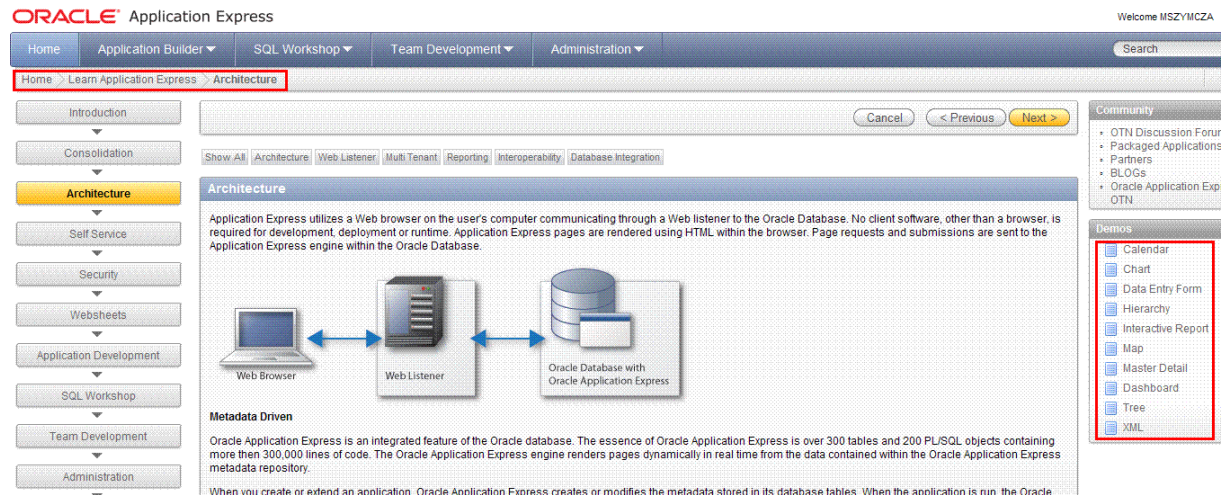


Application Express is a rapid Web application development tool that lets you share data and create applications. Using only a Web browser and limited programming experience, you can develop and deploy applications that are fast and secure.

How to start



Documentation

1/ Very good help in Application

2/ Oracle Database library:

http://www.oracle.com/pls/db112/portal.all_books

Application Express Administration Guide

Application Express Advanced Tutorials

Application Express API Reference

Application Express Application Builder User's Guide

Application Express Application Migration Guide

Application Express Installation Guide

Application Express Release Notes

Application Express SQL Workshop and Utilities Guide

...

General remarks for beginners

Do not afraid creating new objects.

New objects can be easily deleted.

Apex is easy and simple in use. No traps are waiting for you.

Item names should be unique in scope of whole application.

Refer to items in other blocks using ":" convention, for example:

Select * from X where Y = :page12_unbounded_item

Global attributes

See Application Items in APEX.mht

APEX URL

<http://www.examplesite.com/pls/apex/f?p=1:2:3:4:5:6:7:8:9>

- 1 - Application ID or alias
- 2 - Page ID or Alias
- 3 - Session &SESSION. :APP_SESSION
- 4 - Request (eg PRINT_REPORT=REPORT_1) &REQUEST. :REQUEST
- 5 - Debug (YES or NO) &DEBUG. :DEBUG
- 6 - Cache setting

APP - Clear cache for whole application
SESSION - Clear cache for current user session
RP - Reset pagination
x - Clear cache for page x
y - Clear cache for item y

- 7 - Comma separated list of page items
- 8 - Comma separated list of values
- 9 - Printer friendly mode (either YES or blank)

The comma separated parameter list can be used to set Interactive Report settings.

The Application ID, Page ID and session number can be derived from the substitution strings :APP_ID, :APP_PAGE_ID and :APP_SESSION if required.

Translating Messages Used Internally by Oracle Application Express

http://apex.oracle.com/i/doc/global_mess_reports.htm#CHDEDHBJ

Change default (first) page in APEX

<http://dgielis.blogspot.com/2007/05/change-default-first-page-in-apex.html>

Having seen this question often (yesterday again in the [OTN APEX forum](#)) and having had the same problem when I first started with APEX, I thought to blog about it.

When you make your first application in APEX you typically have as default page 1 or the login page (101). If you want to change your default (first) page you need to have a look at three different places. Let's say we want to have page 9 as default page:

1) Application Builder > Your Application > Page 101 > Processes (Page Processing) > Login
Change Process to:

```
<your_defa:&session. requires="" any="" public="" which="" may="" be="" like="" after=""  
back="" first="" requested="" deep="" link="" request="" application="" do="" not=""  
specify="" number="" you="" go="" if="" authentication="" is="" and="" then="" to=""  
specified="" process="" on="" login="" page="" in="" the=""></your_defa:&session.>
```

```

wwv_flow_custom_auth_std.login(
  P_UNAME      => :P101_USERNAME,
  P_PASSWORD   => :P101_PASSWORD,
  P_SESSION_ID => v( 'APP_SESSION' ),
  P_FLOW_PAGE  => :APP_ID | | ':9'
);

```

Whenever somebody logs in we want him to go to page 9.

2) Shared Components > Security > Authentication Schemes > Your Authentication

Change the Logout URL:

```

wwv_flow_custom_auth_std.logout?p_this_flow=&APP_ID.&p_next_flow_page_sess=&APP_ID.:9

```

If somebody logged out, we set the default page to 9 as that's our default page.

3) Shared Components > Security > Edit Security Attributes

Change the Home Link to: `f?p=&APP_ID.:9:&SESSION.<your_defa:&session. requires="" any="" public="" which="" may="" be="" like="" after="" back="" first="" requested="" deep="" link="" request="" application="" do="" not="" specify="" number="" you="" go="" if="" authentication="" is="" and="" then="" to="" specified="" process="" on="" login="" page="" in="" the=""></your_defa:&session.>`

If no page is specified this is the page to go to for ex. `f?p=100` means we're going to application 100 with as default page, the page specified in the Home Link. You can also reference this url by `#HOME_LINK#`.

How to reference variable in html

The screenshot shows the Oracle Application Express interface. The top navigation bar includes 'Home', 'Application Builder', 'SQL Workshop', 'Team Development', and 'Administration'. The breadcrumb trail is 'Home > Application Builder > Application 103 > Page 26 > Edit Region'. The 'Region Definition' section shows 'Region: 1 of 3 Name: Parameters'. The 'Identification' section shows 'Page: 26 Report - Accesibility', 'Title: Parameters', and 'Type: HTML Text'. The 'User Interface' section shows 'Template: Reports Region', 'Sequence: 10', 'Parent Region: - Select a Parent -', 'Display Point: Page Template Body (1. Items below region content)', and 'Column: 1'. The 'Source' section shows 'Region Source' and 'P26_DATE_FROM'.

