

# Hierarchy in a Relational World

Hierarchies –  
parents, children, roots, trees, leaves and  
cascading LOV's in  
Application Express

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# Agenda

- Entities, Relationships and Trees
- Intro to Application Express
- Create Tables for this lab
- Hierarchical SQL
- Hierarchical Reports
- Trees
- Hierarchical LOV's

# Information Model

- Entities

- Expressed as tables

- Relationships

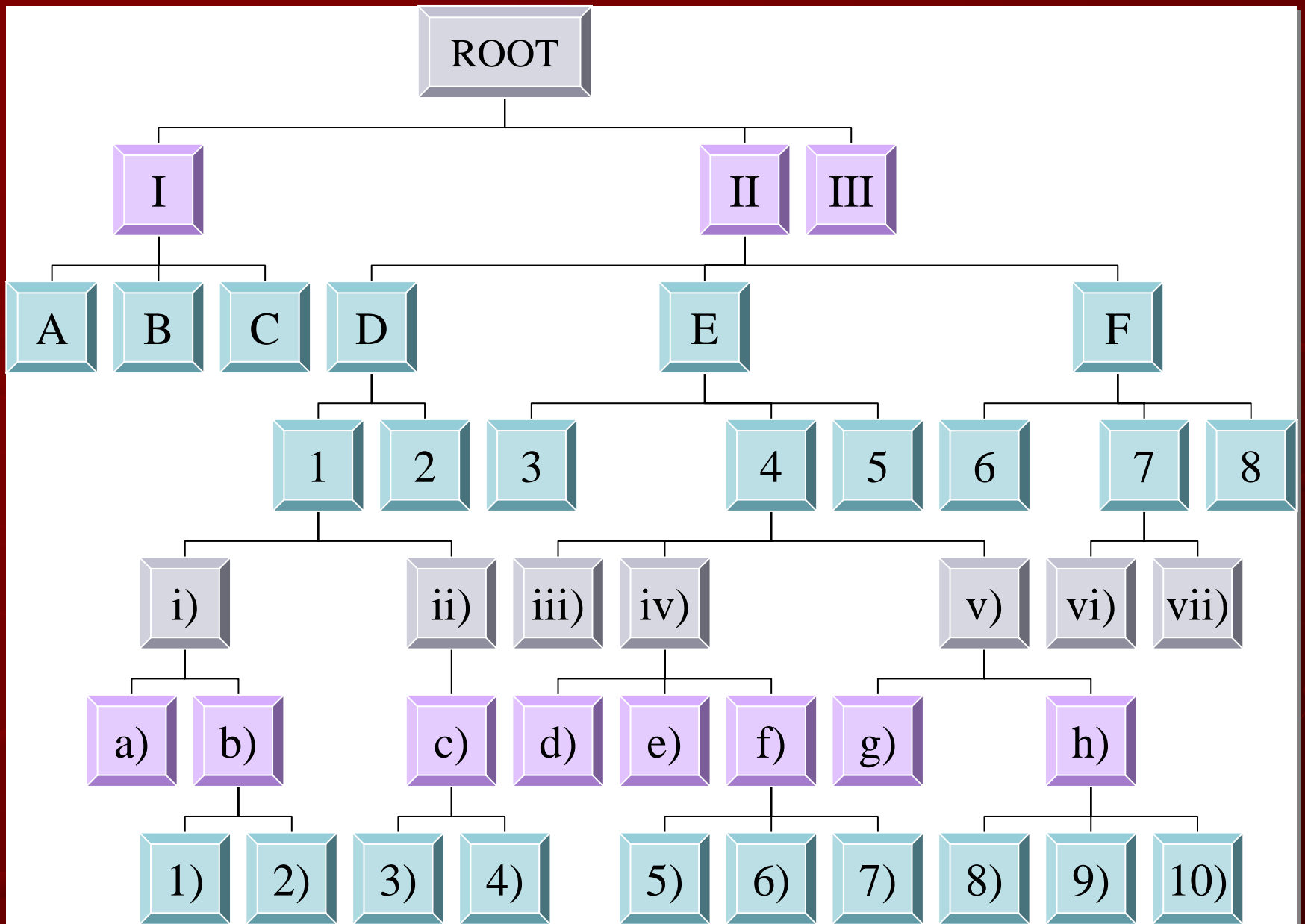
- Expressed as connections between tables

- Hierarchy

- Expressed as connections between rows within the same table

# Examples of Hierarchy

- Employee: Manager / Person Managed
- Organizational Structure:
  - Departments / Sub-departments
- Bill Of Materials:
  - Assemblies / Subassemblies
- Network topologies
- Geographical & political information
- Directory structure (c:\...)



