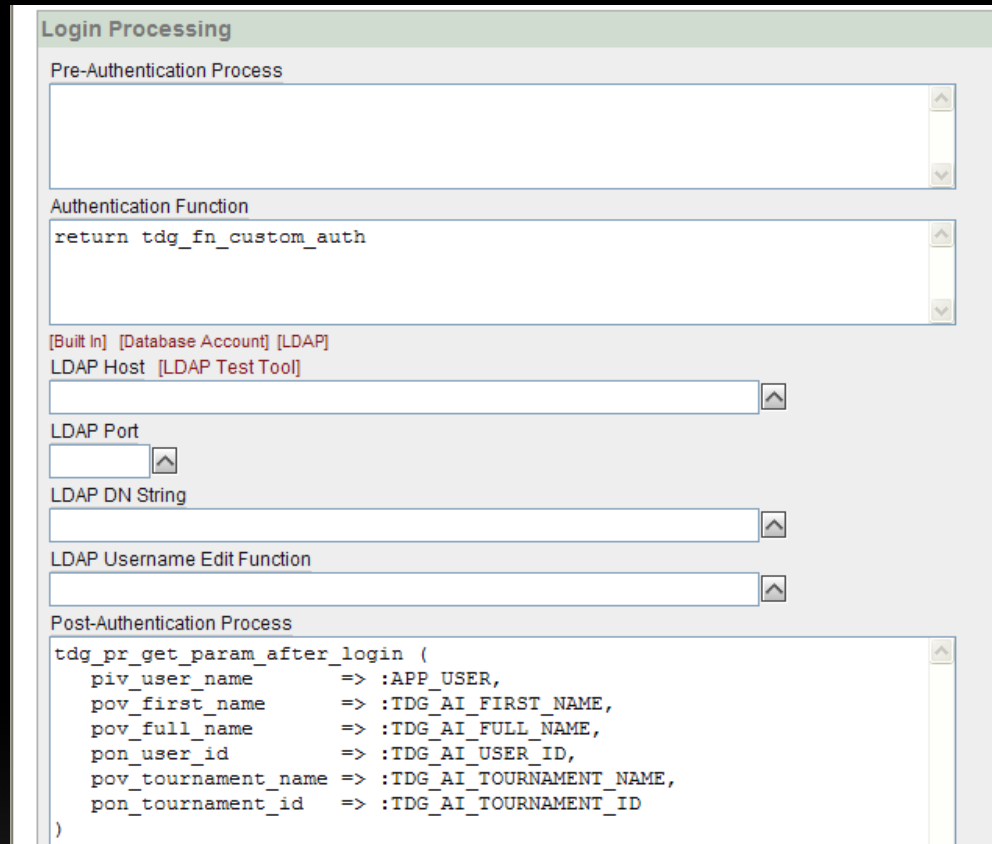
Select a preconfigured authentication scheme. Making a selection here creates an authentication scheme that follows a standard behavior for authentication and session management. Even though you are choosing a preconfigured authentication scheme, you can change any aspect of it later.

Gallery:

- ☒ Show Built-In Login Page and Use Open Door Credentials
- ☐ Show Login Page and Use Application Express Account Credentials
- ☐ Show Login Page and Use Database Account Credentials
- ☐ Show Login Page and Use LDAP Directory Credentials
- ☐ No Authentication (using DAD)
- ☐ Oracle Application Server Single Sign-On (Application Express Engine as Partner App)
- ☐ Oracle Application Server Single Sign-On (My Application as Partner App)

> Information

4. Auth. based on a custom function → returns a boolean



Login Processing

Pre-Authentication Process

Authentication Function

```
return tdg_fn_custom_auth;
```

[Built In] [Database Account] [LDAP]

LDAP Host [LDAP Test Tool]

LDAP Port

LDAP DN String

LDAP Username Edit Function

Post-Authentication Process

```
tdg_pr_get_param_after_login (  
  piv_user_name      => :APP_USER,  
  pov_first_name     => :TDG_AI_FIRST_NAME,  
  pov_full_name      => :TDG_AI_FULL_NAME,  
  pon_user_id        => :TDG_AI_USER_ID,  
  pov_tournament_name => :TDG_AI_TOURNAMENT_NAME,  
  pon_tournament_id   => :TDG_AI_TOURNAMENT_ID  
)
```

and procedure to retrieve user information

The screenshot shows the Oracle Application Express interface. The left sidebar contains the following sections:

- 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**: Translate Application, Text Messages, Edit Attributes

The main content area has a 'Navigation' section with links: Tabs, Lists, Breadcrumbs, User Interface Defaults, Lists of Values, and Shortcuts. A red rectangle highlights the 'Shortcuts' link. Below this is a 'Reports' section with links: Report Queries and Report Layouts.