Remember to include the dot eg “&P26_DATE_FROM.” (dot is mistaken on the screenshot)

Some problems ? Set page number in field “Clear Cache” (process property)

How to control region Position

The screenshot shows the Oracle Application Express interface. On the left, the 'Edit Region' page for 'Region: 3 of 6 Name: Ustawienia dat kalendarza' is displayed. The 'User Interface' tab is active, showing the 'Display Point' set to 'Page Template Region Position 6' and 'Column 2'. A red box highlights the 'Display Point' dropdown and the 'Column' dropdown. A red arrow points from the 'Column 2' dropdown to a preview window on the right. The preview window, titled 'Region Display Point - Windows Internet Explorer', shows a page layout with various regions. A red box highlights 'Page Template Body (1)' in the preview, with a red arrow pointing to it from the 'Column 2' dropdown. A red text box in the preview says: 'Just click desired position. Among position can be several regions, it is managed by column value'.

How to control width of the Region

Method 1

The screenshot shows the 'Edit Region' page for 'Region: 1 of 5 Name: Parameters'. The 'Attributes' tab is active. The 'Region Attributes' field is highlighted with a red box and contains the text 'style="width:600px"'. Other fields like 'Static ID', 'Region Display Selector', 'Region Image', 'Image tag attributes', and 'Region HTML table cell attributes' are also visible.

Why does it work ?

The screenshot shows the 'Edit Region Template' page for 'Region Template: 15 of 22 Name: Reports Region'. The 'Definition' tab is active. The 'Template' field contains HTML code. A red box highlights the code snippet: `<div class="rounded-corner-region" id="#REGION_STATIC_ID" #REGION_ATTRIBUTES#>`. The code defines the structure of the region template, including the header, body, and footer.

Moreover `style="width:250px; margin-left: auto; margin-right: 0px"` sets width of the region and aligns region to the right.

Method 2

type in the "Region Header" :

```
<table width="100%" cellpadding="0" cellspacing="0" border="1" align="left" bgcolor="#cfe0f1">
<tr height="330px" align="left" valign="top">
<td>
```

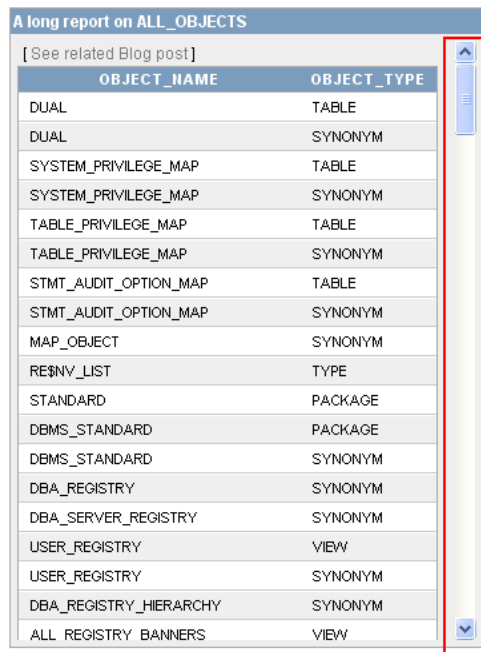
type in the Region Footer:

```
</td>
</tr>
</table>
```

Method 3

```
select "ID",
"CREATION_DATE",
"CREATED_BY",
'<td style="width:500px">' || notes || '</td>' "NOTES"
from "#OWNER#". "SRV_ACTIVITIES"
where REQUEST_ID = :P5_ID
order by id desc
```

Scrollbar in region



A long report on ALL_OBJECTS

[See related Blog post]

OBJECT_NAME	OBJECT_TYPE
DUAL	TABLE
DUAL	SYNONYM
SYSTEM_PRIVILEGE_MAP	TABLE
SYSTEM_PRIVILEGE_MAP	SYNONYM
TABLE_PRIVILEGE_MAP	TABLE
TABLE_PRIVILEGE_MAP	SYNONYM
STMT_AUDIT_OPTION_MAP	TABLE
STMT_AUDIT_OPTION_MAP	SYNONYM
MAP_OBJECT	SYNONYM
RE\$INV_LIST	TYPE
STANDARD	PACKAGE
DBMS_STANDARD	PACKAGE
DBMS_STANDARD	SYNONYM
DBA_REGISTRY	SYNONYM
DBA_SERVER_REGISTRY	SYNONYM
USER_REGISTRY	VIEW
USER_REGISTRY	SYNONYM
DBA_REGISTRY_HIERARCHY	SYNONYM
ALL_REGISTRY BANNERS	VIEW

This is achieved by setting the Region Header to:

```
<div style="overflow: auto; height: 450px;">
```

And the Region footer to:

```
</div>
```

Ensuring a button is clicked only once

From <http://atulley.wordpress.com/category/apex/>

STEP 1

Create a button of type “Create a button in a region position”.

STEP 2

Set the button’s target to be a URL.

STEP 3

If you do not want a confirm dialog with the button, set the button’s URL target to the following (Note: The below has been put on 3 lines for ease of viewing but should be entered into the URL target all as one line of text):

```
javascript:this.disabled=true;
this.value='Submitted...';
doSubmit('XXXXXXX');
```

If you DO want a confirm dialog with the button, set the button’s URL target to the following (Note: The below has been put on 4 lines for ease of viewing but should be entered into the URL target all as one line of text):

```
javascript:if (confirm('Are you sure you want to?')) {
this.disabled=true; this.value='Submitted...';
doSubmit('XXXXXXX');
}
```

In either case you should change the value of XXXXXX to be the same as the name of the button. This is the value that REQUEST will be set to when the button is clicked. By setting it to be the same as the name of the button it means that you can still use “When Button Pressed” conditions for this button.

Blinking text

<p> <blink> You are not allowed to assign already assigned OSO when forecast session is open. </blink></p>

Link calling a function

1. HTML Region with this content in the region body:

```
<a href="javascript:doSubmit('SUBMIT_DO_SOMETHING1');">
Link to execute do_something1 function</a>
```

```
<a href="javascript:doSubmit('SUBMIT_DO_SOMETHING2');">
Link to execute do_something2 function</a>
```

2. Example package with two procedures:

```
CREATE OR REPLACE PACKAGE do_something
AS
    PROCEDURE do_something1;
    PROCEDURE do_something2;
END;
/
```

```

CREATE OR REPLACE PACKAGE BODY do_something
AS
    PROCEDURE do_something1
    IS
    BEGIN
        NULL;
    END;

    PROCEDURE do_something2
    IS
    BEGIN
        NULL;
    END;
END;

```

3. Page Process on Submit:

```

BEGIN
    IF :request = 'SUBMIT_DO_SOMETHING1'
    THEN
        do_something.do_something1;
        :p220_message := 'do_something1 executed';
    ELSIF :request = 'SUBMIT_DO_SOMETHING2'
    THEN
        do_something.do_something2;
        :p220_message := 'do_something2 executed';
    END IF;
END;

```

4. A hidden page item:

P220_MESSAGE

5. Page item :p220_message included in the process success message:

&P220_MESSAGE.