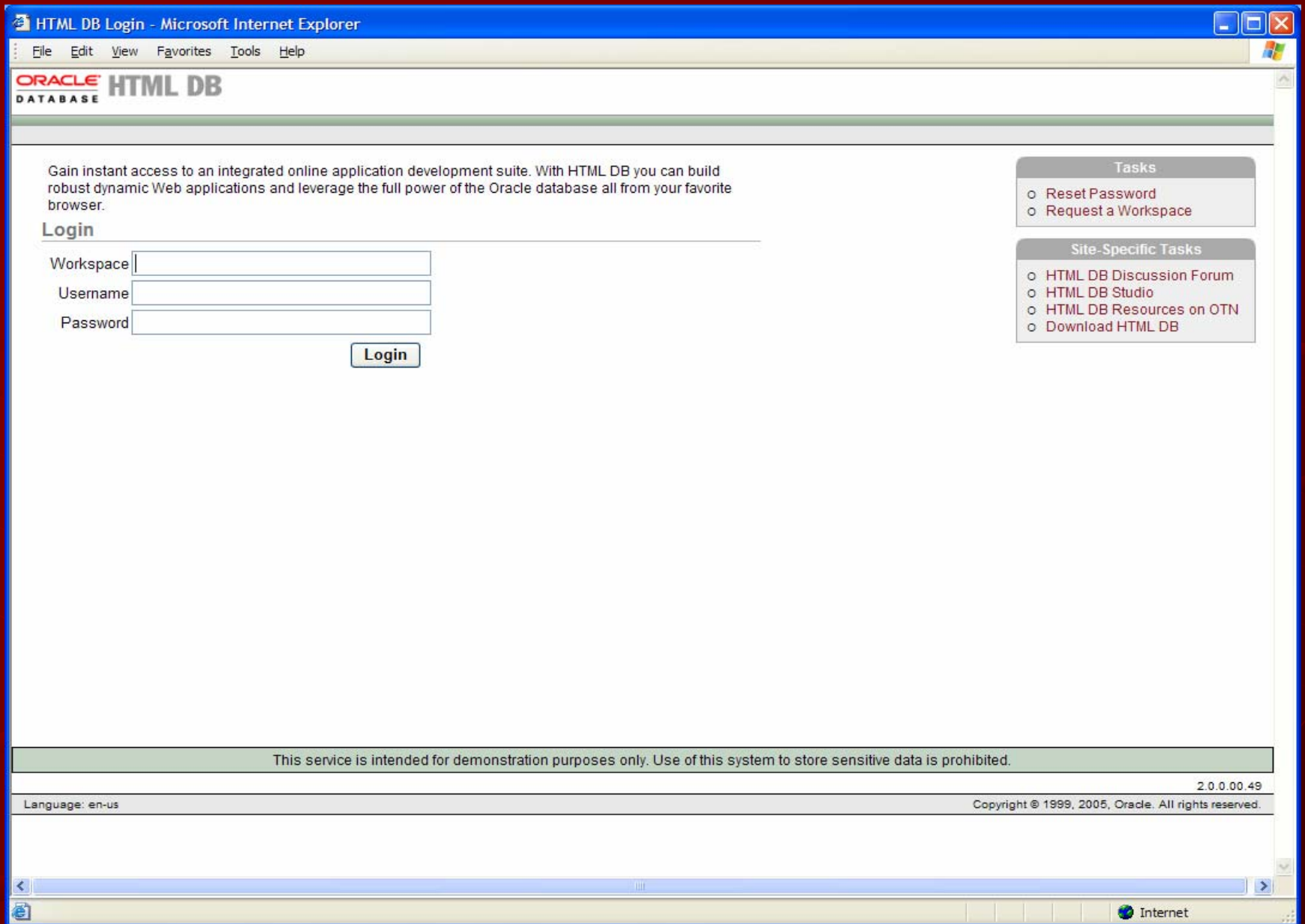
# SigTree1.xls

Microsoft Excel - TreeTable1						
File Edit View Insert Format Tools Data Window Help						
Type a question for help						
A1	ID					
	A	B	C	D	E	F
1	ID	Name	PID	Descr	Notes	Rem
2	101	Root		*root*	{notes root notes}	Albert
3	102	I	101	*I*	{notes I notes}	Brian
4	103	II	101	*II*	{notes II notes}	Charlie
5	104	III	101	*III*	{notes III notes}	David
6	105	A	102	*A*	{notes A notes}	Elmer
7	106	B	102	*B*	{notes B notes}	Frank
8	107	C	102	*C*	{notes C notes}	Gary
9	108	D	103	*D*	{notes D notes}	Harry
10	109	E	103	*E*	{notes E notes}	Igor
11	110	F	103	*F*	{notes F notes}	James
12	111	1	108	*1*	{notes 1 notes}	Kreg
13	112	2	108	*2*	{notes 2 notes}	Larry
14	113	3	109	*3*	{notes 3 notes}	Mike
15	114	4	109	*4*	{notes 4 notes}	Nate
16	115	5	109	*5*	{notes 5 notes}	Oscar
17	116	6	110	*6*	{notes 6 notes}	Paul
18	117	7	110	*7*	{notes 7 notes}	Quenten
19	118	8	110	*8*	{notes 8 notes}	Rich
20	119	i)	111	*i)*	{notes i) notes}	Steve
21	120	ii)	111	*ii)*	{notes ii) notes}	Thomas
22	121	iii)	114	*iii)*	{notes iii) notes}	Uma
23	122	iv)	114	*iv)*	{notes iv) notes}	Victor
24	123	v)	114	*v)*	{notes v) notes}	Walter
25	124	vi)	117	*vi)*	{notes vi) notes}	Xavier
26	125	vii)	117	*vii)*	{notes vii) notes}	Yolanda
27	126	a)	119	*a)*	{notes a) notes}	Zammy
28	127	b)	119	*b)*	{notes b) notes}	Alton
29	128	c)	120	*c)*	{notes c) notes}	Bob
30	129	d)	122	*d)*	{notes d) notes}	Chuck
31	130	e)	122	*e)*	{notes e) notes}	Donald
32	131	f)	122	*f)*	{notes f) notes}	Everet
33	132	g)	123	*g)*	{notes g) notes}	Francis
34	133	h)	123	*h)*	{notes h) notes}	Gerry
35	134	1)	127	*1)*	{notes 1) notes}	Henry
36	135	2)	127	*2)*	{notes 2) notes}	Ivan
37	136	3)	128	*3)*	{notes 3) notes}	Jack
38	137	4)	128	*4)*	{notes 4) notes}	Komar
39	138	5)	131	*5)*	{notes 5) notes}	Luke
40	139	6)	131	*6)*	{notes 6) notes}	Matt
41	140	7)	131	*7)*	{notes 7) notes}	Noel
42	141	8)	133	*8)*	{notes 8) notes}	Omar
43	142	9)	133	*9)*	{notes 9) notes}	Peter
44	143	10)	133	*10)*	{notes 10) notes}	Robert
45						

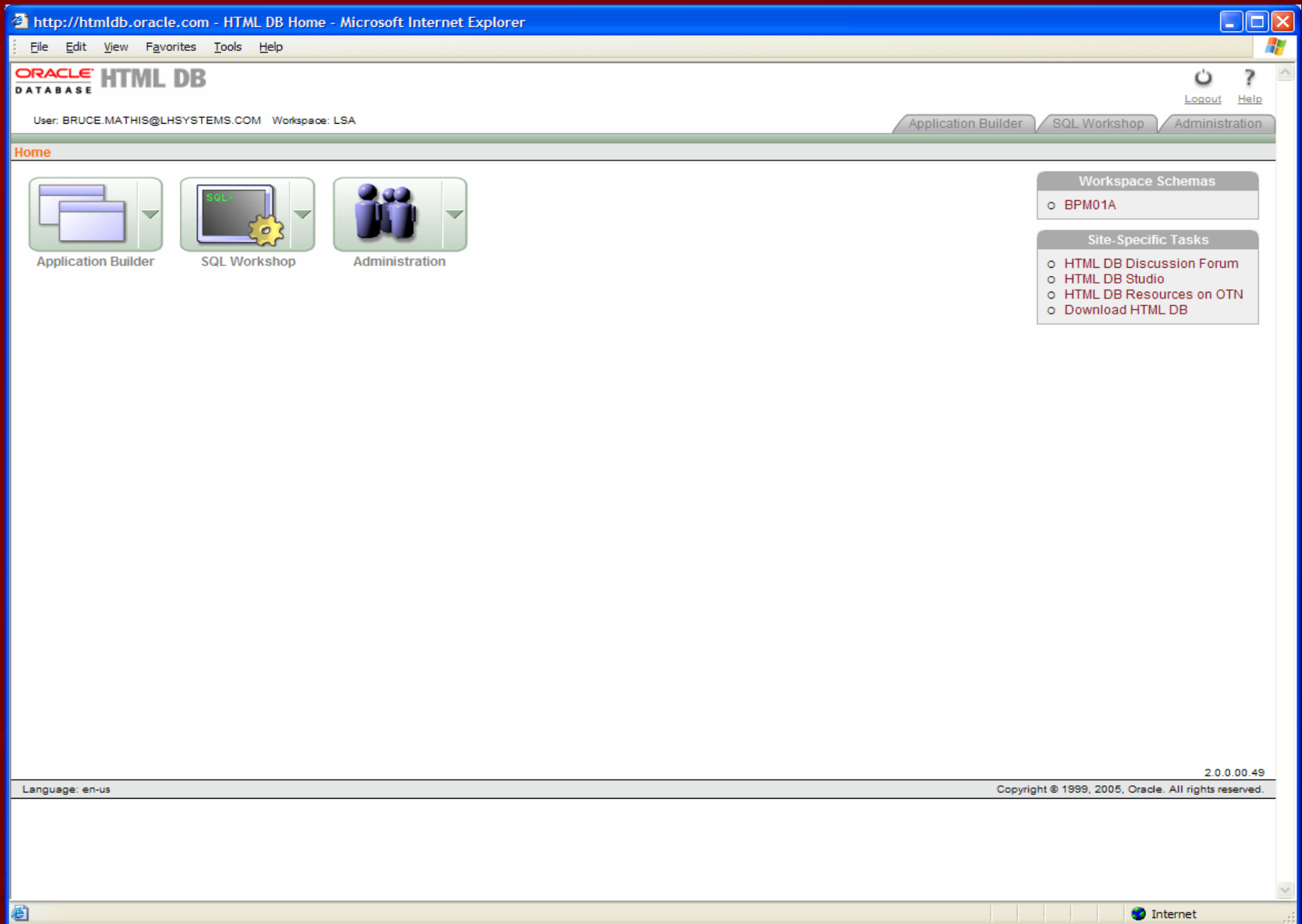
# Application Express

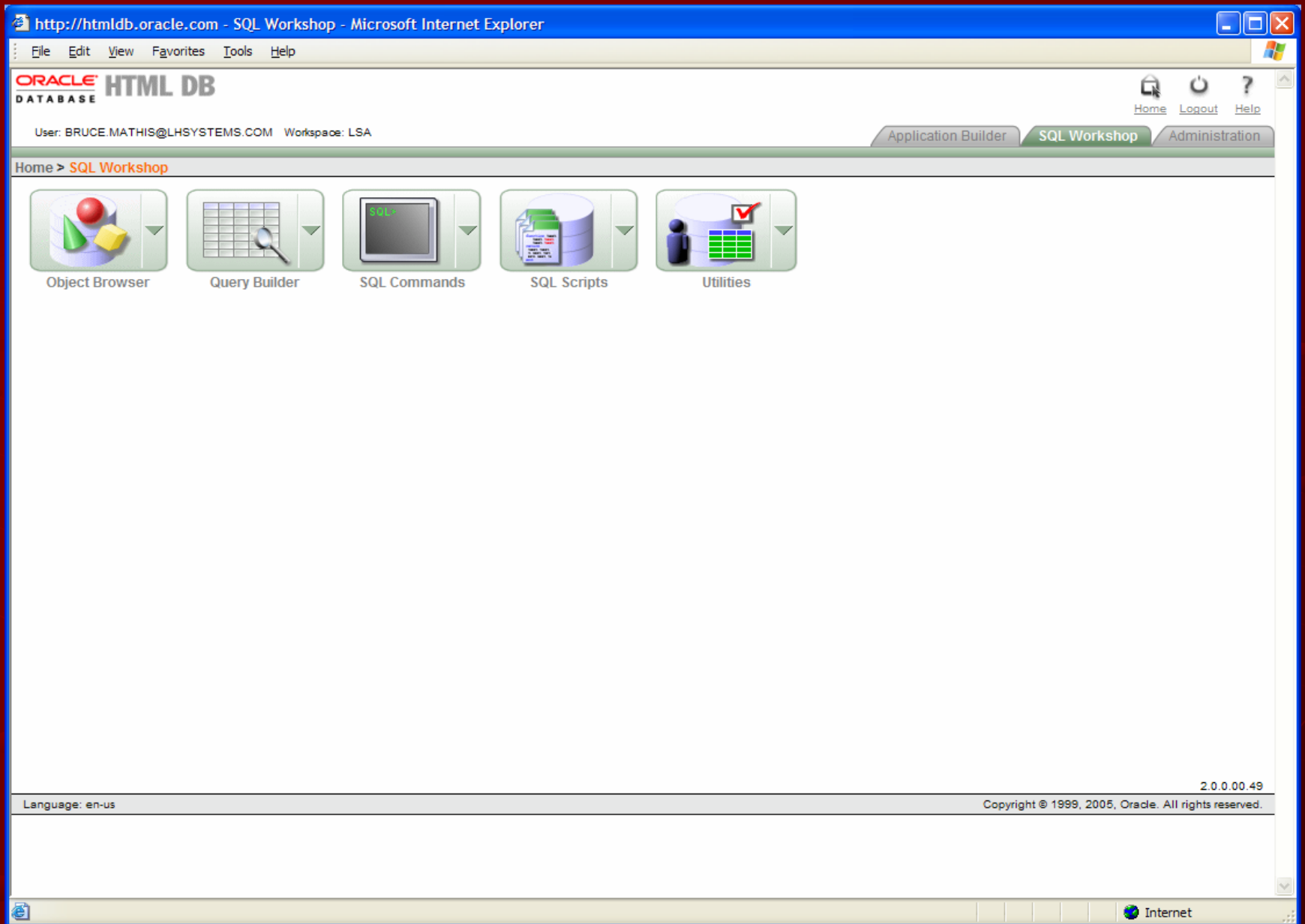
## ● Where to get it:

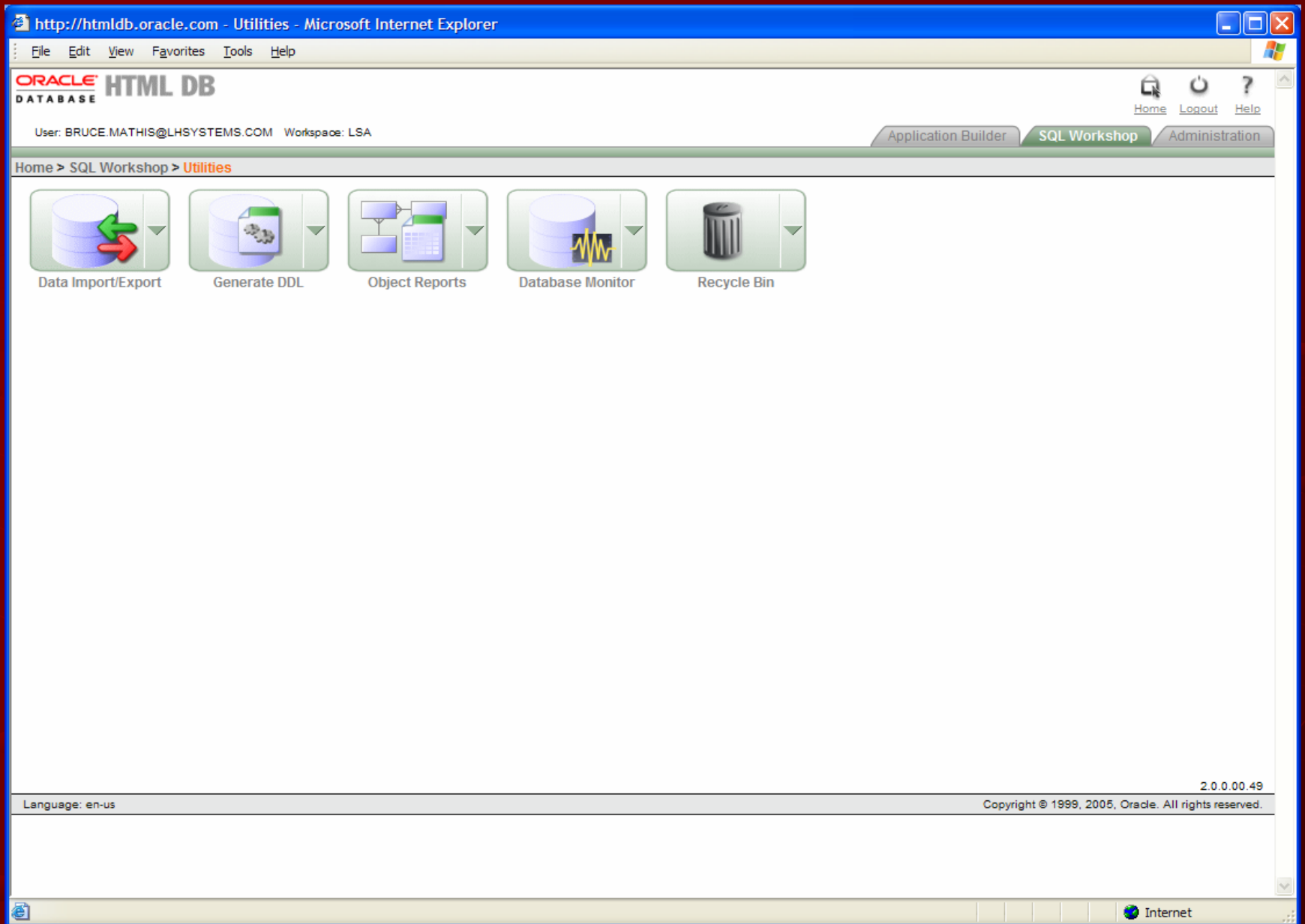
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[http://www.oracle.com/technology/products/  
database/application\\_express/index.html](http://www.oracle.com/technology/products/database/application_express/index.html)
- Included with database 10g