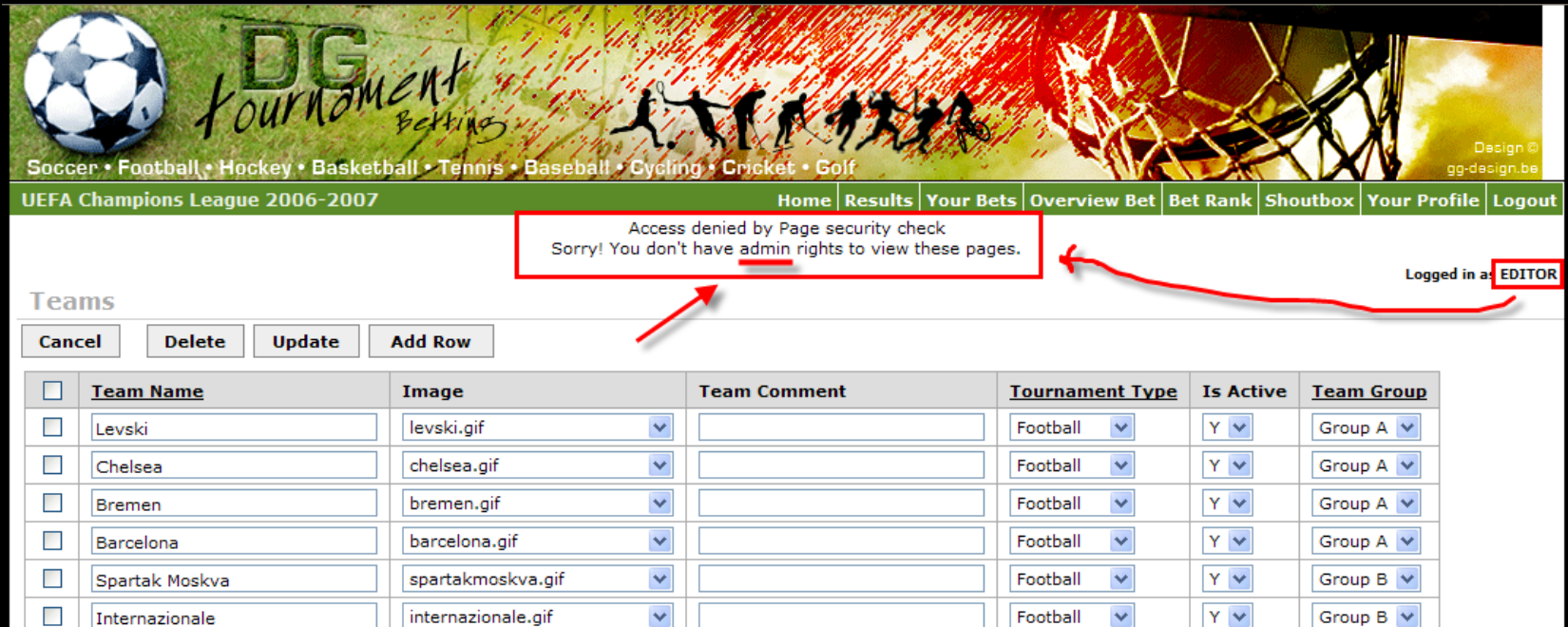
Two yellow callout boxes are present:

- A box pointing to the 'Shortcuts' link with the text: "How can I give certain people access to certain areas of my site?"
- A box pointing to the 'Reports' section with the text: "How can I create roles in APEX like I can in the database?"

On the right side, there are two panels:

- Shared Components**: You can use shared components on any page in an application. This page provides a list of available shared components.
- Tasks**:
 - View Application Reports
 - Export Application Components
 - Manage Supporting Objects

- Authorization Schemes are pass/fail checks
- Types: Exists, Not Exists SQL Queries, and PL/SQL Function Returning Boolean
- Authorization Scheme is cached on a per-session or per-page view basis
- See it like “Roles” and more



Design © gg-design.be

UEFA Champions League 2006-2007

Home Results Your Bets Overview Bet Bet Rank Shoutbox Your Profile Logout

Access denied by Page security check
Sorry! You don't have admin rights to view these pages.