PLSQL REGION

From <http://apex.oracle.com/pls/otn/f?p=31517:199:2288071416125888::NO>

```

DECLARE
    v_counter    INTEGER           := 0;
    v_line       VARCHAR2 (4000);
    v_rec_in_row INTEGER           := 6;
BEGIN
    HTP.prn ('<table>');
    HTP.prn ('<tr>');
    HTP.prn ('<td>');

    FOR c IN
        (SELECT CASE
            WHEN deptno = 20
            THEN
                '<table>'
                || '<tr><td></td></tr>'
                || '<tr><td style="text-align:center">'
                || ename
                || '</td></tr></table>'
            WHEN deptno = 30
            THEN
                '<table>'
                || '<tr><td></td></tr>'
                || '<tr><td style="text-align:center">'
                || ename
                || '</td></tr></table>'
            ELSE
                '<table>'
                || '<tr><td></td></tr>'
                || '<tr><td style="text-align:center">'
                || ename
                || '</td></tr></table>'
            END emp
        FROM emp)
    LOOP
        v_line := v_line || c.emp || '</td><td>';
        v_counter := v_counter + 1;

        IF v_counter = v_rec_in_row
        THEN
            HTP.prn (v_line);
            HTP.prn ('</td></tr><tr><td>');
            v_line := NULL;
            v_counter := 0;
        END IF;
    END LOOP;

    HTP.prn (v_line);
    HTP.prn ('</td></tr></table>');
END

```


Nondatabase region

Page: 22 - Update SLA_EXCEPTION_PERIODS

Identify the type of region to add to this page:

☒ HTML

☐ Multiple HTML

☐ Report

☐ Form

☐ Chart

☐ List

☐ Breadcrumb

☐ PL/SQL Dynamic Content

☐ Tree

☐ URL

☐ Calendar

☐ Help Text

Nondatabase region can have items.

Region logic – master – detail LOVs

- 1/ in detail list query refer to master list by “:” convention.
- 2/ javascript
- 3/ apex

Region logic - last_update_date, last_updated_by

Do it on the trigger
or process launched on submit form (not tested)

Page layout – 2nd line navigation

Desired effect:

Accessibility - Summary Accessibility - Details Setup - Calendar Setup - Dictionaries

Calendar - General Calendar - Exception Days Calendar - Exception Periods

- 1/ Create a list (list is a set of pages). Template : Pull down menu.

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

Lists | **Entries by List** | Unused | Conditional Entries | Utilization | History

List: **Accessibility - Details** ▼
 Template: Pull Down Menu

Sequence	Name	Parent Entry	Target	Conditional	Last Updated	Level	Copy
10	Checkpoints	-	f?p=&APP_ID.:27:&SESSION.: -	-	2 weeks ago	1	
20	Subsystems	-	f?p=&APP_ID.:29:&SESSION.: -	-	2 weeks ago	1	
30	Months	-	f?p=&APP_ID.:28:&SESSION.: -	-	2 weeks ago	1	

2/ On EACH page where buttons are to be visible add region on type LIST and associate it with this list

Home > Application Builder > Application 103 > **Page 23**

Regions

Display Point: Page Template Body (1)
 5 **List**

Display Point: Page Template Body (2)
 15 [Calendar - General](#) [Report](#)

Display Point: Page Template Body (3)
 25 ☐ [Regenerate checkpoints](#) HTML

3/ On Tab level enumerate all pages from just created list

Home > Application Builder > Application 103 > Shared Components > **Tabs > Edit Standard Tab**


Standard Tab


Show All Name Current For Pages Conditions Images Parent Tab Set Authorization Configuration Comments

Name

Application: 103 SLA ARIMR Application


* Tab Name

* Sequence 



Standard Tab Set 

* Tab Label

Current For Pages

* Tab Page 

Tab Also Current for Pages

Site map

Desired effect:

```

Accessibility
├── Summary
├── Details
│   ├── Checkpoints
│   ├── Subsystems
│   └── Months
Performance
├── Summary
├── Details
│   ├── System Overload
│   ├── Function Overload
│   └── Activities
Setup
├── Dictionaries
└── Calendar
    ├── General
    ├── Exception Days
    └── Exception Periods
  
```

To do:

- 1/ Create List. List template = DHTML Tree
- 2/ Create List Entries. Use parent list entry property
- 3/ Create page with region of type "List"

Reports

Report – logic

Parameters

1. Create HTML Region
2. Create parameters in html region. Remember to prefix it by page name, for example P7_DATE_FROM (date picker). For date set format mask 'YYYY-MM-DD'
3. Create report. In sql statement refer to parameters using the syntax:
Select ... from ... where ... = to_date(:P7_DATE_FROM,'YYYY-MM-DD')

Note, that in apex parameters are always varchar2. You HAVE to convert it to appropriate type in sql query as shown above.

Format mask on parameter definition and in select must be identical.

Count records

In html region footer:

```
<script language="Javascript">
var num = #TOTAL_ROWS#; ← works fine
$(P26_RESULTS).value = num; ← not works
if(num == 0) {
$(PDF).style.visibility = 'hidden';
}
</script>
```

Report – layout

How to create checkbox

```
SELECT APEX_ITEM.CHECKBOX(1,employee_id,'CHECKED') " ",
last_name
FROM oehr_employees
```

How to color text

1. Use in select statement html tags, for example

Home > Application Builder > Application 103 > Page 7 > Edit Region

Region Definition | Report Attributes | Saved Reports | Print Attributes

Source

Region Source

```

select context_value feeder_system_name
      , lookup_code function_name
      , nvl(attn1,-1) overload
      , nvl(attn3,-1) percentile
      , round ( sla_utils.percentile( context_value, lookup_code, attn3, to_date
(:P7_DATE_FROM,'YYYY-MM-DD'), to_date(:P7_DATE_TO,'YYYY-MM-DD')) )
percentile_value
      , nvl(attn2,-1) percentile_limit
      , case when round ( sla_utils.percentile( context_value, lookup_code,
attn3, to_date(:P7_DATE_FROM,'YYYY-MM-DD'), to_date(:P7_DATE_TO,'YYYY-MM-
DD')) ) > nvl(attn2,-1)
      then '<font COLOR = "#FF0000">! YES !</font>'
      else 'No'
      end limit_exceeded
from sla_lookup_values
where lookup_type_id = (select id from sla_lookup_types where lookup_type
= 'FUNCTION_NAME')
and enabled_flag = 'Y'
and trunc(sysdate) between nvl(start_date_active, trunc(sysdate)) and nvl
(end_date_active, trunc(sysdate))