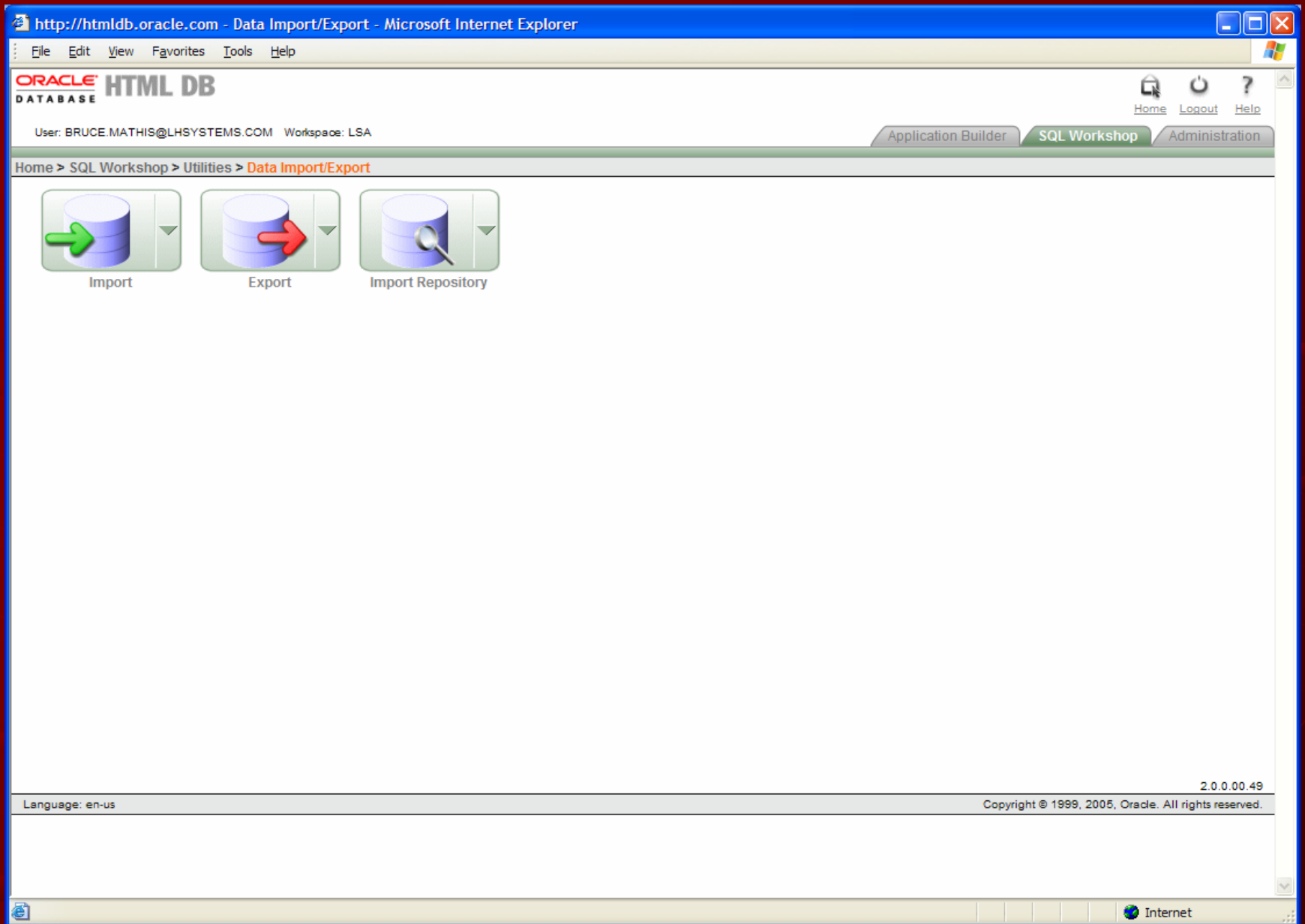


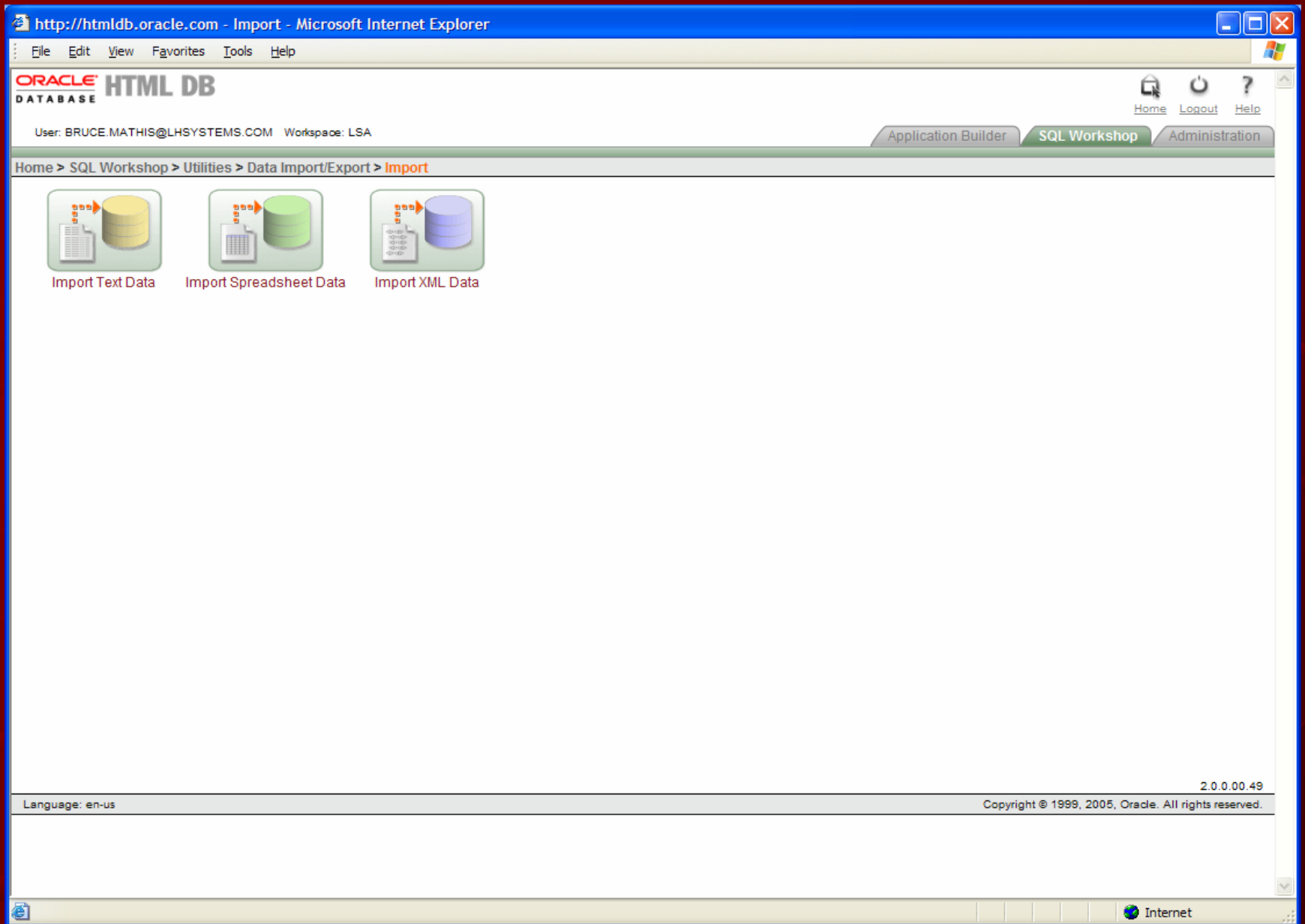


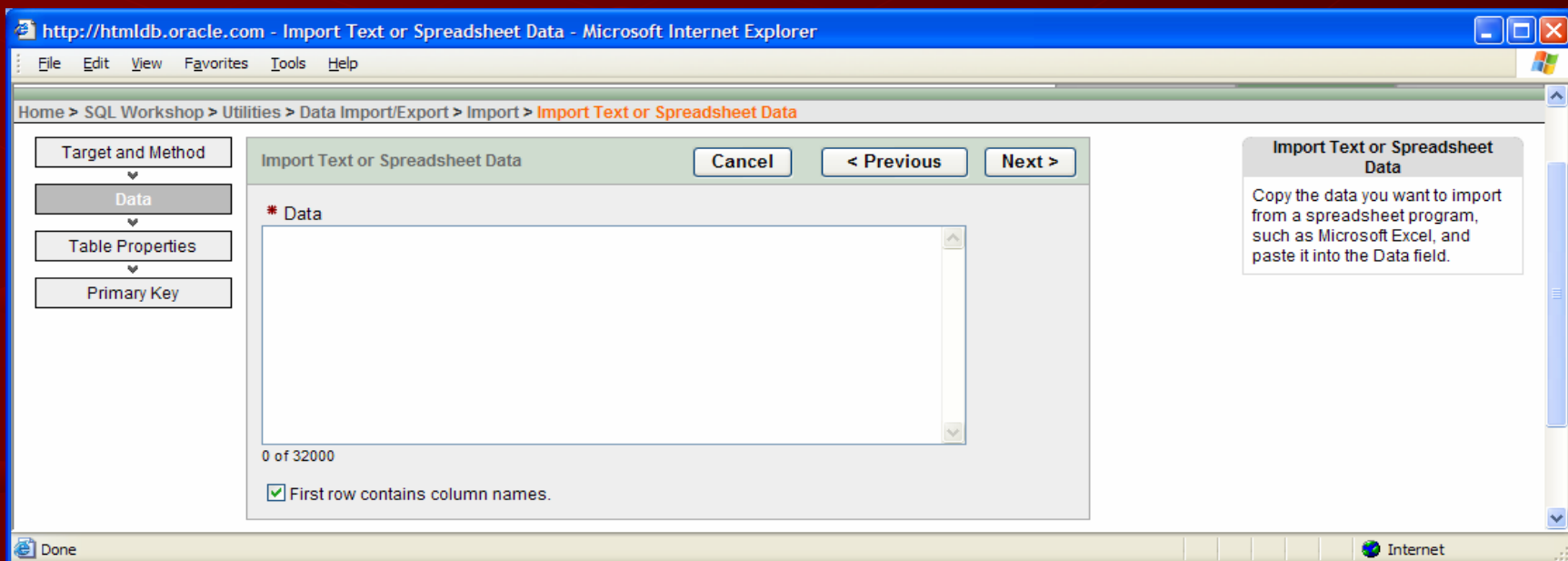
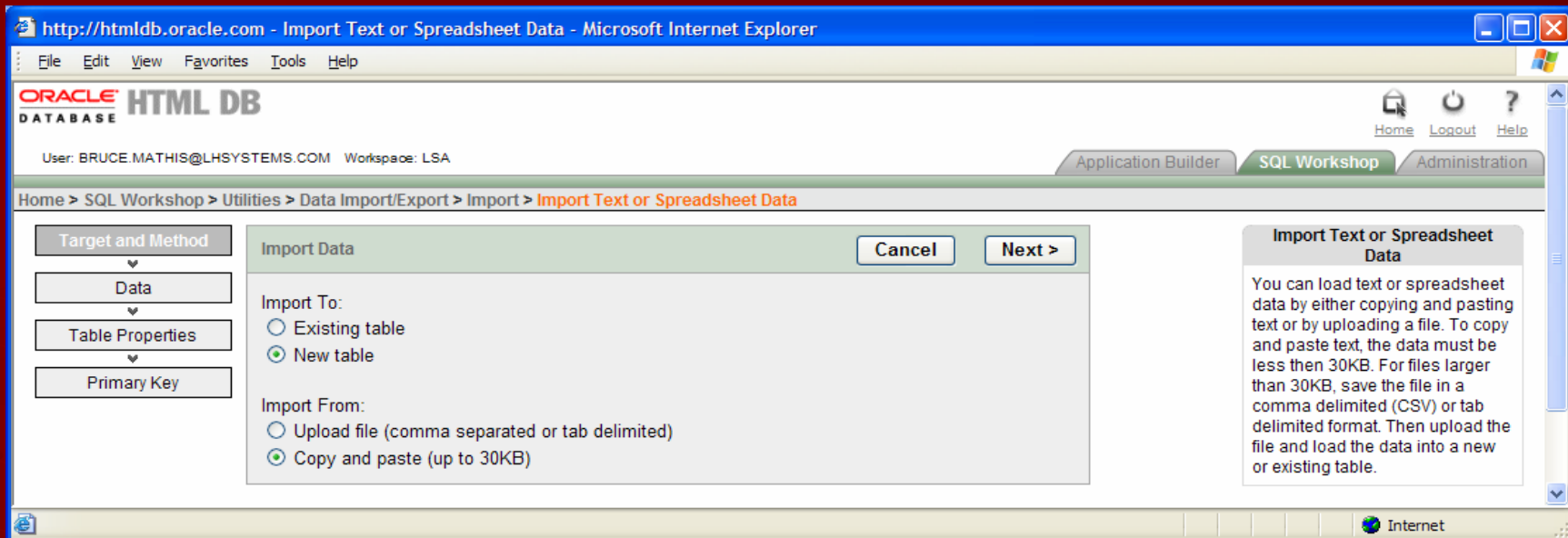












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Home > SQL Workshop > Utilities > Data Import/Export > Import > **Import Text or Spreadsheet Data**

Target and Method  
▼  
**Data**  
▼  
Table Properties  
▼  
Primary Key

Import Text or Spreadsheet Data [Cancel] [< Previous] [Next >]

**\* Data**

ID	Name	PID	Descr	Notes	Rem
101	Root		*root*	{notes	root notes}
	Albert				
102	I	101	*I*	{notes I	notes} Brian
103	II	101	*II*	{notes II	notes}
	Charlie				
104	III	101	*III*	{notes III	notes}
	David				
105	A	102	*A*	{notes A	notes} Elmer
106	B	102	*B*	{notes B	notes} Frank

1733 of 32000

☒ First row contains column names.