Logged in as **EDITOR**

Teams

Cancel Delete Update Add Row

☐	Team Name	Image	Team Comment	Tournament Type	Is Active	Team Group
☐	Levski	levski.gif		Football	Y	Group A
☐	Chelsea	chelsea.gif		Football	Y	Group A
☐	Bremen	bremen.gif		Football	Y	Group A
☐	Barcelona	barcelona.gif		Football	Y	Group A
☐	Spartak Moskva	spartakmoskva.gif		Football	Y	Group B
☐	Internazionale	internazionale.gif		Football	Y	Group B

1. Authorization on a page

Home > Application Builder > Application 103 > Page 9 > Edit Page

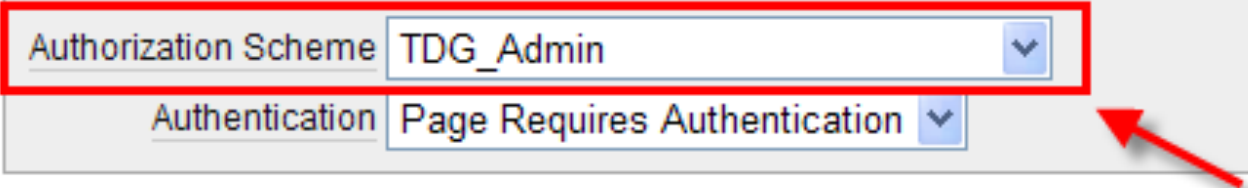
Page Attributes: 10 of 33

Show All Name Display Attributes Header and Footer HTML Header On Load **Security**

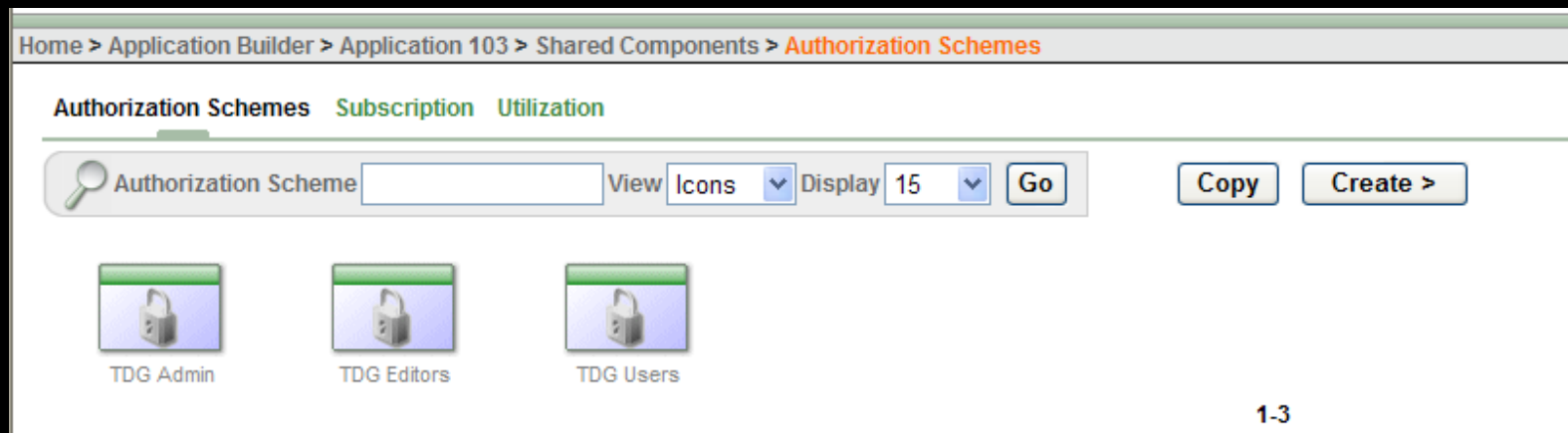
Security

Authorization Scheme TDG_Admin ▼

Authentication Page Requires Authentication ▼



2. Authorization Schemes in DG Tournament



3. Authorization based on a PL/SQL Function Returning a Boolean (True/False)

Home > Application Builder > Application 103 > Shared Components > Authorization Schemes > [Edit Authorization Scheme](#)

Authorization Scheme

Show All | Name | Subscription | Authorization Scheme | Evaluation Point | Comments

Name

Application: 103 TDG_2006

Name

Subscription

Reference Master Authorization Scheme From

This is the "master" copy of this authorization scheme.