```

2. Set following property

Home > Application Builder > Application 103 > Page 7 > Interactive Report Attributes

Region Definition | **Report Attributes** | Saved Reports | Print Attributes

Region Name: Percentiles

Show All | Column Attributes | Groups | Pagination | Sorting | Search Bar | Download | Link Column | Icon View | Detail View | Advanced | Description

Column Attributes

	Heading	Type	Link	Display Text As
	FEEDER_SYSTEM_NAME	Feeder System Name	STRING	Display as Text (escape special characters)
	FUNCTION_NAME	Function Name	STRING	Display as Text (escape special characters)
	OVERLOAD	Overload	NUMBER	Display as Text (escape special characters)
	PERCENTILE	Percentile	NUMBER	Display as Text (escape special characters)
	PERCENTILE_VALUE	Percentile Value	NUMBER	Display as Text (escape special characters)
	PERCENTILE_LIMIT	Percentile Limit	NUMBER	Display as Text (escape special characters)
	LIMIT_EXCEEDED	Limit Exceeded	STRING	Standard Report Column

Result:

Feeder System Name	Function Name	Overload	Percentile	Percentile Value	Percentile Limit	Limit Exceeded
OWB	XX520_ZREAL_PLAT_PF	3	95	-	1000	No
OWB	XX_520_INTERF_NAL_SCHED	3	95	-	1000	No
SGW	PL - Aktualizacja zapisów elementów absencyjnych	3	95	-	1000	No
SGW	PL - Uruchamianie listy płac	3	95	469	1000	No
SGW	Posting	3	95	17	1000	No
SGW	Przedpłaty	3	95	20	1000	No
SGW	Zobowiązania - transfer do Księgi Głównej	3	95	8	1000	No
UE	EBSUE - Generowanie przelewów B2B	3	95	1884	1000	!YES!
UE	EBSUE - Naliczanie odsetek	3	95	-	1000	No

REGIONS

REGION LOGIC

Events

Home Application Builder SQL Workshop Team Development Administration

Home > Application Builder > Application 103 > Page 9 > Page Events

Page 9 Functions Overload ☐ Show All ☐ Show Used

Page Rendering

- No Before Header branches
- No New Instance Computations
- No New Instance Processes
- No Before Header Computations
- No Before Header Processes
- No After Header Computations
- No After Header Processes
- No region at display point After Header

Page Processing

- No On Submit and Before Computation Processes
- No Before Computation branches
- No After Submit Computations
- No Before Validation branches
- No validations
- No Before Processing branches
- No After Submit Processes
- No After Processing branches

Forms event	APEX event
Key-Fn	N/A
Key-Others	N/A
On-Check-Delete-Master	
On-Check-Unique	
On-Clear-Details	
On-Close	Not exists
On-Column-Security	
On-Commit	Submit
On-Count	
On-Delete	Delete button delete and create its own
On-Dispatch-Event	
On-Error	
On-Fetch	
On-Insert	See on-delete
On-Lock	?
On-Logon	
On-Logout	
On-Message	
On-Populate-Details	

On-Rollback	?
On-Savepoint	
On-Select	
On-Sequence-Number	
On-Update	See on-delete
Post-Block	
Post-Change	
Post-Database-Commit	
Post-Delete	
Post-Form	
Post-Forms-Commit	
Post-Insert	
Post-Logon	
Post-Logout	
Post-Query	
Post-Record	
Post-Select	
Post-Text-Item	
Post-Update	
Pre-Block	
Pre-Commit	
Pre-Delete	
Pre-Form	
Pre-Insert	
Pre-Logon	
Pre-Logout	
Pre-Popup-Menu	
Pre-Query	
Pre-Record	
Pre-Select	
Pre-Text-Item	
Pre-Update	
When-Button-Pressed	
When-Checkbox-Changed	
When-Clear-Block	
When-Create-Record	
When-Custom-Item-Event	
When-Database-Record	
When-Form-Navigate	
When-Image-Activated	
When-Image-Pressed	
When-List-Activated	
When-List-Changed	
When-Mouse-Click	Javascript
When-Mouse-DoubleClick	
When-Mouse-Down	
When-Mouse-Enter	
When-Mouse-Leave	

When-Mouse-Move	
When-Mouse-Up	
When-New-Block-Instance	
When-New-Form-Instance	
When-New-Item-Instance	
When-New-Record-Instance	
When-Radio-Changed	
When-Remove-Record	
When-Tab-Page-Changed	
When-Timer-Expired	Javascript
When-Validate-Item	Javascript
When-Validate-Record	Validations section
When-Window-Activated	On-load process
When-Window-Closed	Not exists
When-Window-Deactivated	Not exists
When-Window-Resized	Not exists

Who columns

Or use it on trigger

```
select NVL(v('APP_USER'), user) from dual
```

Disable editing record

Read only tab or

Desired effect

Form on XXTEST

Bfile

Last Update Date

File Name

Mime

Edit Prohibited

Form on XXTEST

Bfile

Last Update Date

File Name

Mime

Edit Prohibited

Setup



Create Dynamic Action

'Standard' allows you to create dynamic actions that 'Show', 'Hide', 'Enable' or 'Disable' page items. 'Advanced' allows you to create more complex native dynamic actions such as 'Add Class' or 'Set Value', specify different event types such as 'Click' or 'After Refresh' and also utilise plug-in dynamic actions, that are installed in your application.

Page: 5 - Form on XXTEST

Identify the type of dynamic action to add to this page:

☒ Standard ☐ Advanced

Create Dynamic Action

Cancel

< Previous

Next >

Page: 5 - Form on XXTEST

* Name

My Name

* Sequence

10

Create Dynamic Action

Specify when you would like the Dynamic Action to fire.

Page: 5 - Form on XXTEST

Name: My Name

* Selection Type

Item(s)

Item, Region

* Item(s)

P5_EDIT_PROHIBITED

Condition

equal to

equal to, is null

* Value

Y

Create Dynamic Action

Cancel

< Previous

Next >

Specify the 'True' and 'False' action for this dynamic action. 'True' actions fire either when the 'When Condition' is met, or when 'No Condition' has been specified. 'False' actions fire only when the 'When Condition' is not met. Therefore, if no 'When Condition' has been specified, only a 'True' action can be created.

Page: 5 - Form on XXTEST

Name: My Name

* Specify the True Action:

Show

Hide

Enable

Disable

Create Opposite False Action ☒

Create Dynamic Action

Select which page elements you would like the dynamic action to control.