**Import Text or Spreadsheet Data**  
Copy the data you want to import from a spreadsheet program, such as Microsoft Excel, and paste it into the Data field.

Done Internet

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Target and Method  
▼  
Data  
▼  
Table Properties  
▼  
Primary Key

Import Text or Spreadsheet Data Cancel < Previous Next >

\* Schema BPM01A ▼  
\* Table Name SIGTable1 ☐ Preserve Case

Set Table Properties

Column Names	ID	Name	PID	Descr	Notes	Rem
Data Type	NUMBER ▼	VARCHAR2 ▼	VARCHAR2 ▼	VARCHAR2 ▼	VARCHAR2 ▼	VARCHAR2 ▼
Format						
Column Length	30	30	255	30	30	30
Upload	Yes ▼	Yes ▼	Yes ▼	Yes ▼	Yes ▼	Yes ▼
Row 1	101	Root		*root*	{notes root notes}	Albert
Row 2	102	I	101	*I*	{notes I notes}	Brian
Row 3	103	II	101	*II*	{notes II notes}	Charlie
Row 4	104	III	101	*III*	{notes III notes}	David
Row 5	105	A	102	*A*	{notes A notes}	Elmer
Row 6	106	B	102	*B*	{notes B notes}	Frank
Row 7	107	C	102	*C*	{notes C notes}	Gary
Row 8	108	D	103	*D*	{notes D notes}	Harry
Row 9	109	E	103	*E*	{notes E notes}	Igor
Row 10	110	F	103	*F*	{notes F notes}	James
Row 11	111	1	108	*1*	{notes 1 notes}	Kreg
Row 12	112	2	108	*2*	{notes 2 notes}	Larry
Row 13	113	3	109	*3*	{notes 3 notes}	Mike
Row 14	114	4	109	*4*	{notes 4 notes}	Nate
Row 15	115	5	109	*5*	{notes 5 notes}	Oscar

Done Internet



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Target and Method  
Data  
Table Properties  
Primary Key

Import Text or Spreadsheet Data Cancel < Previous Import Data

Schema: BPM01A  
Table Name: SIGTABLE1

Primary Key From: ☒ Use an existing column  
☐ Create new column

Primary Key: ID(NUMBER)

Constraint Name: SIGTABLE1\_PK

Primary Key Population: ☐ Generated from a new sequence  
☐ Generated from an existing sequence  
☒ Not generated

Import Text or Spreadsheet Data

Use this page to identify the primary key of the table. If no single column in your data set is appropriate as a primary key then identify a new column as the primary key. A primary key is used to uniquely identify a row in a table.

Done Internet

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Show My Import Go Delete Checked

Details	Imported By	Imported On	Type	Schema	Table	Succeeded	Failed
<input type="checkbox"/>	BRUCE.MATHIS@LHSYSTEMS.COM	0 seconds ago	Spreadsheet Import	BPM01A	<a href="#">SIGTABLE1</a>	43	0
<input type="checkbox"/>	BRUCE.MATHIS@LHSYSTEMS.COM	2 days ago	Spreadsheet Import	BPM01A	<a href="#">SIGTREE</a>	43	0
<input type="checkbox"/>	BRUCE.MATHIS@LHSYSTEMS.COM	7 months ago	Spreadsheet Import	BPM01A	<a href="#">TA2_EVENTS</a>	6	0
<input type="checkbox"/>	BRUCE.MATHIS@LHSYSTEMS.COM	10 months ago	Spreadsheet Import	BPM01A	<a href="#">CLOVS_TA</a>	33	0
						14	

Spreadsheet Import Repository

This page displays the status of imported Spreadsheet data.

To remove a status entry, select it and click **Delete Checked**.

Tasks

- ☐ Text Data Import Repository

Done Internet

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Schema BPM01A

Tables

sigta

SIGTABLE1

SIGTABLE1 Create

Table Data Indexes Model Constraints Grants Statistics UI Defaults Triggers Dependencies SQL

Add Column Modify Column Rename Column Drop Column Rename Copy Drop Truncate Create Lookup Table

Column Name	Data Type	Nullable	Default	Primary Key
ID	NUMBER	No	-	1
NAME	VARCHAR2(30)	Yes	-	-
PID	NUMBER	Yes	-	-
DESCR	VARCHAR2(30)	Yes	-	-
NOTES	VARCHAR2(30)	Yes	-	-
REM	VARCHAR2(30)	Yes	-	-

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Internet

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Schema BPM01A

Tables

sigta

SIGTABLE1

SIGTABLE1 Create

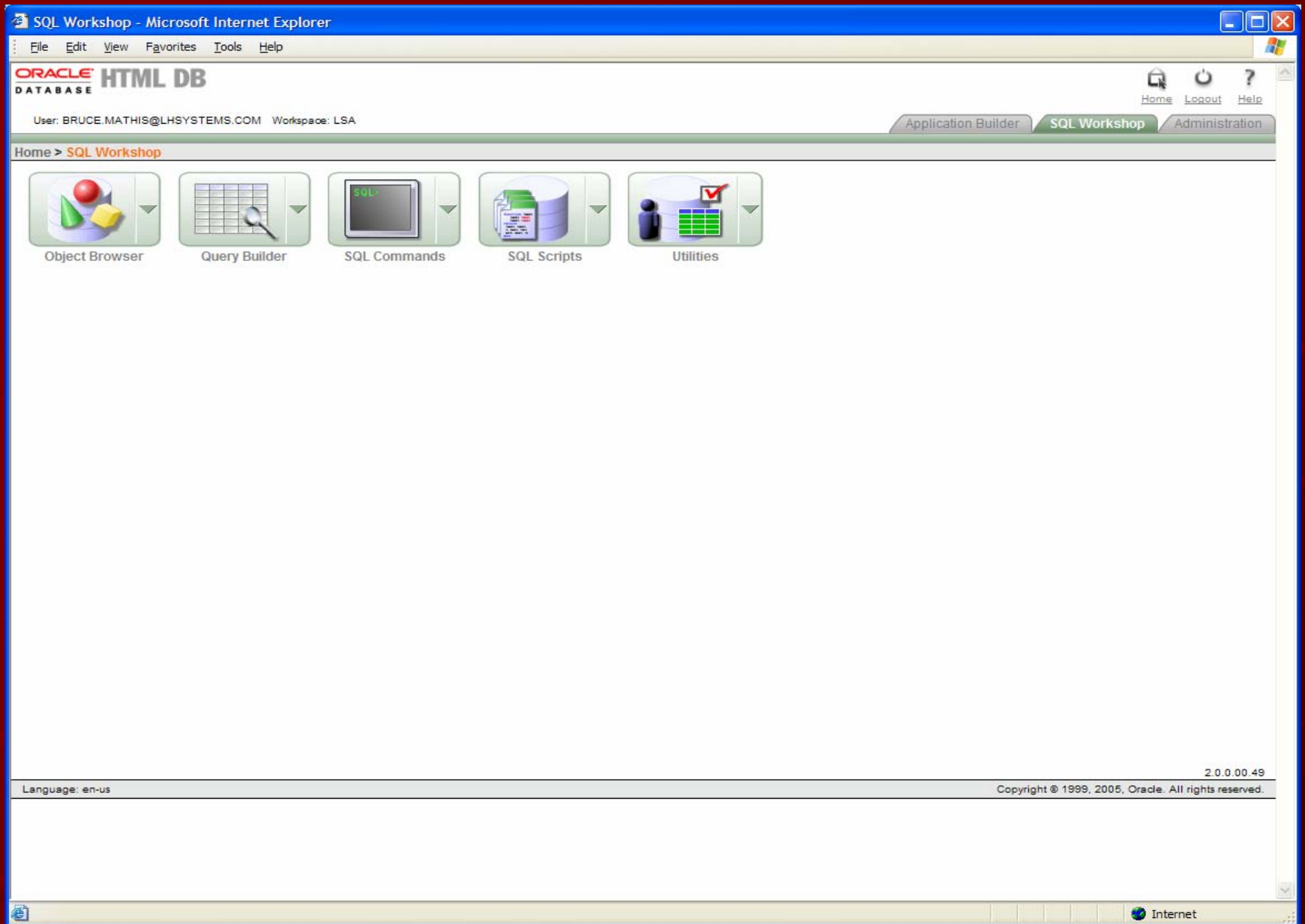
Table Data Indexes Model Constraints Grants Statistics UI Defaults Triggers Dependencies SQL