No authorization schemes subscribe to this authorization scheme.

Authorization Scheme

Scheme Type

Expression 1

```
return tdg_fn_user_is_editor(:APP_USER);
```

Expression 2

Identify error message displayed when scheme violated

Sorry! You don't have editor rights to view these pages.

Evaluation Point

Validate authorization scheme

☒ Once per page view

☐ Once per session

ORACLE® Application Express

Home > Application Builder > Application 2214 > Shared Components

Page 1

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

- Translate Application
- Text Messages
- Edit Attributes

Navigation

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

User Interface

- Themes
- Templates

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

Files

- Cascading Style Sheets
- Images
- Static Files

Where can I change the login and home URL?

Where can I specify which Oracle schema he should look at?

Define

- Home Link
- Login URL
- Parsing Scheme
- Overview of other security settings
(Session State Protection, Authorization and Authentication Scheme, VPD)

Home > Application Builder > Application 103 > Application Attributes > **Edit Security Attributes**

Definition **Security** Globalization

Cancel Apply Changes

Show All Authentication Authorization Database Schema Session State Protection Virtual Private Database

Authentication

Authentication is the process of establishing each user's identity before they can access your application. You may define multiple authentication schemes for your application, however only one scheme can be current. The authentication logic of the current scheme is used when your application is run.

Application: **103**

* Home Link:

Login URL:

Public User:

Authentication Scheme:

Define Authentication Schemes

Authorization

Application authorization schemes control access to all pages within an application. Unauthorized access to the application, regardless of which page is requested, will cause an error page to be displayed.

Authorization Scheme:

Define Authorization Schemes

Database Schema

All SQL and PL/SQL commands issued by this application will be performed with the rights and privileges of the database schema defined below. The domain of available schemas is defined per workspace.

* Parsing Schema:

Session State Protection

Enabling Session State Protection can prevent hackers from tampering with URLs within your application. URL tampering can adversely affect program logic, session state contents, and information privacy.

To enable Session State Protection for your application, select **Enabled** from the Session State Protection list. Enabling Session State Protection turns on session state protection controls defined at the page and item level. To configure Session State Protection, click **Manage Session State Protection**.

Session State Protection:

Manage Session State Protection

Virtual Private Database (VPD)

Virtual Private Database PL/SQL call to set security context

ORACLE Application Express

Home > Application Builder > Application 2214 > 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

- Translate Application
- Text Messages
- Edit Attributes

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

User Interface

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

Files

- Cascading Style Sheets
- Images
- Static Files

How can I change the layout of my site?

I don't want to have a standard pre-defined theme, what can I do?

- Switch lay-out easier
- Multiple Templates → 1 Theme

A templates for Pages, Regions, Reports, ...



DG Tournament
Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf

Design © gg-design.be

Home Results Bet Rank Shoutbox Login

DG Tournament

This is the follow-up application of the famous [WC 2006 application](#).

In May 2006 I created the World Cup 2006 application. The goal was to make an application entirely in **APEX** (Oracle Application Express). In the beginning the application only gave an overview of the scores and the ranking of the teams. Soon the application got interactive: it allowed betting on the games and having discussions through the shoutbox. An other feature was the utilization of Webservices to show some more info about the World Cup. More than 400 people played with us. At "peak"-moments we had over 10.000 hits an hour (after the mention on [Tom Kyte's Blog](#))!

I got a lot of positive reactions, even the APEX development team of Oracle contacted me. It kept me motivated to make this follow-up application...

With this version of the application I try to open it up for other, even non-football, tournaments. My intention is to include as many (technical) features of APEX 2.2 into the application, to continuously improve it and of course, as I like the interactivity, I count on you to shout and play with this application and make it rock!

You may put your suggestions and remarks in the ShoutBox or on my [Blog](#).

I would like to thank John Scott ([shellprompt.net](#)) for the hosting and Kristel Geukens ([gg-design.be](#)) for the graphics and lay-out.