Page: 5 - Form on XXTEST

Name: My Name

True Action: Disable

Selection Type

Item(s)

Item(s)

P5_ID

P5_BFILE

P5_LAST_UPDATE_DATE

P5_FILE_NAME

P5_MIME

P5_EDIT_PROHIBITED

How To Force The Users To Enter Upper Case Characters In Apex

Goal

How to force the users to enter upper case characters in ApEx form text field.

Solution

This can be done only using javascript code. Since the APEX pages are presented in the browser as html pages we can use javascript to change the case of the text after the control goes out of the text field.

Steps to follow:

- 1) Go to page definition of a page
- 2) Click on the text field name under ITEMS block.
- 3) Go to " HTML Form Element Attributes " property
- 4) Include the following javascript line:
onBlur="javascript:{this.value = this.value.toUpperCase(); }"
OnBlur acts when they move off the field.
OnKeyUp acts as soon as they type a character in the field.
- 5) Apply the changes and run the page.

REGION LAYOUT

Checkbox

Just create checkbox.

Tricky:

- You must select list of values. Select LOV with ONE value. Checkbox will return NULL(unchecked) or lov value (checked).

Name

* List of Values Name

Subscription

Reference Master List of Values From ☒ Refresh

This is the "master" copy of this List of Values.

No Lists of Values subscribe to this List of Values.

Source: Static Values

	Sequence ▲	Display	Return	Conditional	Last Updated
	1		Y		4 weeks ago

- If you select LOV with values Y,N you will obtain this effect:

Recalculate Overload ☐ Yes
☐ No

Selecting both values will cause return “N:Y” value.

Unbound checkbox – sample code

Name

Page: 7 Performance - Summary

* Name

Type: PL/SQL anonymous block

Process Point

* Sequence

Process Point

Run Process

Source

* Process [\[Download Source\]](#)

```

begin
  if nvl(:P7_RECALCULATE_OVERLOAD,'NULL') = 'Y' then
    sla_utils.calculate_overload ( to_date(:P7_DATE_FROM,'yyyy-mm-dd'), to_date(:P7_DATE_TO,'yyyy-mm-dd') );
  end if;

```

List of values

Each item can be assigned to list of values (code, meaning)

List of values can be created on application level (recommended) or on item level (not recommended). Item level lovs can be converted to app level.

Column Attributes

Display As

Number of rows

Home Application Builder SQL Workshop Team Development Administration

Home > Application Builder > Application 103 > Page 18 > Report Attributes

Region Definition Report Attributes Print Attributes

Region Name: Values

Show All Column Attributes Layout and Pagination Sorting Messages Report Export Break Formatting External Processing

Column Attributes

Layout and Pagination

Report Template

Report Attributes Substitution

Show Null Values as

Pagination Scheme

Enable Partial Page Refresh

Display Position

Number of Rows Number of Rows (Item)

Maximum Row Count

Strip HTML

Sort Nulls

Width of item in list

Width property of item does not work, instead of this change item type and set width

Column Attributes

Display As

Number / Date Format

Numeric format mask: 999G999G999G999G990

Graphical formatting: for percentages, whole numbers between 0 and 100

Element Width Number of Rows

Number of Columns (Radio Group)

Element Attributes

Element Option Attributes

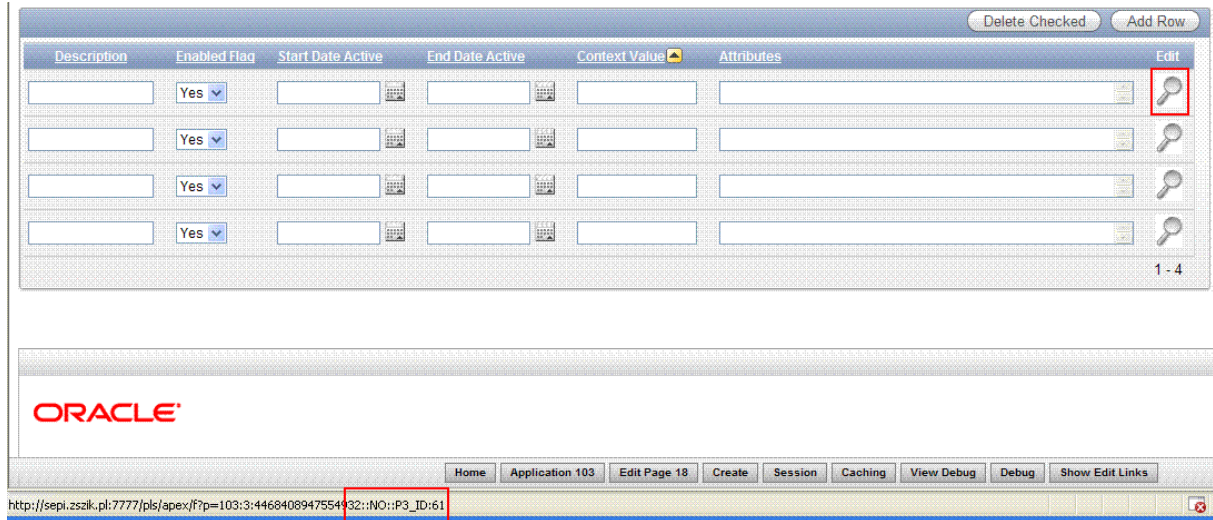
=>

Delete Checked Add

Enabled Flag	Start Date Active	End Date Active	Context Value	Attributes
Yes	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Yes	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Yes	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Yes	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