Query Count Rows Insert Row

EDIT	ID	NAME	PID	DESCR	NOTES	REM
	101	Root	-	*root*	{notes root notes}	Albert
	102	I	101	*I*	{notes I notes}	Brian
	103	II	101	*II*	{notes II notes}	Charlie
	104	III	101	*III*	{notes III notes}	David
	105	A	102	*A*	{notes A notes}	Elmer
	106	B	102	*B*	{notes B notes}	Frank

Done

Internet



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Application Builder SQL Workshop Administration

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☒ Autocommit Display 30 Save Run

```
SELECT *
  FROM sigtable1;
```

Results Explain Describe Saved SQL History

ID	NAME	PID	DESCR	NOTES	REM
101	Root	-	*root*	{notes root notes}	Albert
102	I	101	*I*	{notes I notes}	Brian
103	II	101	*II*	{notes II notes}	Charlie
104	III	101	*III*	{notes III notes}	David
105	A	102	*A*	{notes A notes}	Elmer
106	B	102	*B*	{notes B notes}	Frank
107	C	102	*C*	{notes C notes}	Gary
108	D	103	*D*	{notes D notes}	Harry
109	E	103	*E*	{notes E notes}	Igor
110	F	103	*F*	{notes F notes}	James
111	1	108	*1*	{notes 1 notes}	Kreg
112	2	108	*2*	{notes 2 notes}	Larry
113	3	109	*3*	{notes 3 notes}	Mike
114	4	109	*4*	{notes 4 notes}	Nate
115	5	109	*5*	{notes 5 notes}	Oscar
116	6	110	*6*	{notes 6 notes}	Paul

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```

SELECT *          -- depth first - follows branches
FROM sigtable1
START WITH id = 101
CONNECT BY pid = PRIOR id;

```

Results Explain Describe Saved SQL History

ID	NAME	PID	DESCR	NOTES	REM
101	Root	-	*root*	{notes root notes}	Albert
102	I	101	*I*	{notes I notes}	Brian
105	A	102	*A*	{notes A notes}	Elmer
106	B	102	*B*	{notes B notes}	Frank
107	C	102	*C*	{notes C notes}	Gary
103	II	101	*II*	{notes II notes}	Charlie
108	D	103	*D*	{notes D notes}	Harry
111	1	108	*1*	{notes 1 notes}	Kreg
119	i)	111	*i)*	{notes i) notes}	Steve
126	a)	119	*a)*	{notes a) notes}	Zammy
127	b)	119	*b)*	{notes b) notes}	Alton
134	1)	127	*1)*	{notes 1) notes}	Henry
135	2)	127	*2)*	{notes 2) notes}	Ivan
120	ii)	111	*ii)*	{notes ii) notes}	Thomas
128	c)	120	*c)*	{notes c) notes}	Bob
136	3)	128	*3)*	{notes 3) notes}	Jack

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```

SELECT *          -- depth first - follows branches
FROM sigtable1
START WITH id = 109 -- not root node
CONNECT BY pid = PRIOR id;
  
```

Results Explain Describe Saved SQL History

ID	NAME	PID	DESCR	NOTES	REM
109	E	103	*E*	{notes E notes}	Igor
113	3	109	*3*	{notes 3 notes}	Mike
114	4	109	*4*	{notes 4 notes}	Nate
121	iii)	114	*iii)*	{notes iii) notes}	Uma
122	iv)	114	*iv)*	{notes iv) notes}	Victor
129	d)	122	*d)*	{notes d) notes}	Chuck
130	e)	122	*e)*	{notes e) notes}	Donald
131	f)	122	*f)*	{notes f) notes}	Everet
138	5)	131	*5)*	{notes 5) notes}	Luke
139	6)	131	*6)*	{notes 6) notes}	Matt
140	7)	131	*7)*	{notes 7) notes}	Noel
123	v)	114	*v)*	{notes v) notes}	Walter
132	g)	123	*g)*	{notes g) notes}	Francis
133	h)	123	*h)*	{notes h) notes}	Gerry
141	8)	133	*8)*	{notes 8) notes}	Omar
142	9)	133	*9)*	{notes 9) notes}	Peter



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Home > SQL Workshop > **SQL Commands** Schema: **BPM01A**

☒ Autocommit Display **30** **Save** **Run**

```

SELECT *          -- depth first - follows branches
FROM sigtable1    -- each level listed in DESC order
START WITH id = 101
CONNECT BY pid = PRIOR id
ORDER SIBLINGS BY name DESC;

```

**Results** Explain Describe Saved SQL History

ID	NAME	PID	DESCR	NOTES	REM
101	Root	-	*root*	{notes root notes}	Albert
104	III	101	*III*	{notes III notes}	David
103	II	101	*II*	{notes II notes}	Charlie
110	F	103	*F*	{notes F notes}	James
118	8	110	*8*	{notes 8 notes}	Rich
117	7	110	*7*	{notes 7 notes}	Quenten
125	vii)	117	*vii)*	{notes vii) notes}	Yolanda
124	vi)	117	*vi)*	{notes vi) notes}	Xavier
116	6	110	*6*	{notes 6 notes}	Paul
109	E	103	*E*	{notes E notes}	Igor
115	5	109	*5*	{notes 5 notes}	Oscar
114	4	109	*4*	{notes 4 notes}	Nate
123	v)	114	*v)*	{notes v) notes}	Walter
133	h)	123	*h)*	{notes h) notes}	Gerry
142	9)	133	*9)*	{notes 9) notes}	Peter

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Application Builder

SQL Workshop

Administration

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Schema BPM01A

☒ Autocommit Display 30

Save

Run

```
SELECT id, LPAD(' ', 2*(LEVEL-1),'+')||name Name,
       pid, descr, notes, rem, LEVEL
FROM sigtable1      -- LEVEL from chosen root
START WITH name = '4' -- name not id
CONNECT BY pid = PRIOR id;
```

Results Explain Describe Saved SQL History

ID	NAME	PID	DESCR	NOTES	REM	LEVEL
114	4	109	*4*	{notes 4 notes}	Nate	1
121	+ iii)	114	*iii)*	{notes iii) notes}	Uma	2
122	+ iv)	114	*iv)*	{notes iv) notes}	Victor	2
129	+++ d)	122	*d)*	{notes d) notes}	Chuck	3
130	+++ e)	122	*e)*	{notes e) notes}	Donald	3
131	+++ f)	122	*f)*	{notes f) notes}	Everet	3
138	+++++ 5)	131	*5)*	{notes 5) notes}	Luke	4
139	+++++ 6)	131	*6)*	{notes 6) notes}	Matt	4
140	+++++ 7)	131	*7)*	{notes 7) notes}	Noel	4
123	+ v)	114	*v)*	{notes v) notes}	Walter	2
132	+++ g)	123	*g)*	{notes g) notes}	Francis	3
133	+++ h)	123	*h)*	{notes h) notes}	Gerry	3
141	+++++ 8)	133	*8)*	{notes 8) notes}	Omar	4
142	+++++ 9)	133	*9)*	{notes 9) notes}	Peter	4
143	+++++ 10)	133	*10)*	{notes 10) notes}	Robert	4



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Application Builder SQL Workshop Administration

Home > SQL Workshop > SQL Commands

Schema BPM01A

☒ Autocommit Display 30

Save

Run

```
SELECT id, LPAD(' ', 2*(LEVEL-1), '+') || name Name,
       pid, descr, rem, LEVEL,
       'Parent: ' || PRIOR(name) Parent
FROM sigtable1      -- LEVEL from chosen root
START WITH name = '4' -- name not id
CONNECT BY pid = PRIOR id;
```

Results Explain Describe Saved SQL History

ID	NAME	PID	DESCR	REM	LEVEL	PARENT
114	4	109	*4*	Nate	1	Parent:
121	+ iii)	114	*iii)*	Uma	2	Parent: 4
122	+ iv)	114	*iv)*	Victor	2	Parent: 4
129	+++ d)	122	*d)*	Chuck	3	Parent: iv)
130	+++ e)	122	*e)*	Donald	3	Parent: iv)
131	+++ f)	122	*f)*	Everet	3	Parent: iv)
138	+++++ 5)	131	*5)*	Luke	4	Parent: f)
139	+++++ 6)	131	*6)*	Matt	4	Parent: f)
140	+++++ 7)	131	*7)*	Noel	4	Parent: f)
123	+ v)	114	*v)*	Walter	2	Parent: 4
132	+++ g)	123	*g)*	Francis	3	Parent: v)
133	+++ h)	123	*h)*	Gerry	3	Parent: v)
141	+++++ 8)	133	*8)*	Omar	4	Parent: h)
142	+++++ 9)	133	*9)*	Peter	4	Parent: h)
143	+++++ 10)	133	*10)*	Robert	4	Parent: h)