Enjoy this application,
[Dimitri Gielis](#)

My Sponsors

HOSTED BY
SHELLPROMPT

DESIGN BY
G&G DESIGN

CREATED BY
DIMITRI GIELIS

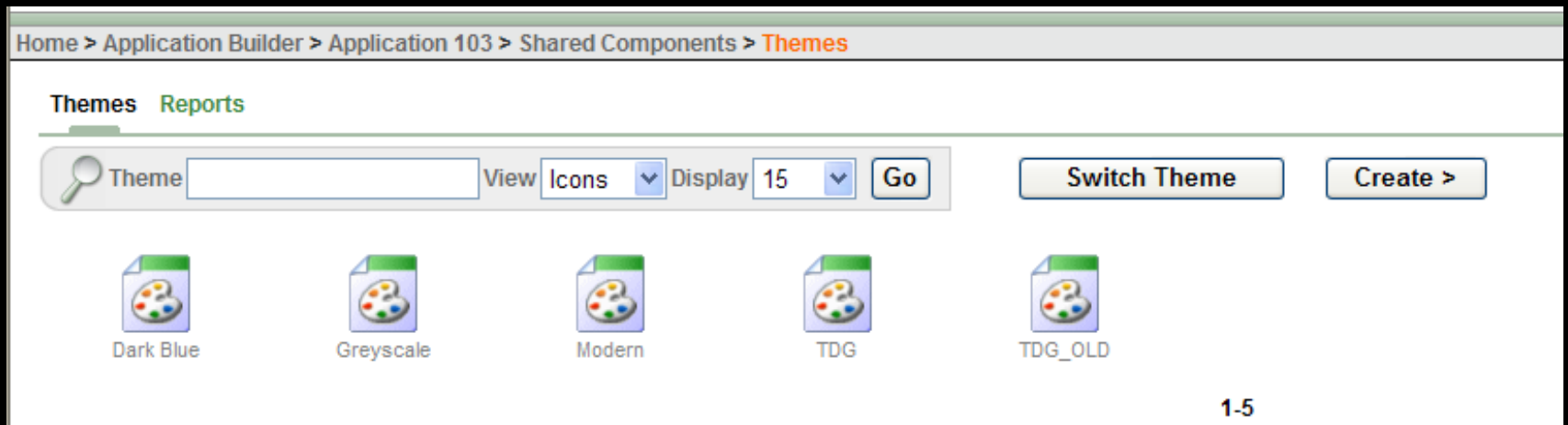
Created by Dimitri Gielis © 2006

0.10

Design by G&G Design

Games due to play		Games in progress		Games played	
	Roland Garros 2007		UEFA Champions League 2006-2007		Roland Garros 2006
	UEFA Euro 2008				World Cup 2006
	World Cup 2010				

1. The Theme page



1. The available Templates

Home > Application Builder > Application 103 > Shared Components > **Templates**

Templates Utilization Subscription History

Theme 101 - TDG Show - All - View All Templates Go Create >

Type	Name	References	Updated	Updated By	Subscribed	Default	Theme	Preview	Copy
Breadcrumb	Breadcrumb Menu	3	-	-	-	✓	101	-	
	Hierarchical Menu	0	-	-	-	-	101	-	
Button	Button	76	-	-	-	✓	101	-	
	Button, Alternative 1	0	-	-	-	-	101	-	
	Button, Alternative 2	0	-	-	-	-	101	-	
	Button, Alternative 3	1	-	-	-	-	101	-	
Calendar	Calendar	0	-	-	-	-	101	-	
	Calendar, Alternative 1	0	-	-	-	-	101	-	
	Small Calendar	0	-	-	-	-	101	-	
Label	No Label	22	-	-	-	-	101	-	
	Optional Label	33	-	-	-	-	101	-	
	Optional Label with Help	62	-	-	-	✓	101	-	
	Required Label	7	-	-	-	-	101	-	
	Required Label with Help	21	-	-	-	-	101	-	
List	Button List	0	-	-	-	-	101	-	
	DHTML List (Image) with Sublist	0	-	-	-	-	101	-	
	DHTML Menu with Sublist	1	5 months ago	admin	-	-	101	-	
	DHTML Tree	0	-	-	-	-	101	-	
	Horizontal Images with Label List	0	-	-	-	-	101	-	
	Horizontal Links List	0	-	-	-	-	101	-	
	Tabbed Navigation List	0	-	-	-	-	101	-	
	Tree List	0	-	-	-	-	101	-	

2. An example of a Template: Html linked with Stylesheets and APEX Tags (the # #)

Column Templates

Column Template 1

```
<td #ALIGNMENT# headers="#COLUMN_HEADER#" class="t17data" style="background:#FBDFDF; border-color:#E50713;">
<div class="t17datar">#COLUMN_VALUE#</div>
</td>
```

Column Template 1 Condition

- Select Condition -

Column Template 1 Expression

The screenshot shows the Oracle Application Express interface. The left sidebar contains navigation links for Application, Logic, Security, and Globalization. The main area displays a tree view of the application structure, with 'Lists of Values' highlighted under the 'Navigation' section. A red rectangle is drawn around the 'Lists of Values' link. Three yellow callout boxes contain the following text:

- How can I create a pop-up list?
- Do I always need to type that static/dynamic LOV?
- How can I create a drop-down list?