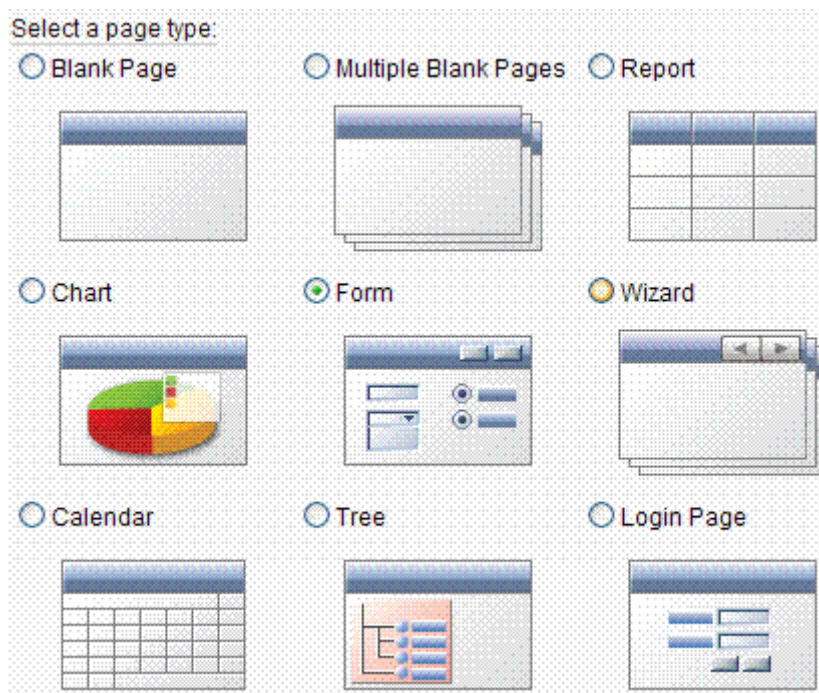
How to add edit button

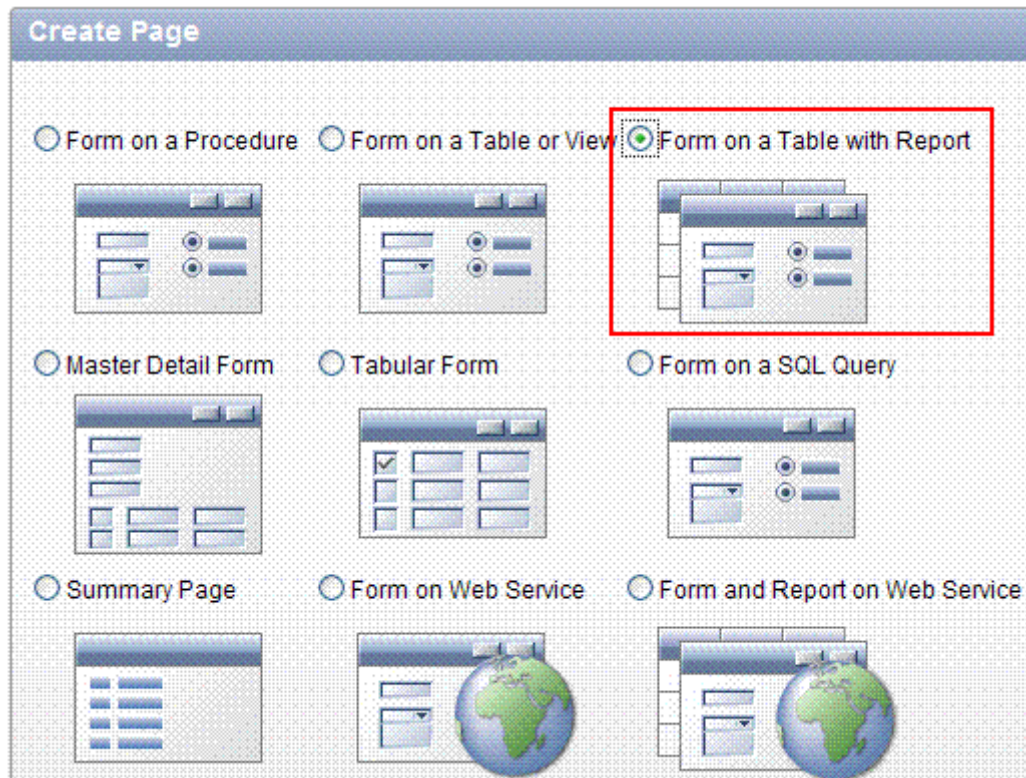
Desired effect



How to do it

1. Create detail form. You can use page wizard to do that.





Two pages will be created – list form and detail form.
You do not need list form – delete it.

2. Create new field on list form

Region Definition Report Attributes Print Attributes

Region: 3 of 3 Name: Values

Show All Identification User Interface Source Attributes Header and Footer

Source

Region Source

```
select
  "ID",
  "LOOKUP_TYPE_ID",
  "LOOKUP_CODE",
  "MEANING",
  "DESCRIPTION",
  "ENABLED_FLAG",
  "START_DATE_ACTIVE",
  "END_DATE_ACTIVE",
  "CONTEXT_VALUE",
  "ATTRIBUTES",
  "ID" Link
from "#OWNER#". "SLA_LOOKUP_VALUES"
where "LOOKUP_TYPE_ID" = :P18_ID
```

3. Change field type to link and specify link properties

Home > Application Builder > Application 103 > Page 18 > Report Attributes > Column Attributes

Column Attributes

Display As: **Display as Text (escape special characters, does not save state)**

Number / Date Format:

Numeric format mask: 999G999G999G999G990

Graphical formatting for percentages, whole numbers between 0 and 100

Element Width: Number of Rows:

Number of Columns (Radio Group):

Element Attributes:

Element Option Attributes:

Compute Sum: **No** Column Alignment: **left**

Sortable Column: **No** Column Width:

Include In Export: **Yes**

Column Link

Link Text: **Icon to display**

Link Attributes:

Target: **Page in this Application** **Page 3** **Reset** **Detail page number**

Request: Clear Cache:

Detail page primary key field: **Item 1 P3_ID** **#LINK#** **This form primary key to pass**

Name: **Item 1 P3_ID** Value: **#LINK#**

Item 2: Item 3:

Page Checksum: **- Use default -**

Items

Region: **Form on SLA LOOKUP VALUES**

Item	Item Name	Item Type
1	P3_ID	Hidden
10	P3_LOOKUP_CODE	Text Field
20	P3_MEANING	Text Field
30	P3_DESCRIPTION	Textarea
40	P3_ENABLED_FLAG	Text Field
50	P3_START_DATE_ACTIVE	Date Picker
60	P3_END_DATE_ACTIVE	Date Picker
70	P3_CREATION_DATE	Date Picker
80	P3_CREATED_BY	Text Field
90	P3_LAST_UPDATE_DATE	Date Picker
100	P3_LAST_UPDATED_BY	Text Field
120	P3_LOOKUP_TYPE_ID	Number Field
130	P3_CONTEXT_VALUE	Text Field

- Fix navigation for cancel and apply updates buttons on detail form (detail form no longer refers to standard list form, which was deleted. Instead on this it refers to our list form)

Home > Application Builder > Application 103 > Page 3

Action Processed

Page 3

Page Rendering

Page Name: **Form on SLA LOOKUP VALUES** Template: **Application default**

Title: **Form on SLA LOOKUP VALUES** Header Text:

HTML Header: Footer Text:

HTML Body: Build Option:

Help Text: **No help is available for this** Authorization: **No**

Page Group: Cached: **No**

Regions

Display Point: **Page Template Body (3)**

10 ☐ **Form on SLA LOOKUP VALUES HTML**

Buttons

Region: **Form on SLA LOOKUP VALUES**

Item	Item Name	Item Type
10	Cancel	Text Field
20	Delete	Text Field
30	Apply Changes	Text Field
40	Create	Text Field

Redirect to: **page 18**

Run: **javascript:apex.confirm('htmllob_delete_me')** Conditional

Submit as: **Save** Conditional

Submit as: **"CREATE"** Conditional

Page Processing

Computations

Validations

Processes

After Submit

Item	Item Name	Item Type
10	Get PK	Text Field
30	Process Row of SLA LOOKUP VALUES	Text Field
40	reset page	Text Field

PL/SQL anonymous block

Automatic Row Processing (DML)

Clear Cache for all Items on Pages (PageID,PageID,PageID)

Branches

After Processing


Item	Item Name	Item Type
1	Go To Page 18	Text Field


Unconditional

Item position in region

Sample layout

Parameters

Date From  [Recalculate Overload \(click to see help\)](#) ☐

Date To  [Recalculate Exception Periods \(click to see help\)](#) ☐

Method 1.