- Improve productivity / Reusability
- Better performance

The screenshot shows a web application for "DG Tournament Betting". The header includes a navigation bar with links: Home, Results, Your Bets, Overview Bet, Bet Rank, Shoutbox, Your Profile, and Logout. The main content area is titled "View a person bets" and features two dropdown menus: "Select User" (currently showing "Dimitri Gielis") and "Select Round" (currently showing "First Round"). Below these is a "Bet Overview" section containing a table of matches. Two red arrows point from the "Select User" and "Select Round" dropdowns to the "Place" and "Group" columns of the table, respectively, illustrating how these LOVs filter the data.

Design © gg-design.be

Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf

UEFA Champions League 2006-2007

Logged in as DGIELIS

Select User Dimitri Gielis

Select Round First Round

Bet Overview

Match Date ▲			Place	Group	Score	Points
12-SEP-2006 20:45	Barcelona		Levski	Group A	5-0	0
12-SEP-2006 20:45	Chelsea		Bremen	Group A	2-0	0
12-SEP-2006 20:45	Sporting		Internazionale	Group B	1-0	0
12-SEP-2006 20:45	Bayern		Spartak Moskva	Group B	4-0	0
12-SEP-2006 20:45	Olympiacos		Valencia	Group D	2-4	0
12-SEP-2006 20:45	Roma		Shakhtar	Group D	4-0	0
12-SEP-2006 20:45	Galatasaray		Bordeaux	Group C	0-0	0
12-SEP-2006 20:45	PSV		Liverpool	Group C	0-0	0
13-SEP-2006 20:45	Dynamo Kyiv		Steaua	Group E	1-4	0

1. A LOV based on a SELECT-statement

The screenshot shows the 'Edit List of Values' interface in Oracle APEX. The breadcrumb trail at the top reads: Home > Application Builder > Application 103 > Shared Components > Lists of Values > Edit List of Values. The interface has a header bar with the text 'List of Values Name: TDG_LOV_TOURNAMENT' and three buttons: 'Cancel', 'Delete', and 'Apply Changes'. Below the header, there are three tabs: 'Show All', 'Name', 'Subscription', and 'Source'. The 'Name' tab is selected. The 'Name' section contains a label '* List of Values Name' followed by a text input field containing 'TDG_LOV_TOURNAMENT'. The 'Subscription' section has a label 'Subscription' and a 'Reference Master List of Values From' dropdown menu. Below this, there is a 'Refresh' checkbox which is checked. The 'Source' section is titled 'Source: Lists of Values Query' and contains a text area with the following SQL query:

```
select tournament_name d, tournament_id r
from   tdg_tournament
where  is_active = 1
order by 1
```

The screenshot displays the Oracle Application Express interface. The top navigation bar includes links for Home, Application Builder, SQL Workshop, and Utilities. The breadcrumb trail shows the path: Home > Application Builder > Application 2214 > Shared Components. The left sidebar contains sections for Application, Logic, Security, and Globalization. The main content area is divided into Navigation, User Interface, and Files. The 'Files' section is highlighted with a red rectangular box and contains links for Cascading Style Sheets, Images, and Static Files. Two yellow callout boxes are overlaid on the interface:

- A callout box on the left asks: "How can I adapt my layout?"
- A callout box on the right asks: "How can I add my own home-style/css?"

Additional interface details include a 'Shared Components' panel on the right with a description and a 'Tasks' panel with links like 'View Application Reports' and 'Export Application Components'. The 'Files' section is currently empty, showing only the folder icons and their corresponding links.

- Separate lay-out from logic
- Work together with a Graphic Designer

Tip

- To increase performance, put the css on your file system (caching)






Soccer • Football • Hockey • Basketball • Tennis • Baseball • Cycling • Cricket • Golf

Design © gg-design.be

UEFA Champions League 2006-2007
 Home Results Bet Rank Shoutbox Login

Logged in as nobody

Your Current Rank

Ah! I don't know your rank, because you're not logged in or maybe because you're not yet a user? When you login you can bet on the games...

Registration is free, you can do it [here](#).

Select Option

Give part of name or location

What can you win?

I'm still looking for some sponsors...

If you know somebody who's interested to sponsor, let me know by [mail](#).

Rank of betting

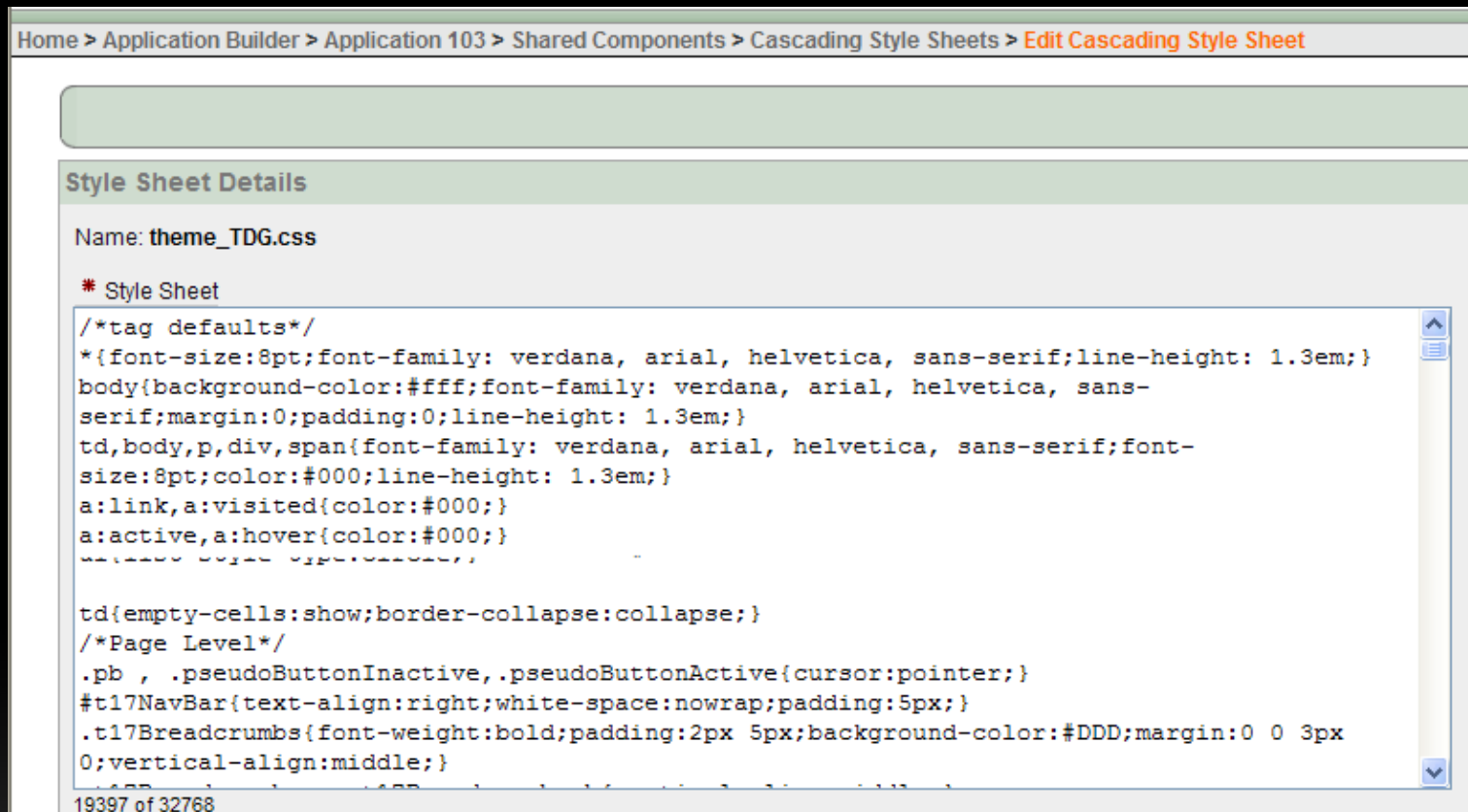
R		Full Name	Location	G P	G C	G W	S C	S W	Pts	Pts/G
1		Tunesi Davide	Locarno	72	37	35	7	65	51	0.71
2		Michal Kaminski	Warsaw	56	26	30	10	46	46	0.82
3		Sithembiso Simelane	RSA, Durban	64	32	32	7	57	46	0.72
		Jymaekers	BE	40	24	16	9	31	42	1.05
		edina	Bogotá, Colombia	48	29	19	6	42	41	0.85
		Bouchaud	FRANCE	56	29	27	3	53	35	0.63
		Colombani	Milano, Italy	72	22	50	6	66	34	0.47
		ott	United Kingdom	50	22	28	6	44	34	0.68
9		Dimitri Gielis	Leuven	64	23	41	5	59	33	0.52
10		Kristof Mangelschots	Hasselt, Belgium	48	19	29	6	42	31	0.65
11		Peter Somos	Budapest, Hungary	50	25	25	3	47	31	0.62
12		Sydney Damen	Beuningen, the Netherlands	50	24	26	3	47	30	0.60
12		Bernardo Campesino		50	24	26	3	47	30	0.60
14		Roel Hartman	Diepenveen	32	16	16	6	26	28	0.88