Items   


Region: Parameters  



10	<u>P7 DATE FROM</u>	Date Picker
20	<u>P7 RECALCULATE PERFORM</u>	Drag and drop
30	<u>P7 RECALCULATE OVERLOAD</u>	Checkbox
40	<u>P7 DATE TO</u>	Date Picker

Method 2. Items are displayed in html table, it is controlled by item properties:

Displayed

* Sequence

* Region 

Begin On New Line  Field  ColSpan Row Span


Export to excel

Home Application Builder SQL Workshop Team Development Administration

Home > Application Builder > Application 103 > Page 22 > Report Attributes

Region Definition **Report Attributes** Print Attributes

Report Export

Enable CSV output  Separator Enclosed By

Link Label

Filename

Other layout hints

- Region can be located inside another region – see Parent region

Security

Each form, region and item has security section

Security	
Authorization Scheme	- No Page Authorization Required - ▾
Authentication	Page Requires Authentication ▾
Page Access Protection	Unrestricted ▾
Form Auto Complete	On ▾

Authorization and authentication items are defined here:

Home
Application Builder ▾
SQL Workshop ▾
Team Development ▾
Administration ▾

Home > Application Builder > Application 103 > Shared Components

Logic

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

Navigation

- Tabs
- Lists
- Breadcrumb
- Navigation B

Security

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


User Interface




- Themes
- Templates
- Lists of Valu
- Shortcuts
- Plugins

Tutorials

Upload / download file

Desired effect

	<input type="text"/>	<input type="button" value="Go"/>	<input type="button" value="Actions ▾"/>	<input type="button" value="Create"/>
---	----------------------	-----------------------------------	--	---------------------------------------

	Bfile	Last Update Date	Id	File Name	Mime
	Download	130	20-DEC-10	link_do_zdjec.txt	text/plain
	Download	3561458	20-DEC-10	IOCreation.avi	video/avi
	Download	30367	20-DEC-10	D70243GC10_10_PL.pdf	application/pdf

Form on XXTEST

Cancel Delete Apply Changes

Bfile Przeglądaj... Download

Last Update Date 20-DEC-10

File Name D70243GC10_10_PL.pdf

Mime application/pdf

Query

```

1 CREATE TABLE XXTEST
2 (
3   ID          NUMBER primary key,
4   BFILE       BLOB,
5   LAST_UPDATE_DATE DATE,
6   FILE_NAME   VARCHAR2(500 BYTE),
7   MIME        VARCHAR2(500 BYTE)
8 );
9
10 select * from xxtest
11

```

Data Script

	BFILE	LAST_UPDATE_DATE	ID	FILE_NAME	MIME
▶	(BLOB)	2010-12-20 12:16:54	5811445	link_do_zdjec.txt	text/plain
	(BLOB)	2010-12-20 12:17:06	5811446	IOCreation.avi	video/avi
	(BLOB)	2010-12-20 12:17:55	5811447	D70243GC10_10_PL.pdf	application/pdf

Setup

Prerequisites

There are two ways to create this task: standard flow table or blob table. Here is presented blob table solution.

You must have table with BLOB column.

Home > Application Builder > Application 108 Page 17

Application: 108 - SLA ARIMR Application Edit Application Properties Create Page >

Run Application Supporting Objects Shared Components Utilities Export/Import

Create Page Cancel < Previous Next >

Application: 108 - SLA ARIMR Application

Select a page type:

☐ Blank Page
 ☐ Multiple Blank Pages
 ☐ Report

☐ Chart
 ☒ Form
 ☐ Wizard

☐ Calendar
 ☐ Tree
 ☐ Login Page

☐ Access Control
 ☐ Map
 ☐ Feedback Page

Create interactive report + single record edit form

Home > Application Builder > Application 108 > Page 17 > Create Page

Page

Define

Create Page

☐ Form on a Procedure
 ☐ Form on a Table or View
 ☒ Form on a Table with Report

☐ Master Detail Form
 ☐ Tabular Form
 ☐ Form on a SQL Query

☐ Summary Page
 ☐ Form on Web Service
 ☐ Form and Report on Web Service

All screens are presented, however draw your attention to red rectangles only, rest of screen just ignore.

Home > Application Builder > Application 108 > Page 17 > Create Page > Form and Report

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Pages

Cancel Next >

This wizard builds a two page report and form combination on a single table or view. The first page enables users to specify the row to be updated. The second page provides users with ability to update the selected table or view. Select the schema owner who owns the database table or view.

* Table / View Owner: SLAARIMR

Home > Application Builder > Application 108 > Page 17 > Create Page > Form and Report

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Pages

Cancel < Previous Next >

Select the table or view on which you wish to base your report and form.

Owner: SLAARIMR

* Table / View Name: XXTEST

Home > Application Builder > Application 108 > Page 17 > Create Page > Form and Report

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Report Page

Cancel < Previous Next >

The report page is used to select the rows to be edited. It also includes a button to create a new row. If the page you specify does not exist, the page will be created.

Owner: SLAARIMR

Table Name: XXTEST

Implementation: Interactive

* Page Number: 4

* Page Name: Report on XXTEST

* Region Title: Report on XXTEST

* Region Template: No Template

Report Template: Template: 2 Standard

Pagination Size: 15

Breadcrumb: - do not add breadcrumb region to page -

Home > Application Builder > Application 108 > Page 17 > Create Page > Form and Report

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Report Page

Cancel < Previous Next >

Both report and form pages will use the same tab definition

Page: 4

Tab Options:

- ☐ Do not use tabs
- ☒ Use an existing tab set and create a new tab within the existing tab set.
- ☐ Use an existing tab set and reuse an existing tab within that tab set.

* Tab Set: SLA Tab Set (Site Map, Accessibility - Summary, Accessibility - Details...)

* New Tab Label: XXTEST

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Report Page

Cancel

< Previous

Next >

Select the columns to include in the report page. Define an optional WHERE clause to restrict the result set.

Page: 4

Owner: SLAARIMR

Table Name: XXTEST

- * Select Column(s)
- 1.BFILE (Blob)
 - 2.LAST_UPDATE_DATE (Date)
 - 3.ID (Number)
 - 4.FILE_NAME (Varchar2)
 - 5.MIME (Varchar2)

Optional WHERE clause

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Report Page

Cancel

< Previous

Next >

Select an edit link image. This image will function as a link for choosing a row to edit. Use image attributes to define the image height and width. Defining the height and width helps browsers display pages faster.