Create a new Cascading Style Sheet by

- Use notepad or css software to create a new stylesheet
- Upload your css file
- This css is available for the entire workspace

The screenshot shows the 'Create Cascading Style Sheet' dialog box within the Oracle APEX interface. The breadcrumb trail at the top reads: Home > Application Builder > Application 103 > Shared Components > Cascading Style Sheets > Create Cascading Style Sheet. The dialog box has a title bar 'Create Cascading Style Sheet' and two buttons: 'Cancel' and 'Upload'. Inside the dialog, there is a required field '* Stylesheet Filename' with a text input and a 'Browse...' button. Below this is a 'Notes' section with a large text area. At the bottom, there is a required field '* File Character Set' with a dropdown menu currently set to 'Unicode UTF-8'.

Edit your stylesheet in APEX



The screenshot shows the Oracle Application Express interface. The top navigation bar includes links for Home, Application Builder, SQL Workshop, and Utilities. The breadcrumb trail indicates the current location: Home > Application Builder > Application 2214 > Shared Components. The left sidebar contains sections for Application, Logic, and Security, each with a list of sub-items. The main content area is divided into four sections: Navigation, User Interface, Reports, and Files. The Files section is highlighted with a red box and contains two items: Images and Static Files. Two yellow callout boxes are present: one pointing to the 'Images' item with the text 'Where can I store my images?', and another pointing to the 'Static Files' item with the text 'Where can I store my files?'.

ORACLE Application Express

Home > Application Builder > Application 2214 > 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

Navigation

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

User Interface

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

Reports

- Report
- Report

Files

- Images
- Static Files

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- View Application Reports
- Export Application Components
- Manage Supporting Objects

Where can I store my images?

Where can I store my files?

- Store your files in the APEX repository

Tip

- To increase performance, put the images and static files on your file system (caching)
(see also John Scotts presentation at IOUG Collab 07)

1. Upload your Image
2. Upload your Static file (for ex. javascript file) and Specify the Characterset

The screenshot shows the 'Create Static File' dialog box within the Oracle APEX Application Builder. The breadcrumb trail at the top reads: Home > Application Builder > Application 103 > Shared Components > Static Files > Create Static File. The dialog has a title bar 'Create Static File' with 'Cancel' and 'Upload' buttons. It contains the following fields:

- Application:** A dropdown menu currently showing '- No Application Associated -'.
- * Filename:** A text input field with a 'Browse...' button to its right.
- Notes:** A large text area for additional information.
- * File Character Set:** A dropdown menu currently showing 'Unicode UTF-8'.

Reference the uploaded image or static file:

- #APP_IMAGES# (if app specified)
- #WORKSPACE_IMAGES#

Reference an Image or Static File on your file system:

- #IMAGE_PREFIX#

Subscribe to Shared Components!
(see it as Master – Child)

Tip

- To improve development time, have a cheat sheet
(see presentation of Karen Cannell at IOUG Collab 07)

- APEX Shared Components
on the hand of DG Tournament
 - Overview (but not indepth)
 - Why and how to use?
- Shared components can help you!
- GO! and start using “Shared Components” in your application today!



- Hand in Evaluation Form
- **Dimitri Gielis**, Session #467,
APEX by Example - Shared Components
- More information:
 - Whitepaper: 2007_467_gielis_ppr.zip
 - Email: dimitri.gielis@apex-evangelists.com
 - Blog: <http://dgielis.blogspot.com>
 - DG Tournament: <http://www.dgtournament.com>
 - AE: <http://www.apex-evangelists.com>