Report Page: 4

Owner: SLAARIMR

Table Name: XXTEST

Edit Link Image:



Use Other Image

Image Attributes

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Form Page

Cancel

< Previous

Next >

Specify page and region information for the Form Page. The Form Page is used to insert, update, and delete rows from the selected table. If the page you specify does not exist, the page will be created.

Owner: SLAARIMR

Table Name: XXTEST

* Page Number

5

* Page Name

Form on XXTEST

* Region Title

Form on XXTEST

* Region Template

Form Region

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Form Page

Cancel

< Previous

Next >

Select the primary key column of the table on which this form is to be based. If the table has two columns that form the primary key, identify the second primary column.

Form Page: 5

Owner: SLAARIMR

Table Name: XXTEST

* Primary Key Column ID

Primary Key Column 2 - Select Primary Key 2 -

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Form Page

Cancel

< Previous

Next >

Form Page: 5

Owner: SLAARIMR

Table Name: XXTEST

Primary Key Column 1: ID

* Define the source for the primary key columns

☐ Existing trigger

☐ Custom PL/SQL function

☒ Existing sequence



* Sequence SLA_MAIN_SEQ

Identify Table or View

Define Report Page

Define Form Page

Confirm

Create Form Page

Cancel

< Previous

Next >

Select the columns to include in the form page.

Page: 5

Owner: SLAARIMR

Table Name: XXTEST

* Select Column(s) BFILE (Blob)
LAST_UPDATE_DATE (Date)
FILE_NAME (Varchar2)
MIME (Varchar2)

Home > Application Builder > Application 108 > Page 17 > Create Page > Form and Report

Identify Table or View

Define Report Page

Define Form Page

Confirm

Identify Process Options

Cancel < Previous Next >

Identify the process options for this form page. For example, to prevent users from deleting from this form page, select **No** for the delete option.

Form Page: 5
Owner: SLAARIMR
Table Name: XXTEST

Insert	Yes
Update	Yes
Delete	Yes

Home > Application Builder > Application 108 > Page 17 > Create Page > Form and Report

Identify Table or View


Define Report Page

Define Form Page

Confirm

Form and Report Page Confirmation


Cancel < Previous Finish

 You have requested to create form and report pages with the following attributes. Please confirm your selections.


Application	108
Report Page	4
Report Page Name	Report on XXTEST
Report Implementation	Interactive
Form Page	5
Form Page Name	Form on XXTEST
Tab Set	SLA Tab Set
Tab Label	XXTEST
Table / View Owner	SLAARIMR
Table / View Name	XXTEST
Primary Key Column 1	ID
Primary Key Column 2	
Updateable Columns	BFILE LAST_UPDATE_DATE FILE_NAME MIME
Report Columns	BFILE LAST_UPDATE_DATE ID FILE_NAME MIME
Where Clause	

Success

The Report and Form have been created successfully.



Run Page



Edit Page

Last step must be done manually, outside of wizard. Edit page item P5_BFILE.

Note that column names HAVE to be written in upper case, otherwise you will obtain error message.

Home > Application Builder > Application 108 > Page 5 > Edit Page Item

Page Item: P5_BFILE

Show All Name Displayed Label Settings Element Source Default Conditions Rea

Settings

Value Required: No

Storage Type: BLOB column specified in Item Source attribute

MIME Type Column: MIME

Filename Column: FILE_NAME

Character Set Column:

BLOB Last Updated Column: LAST_UPDATE_DATE

Display Download Link: Yes

Download Link Text:

Content Disposition: Inline

Interactive report item:

Region Definition Report Attributes Saved Reports Print Attributes

Column Attributes: BFILE

Show All Definition List of Values Link Authorization Conditions Help Comments

Column Definition

Column Name: BFILE

Column Type: NUMBER

Group: - Select Column Group -

Display Type: Display as Text (escape special characters)

Column Heading: Bfile

Single Row View Label: BFILE

Number / Date Format: DOWNLOAD.SRV_DOCUMENTS.BFILE.ID:MIME.FILE_NAME.LAST_UPDATE_

Numeric format mask: 999099909990999099909990

BLOB Download Format Mask

Heading Alignment: center Column Alignment: left

Allow Users To: ☒ Hide ☐ Sort ☐ Filter ☐ Highlight ☐ Control Break ☐ Aggregate ☐ Compute ☐ Chart ☐ Group By

Format Mask: DOWNLOAD

BLOB Table: SRV_DOCUMENTS

BLOB Column: BFILE

Primary Key Column 1: ID

Primary Key Column 2:

MIME Type Column: MIME

Filename Column: FILE_NAME

BLOB Last Updated Column: LAST_UPDATE_DATE

Character Set Column:

Content Disposition: Inline

Download Link Text: Pobierz

Database table and column names are case sensitive

See Also:

<http://www.oracleapplicationexpress.com/tutorials/49-file-browse-filename-length-limit>

Others

dkubicek / maciej.szymczak / wrona1122

<http://apex.oracle.com/pls/otn/f?p=4550:1>

Application Express Advanced Tutorials

<http://www.oracleapplicationexpress.com/tutorials/>
1Basics of AJAX

- 2Clearing Cache
- 3Creating A Popup Window
- 4File Browse - filename length limit
- 5How to stop the user from clicking a page submit button more than once
- 6Integrating jQuery into APEX
- 7jQuery datepicker
- 8jQuery Thickbox
- 9Manually set page success/failure message
- 10Oracle APEX Interactive report based on PLSQL function
- 11Recover saved interactive reports after an application import
- 12URL Parameters
- 13Using AJAX in APEX
- 14Using APEX Authorisation Schemes In PLSQL

http://apex.oracle.com/pls/apex/f?p=12060:5:1865476081495598::NO::P5_EMPNO:7900
 explanations: <http://shijesh.wordpress.com/2010/03/21/my-first-ajax/>

- Multiple Interactive Report on same page
- Vertical Report - Multi Column
- jQuery Modal Form in APEX
- jQuery Tab in APEX
- AJAX - The Simplest Example

Disadvantages

- Each item has separate set of properties, it is confusing (for example one item has property position in template, second one has not)
- Not object approach
- No search source code engine
- No take apart SQL for alive LOV and SQL for validation LOV
- Html form layout (no interactive layout)

Open issues

Parent tabs don't work



before delete
 before edit
 before insert

In html region footer:

```
<script language="Javascript">
var num = #TOTAL_ROWS#; ← works fine
```

```
$x('P26_RESULTS').value = num; ← not works  
if(num == 0) {  
  $x('PDF').style.visibility = 'hidden';  
}  
</script>
```