☒ Autocommit Display 30

Save

Run

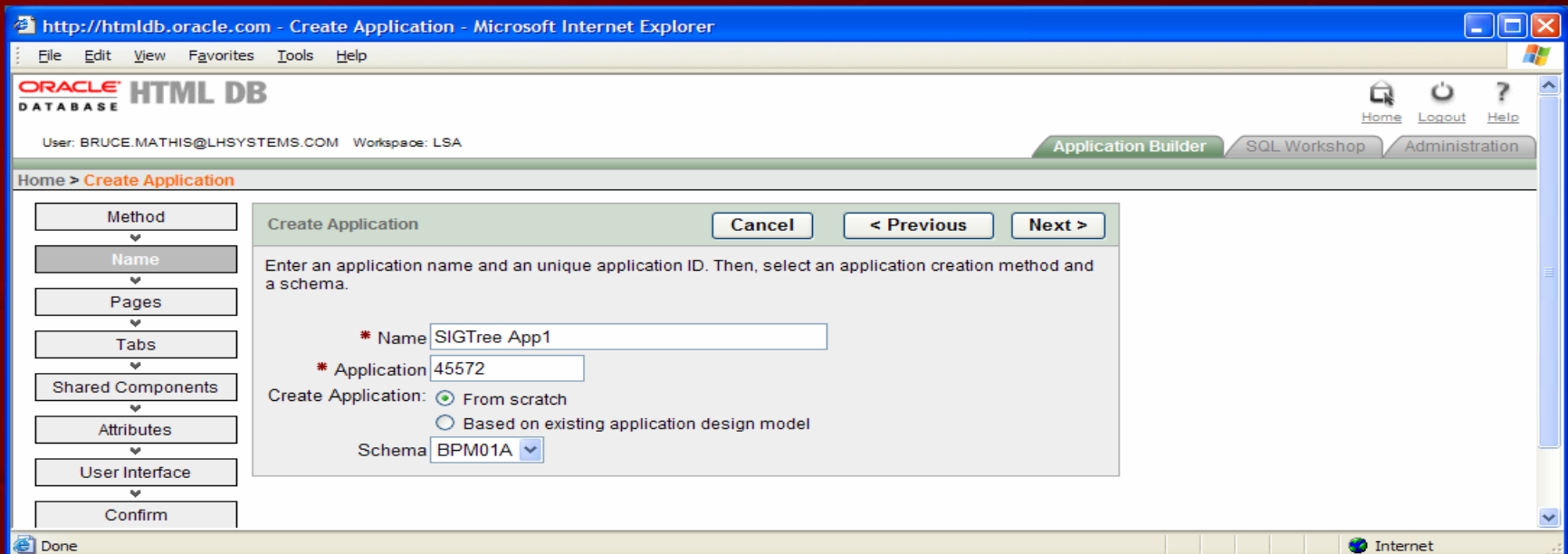
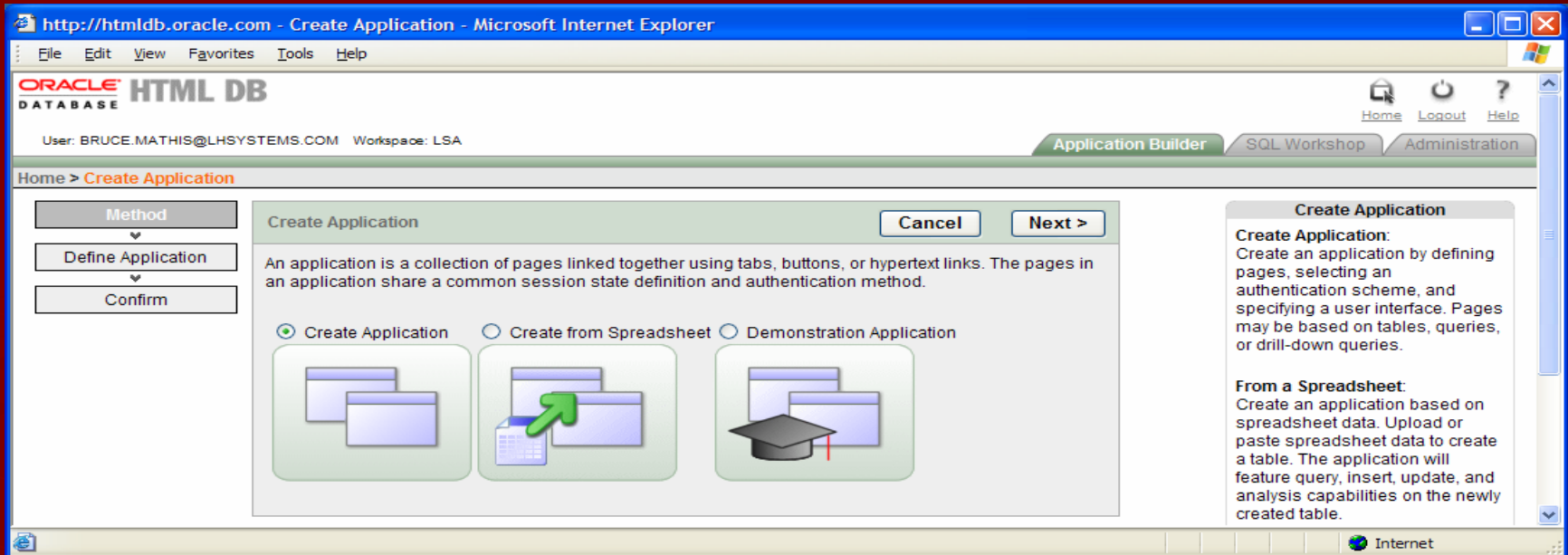
```
SELECT id, LPAD(' ', 2*(LEVEL-1),'+')||name Name,
       pid, descr, LEVEL,
       SYS_CONNECT_BY_PATH(name,'>') "Ancestors",
       CONNECT_BY_ROOT name "Root"
FROM sigtable1          -- LEVEL from chosen root
START WITH name = 'E'   -- name not id
CONNECT BY pid = PRIOR id;
```

Results Explain Describe Saved SQL History

ID	NAME	PID	DESCR	LEVEL	Ancestors	Root
109	E	103	*E*	1	=>E	E
113	+ 3	109	*3*	2	=>E=>3	E
114	+ 4	109	*4*	2	=>E=>4	E
121	+++ iii)	114	*iii)*	3	=>E=>4=>iii)	E
122	+++ iv)	114	*iv)*	3	=>E=>4=>iv)	E
129	+++++ d)	122	*d)*	4	=>E=>4=>iv)=>d)	E
130	+++++ e)	122	*e)*	4	=>E=>4=>iv)=>e)	E
131	+++++ f)	122	*f)*	4	=>E=>4=>iv)=>f)	E
138	+++++++ 5)	131	*5)*	5	=>E=>4=>iv)=>f)=>5)	E
139	+++++++ 6)	131	*6)*	5	=>E=>4=>iv)=>f)=>6)	E
140	+++++++ 7)	131	*7)*	5	=>E=>4=>iv)=>f)=>7)	E
123	+++ v)	114	*v)*	3	=>E=>4=>v)	E
132	+++++ g)	123	*g)*	4	=>E=>4=>v)=>g)	E
133	+++++ h)	123	*h)*	4	=>E=>4=>v)=>h)	E

# Create Application

- Create normal report on table sigtable1
- Create maintenance form
- Add report based on hierarchical SQL
- Adjust columns



http://htmldb.oracle.com - Create Application - Microsoft Internet Explorer

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Application Builder SQL Workshop Administration

Home > Create Application

Method  
▼  
Name  
▼  
**Pages**  
▼  
Tabs  
▼  
Shared Components  
▼  
Attributes  
▼  
User Interface  
▼  
Confirm






Create Application Cancel < Previous Next >

Page	Page Name	Page Type	Source Type	Source
1	<u>SIGTABLE1</u>	Report	Table	SIGTABLE1 ✖
2	<u>SIGTABLE1</u>	Form	Table	SIGTABLE1 ✖

**Add Page** Add Page

Select Page Type:

☐ Blank
☐ Report
☐ Form
☐ Tabular Form
☒ Report and Form

Action: **Add a report with an edit form on a second page**

Subordinate to Page: - Top Level Page - ▼

Table or View:  ▲

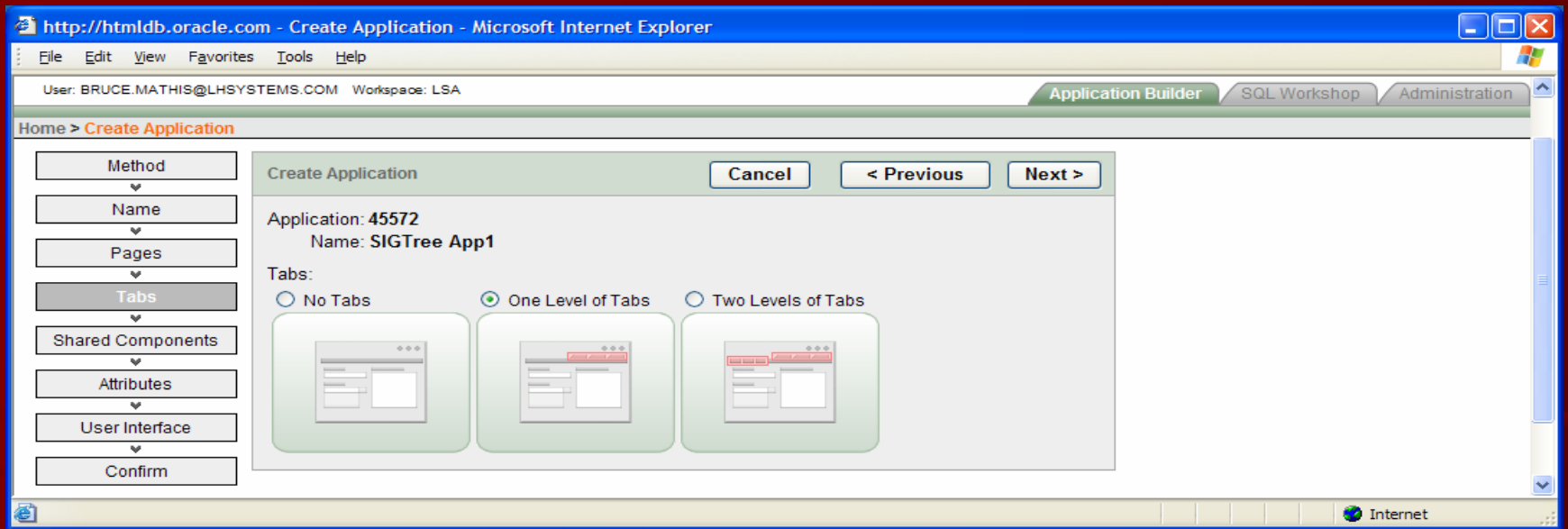
☐ Include Analysis Pages

**Add Page**

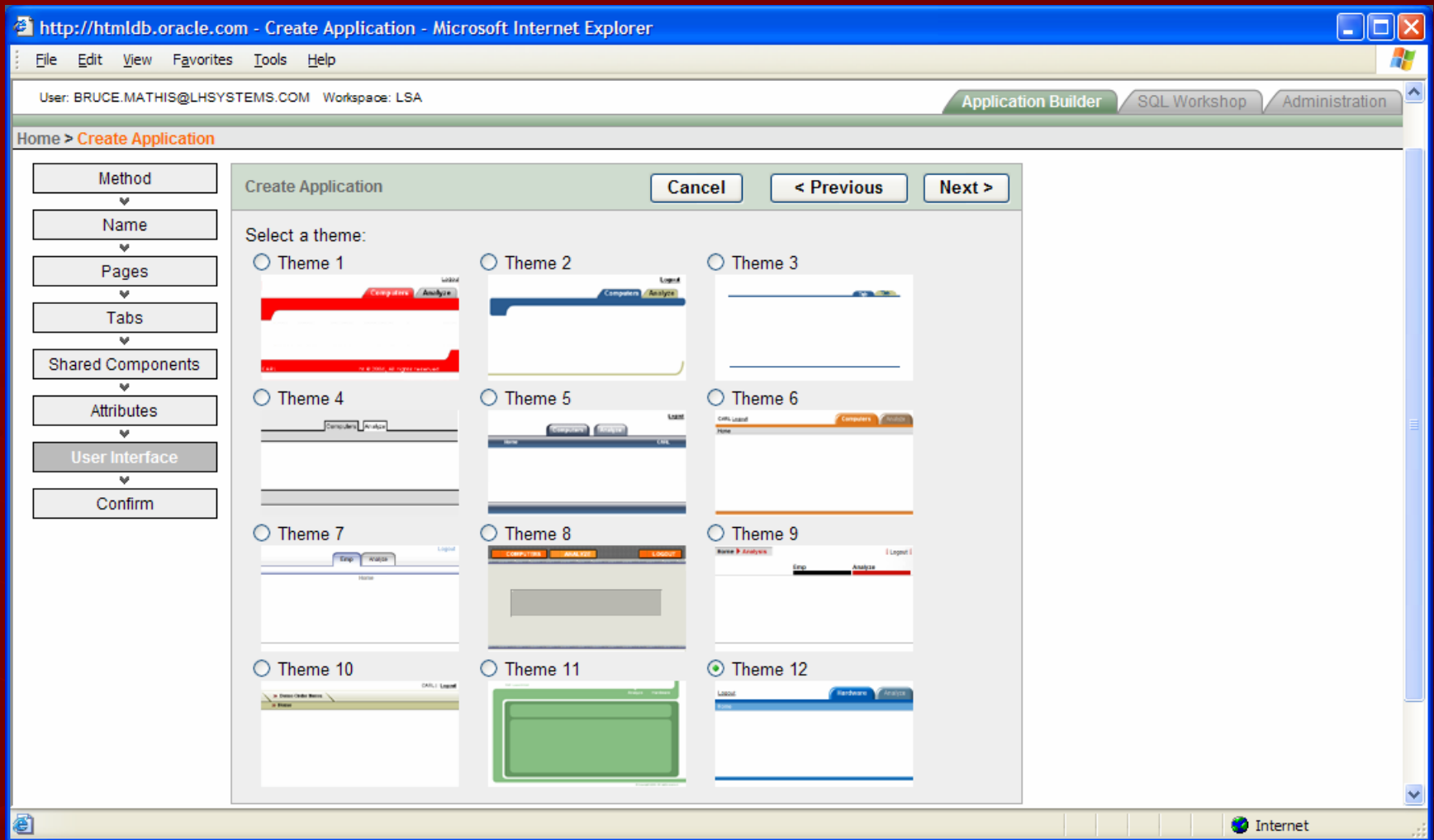
Select the type of page you wish to create:

- **Blank** creates a page with no built-in functionality.
- **Report** creates a page the contains the formatted result of a SQL query. You can choose to build a report based on a table you select, or based on a custom SQL SELECT statement or a PL/SQL function returning a SQL SELECT statement that you provide.
- **Form** creates a form to update a single row in a database table.
- **Tabular Form** creates a form to perform update, insert, and delete operations on multiple rows in a database table.
- **Report and Form** builds a two page report and form combination. On the first page, users select a row to update. On the second page users can update the selected table or

Internet







http://htmldb.oracle.com - Create Application - Microsoft Internet Explorer

File Edit View Favorites Tools Help

ORACLE HTML DB DATABASE

User: BRUCE.MATHIS@LHSYSTEMS.COM Workspace: LSA

Application Builder SQL Workshop Administration

Home > Create Application

Method  
Name  
Pages  
Tabs  
Shared Components  
Attributes  
User Interface  
Confirm

Create Application

Cancel < Previous Create

You have requested to create an application with the following attributes. Please confirm your selections.

Application	45572
Name	SIGTree App1
Parsing Schema	BPM01A
Default Language	en-us
Tabs	One Level of Tabs
Default Authentication Scheme	No Authentication
UI Theme	12

☒ Save this definition as a design model for reuse

Language: en-us

2.0.0.00.49

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Done Internet



http://htmldb.oracle.com - Application Builder - Microsoft Internet Explorer

File Edit View Favorites Tools Help

ORACLE HTML DB  
DATABASE

User: BRUCE.MATHIS@LHSYSTEMS.COM Workspace: LSA

Application Builder SQL Workshop Administration

Home > Application Builder > Application 45572 Page 1

Application created successfully.

Application: 45572 - SIGTree App1

Run Application Edit Attributes Shared Components Export / Import

Tasks

- Delete this Application
- Manage Page Groups
- Manage Page Locks
- View Application Reports

Page View Details Display 15 Go Create Page >

Page	Name	Updated	Updated By	Lock	Run
1	<a href="#">SIGTABLE1</a>	1 seconds ago	-		
2	<a href="#">SIGTABLE1</a>	1 seconds ago	-		
101	<a href="#">Login</a>	1 seconds ago	-		

row(s) 1 - 3 of 3

Internet

http://htmldb.oracle.com - SIGTABLE1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1

SIGTABLE1

**SIGTABLE1**

[Reset](#) [Create](#)

Search  Display  [Go](#)

	Name	Pid	Descr	Notes	Rem
	1	108	*1*	{notes 1 notes}	Kreg
	1)	127	*1)*	{notes 1) notes}	Henry
	10)	133	*10)*	{notes 10) notes}	Robert
	2	108	*2*	{notes 2 notes}	Larry
	2)	127	*2)*	{notes 2) notes}	Ivan
	3	109	*3*	{notes 3 notes}	Mike
	3)	128	*3)*	{notes 3) notes}	Jack
	4	109	*4*	{notes 4 notes}	Nate
	4)	128	*4)*	{notes 4) notes}	Komar
	5	109	*5*	{notes 5 notes}	Oscar
	5)	131	*5)*	{notes 5) notes}	Luke
	6	110	*6*	{notes 6 notes}	Paul
	6)	131	*6)*	{notes 6) notes}	Matt
	7	110	*7*	{notes 7 notes}	Quenten
	7)	131	*7)*	{notes 7) notes}	Noel

row(s) 1 - 15 of 43

[Spread Sheet](#)

[Edit Application](#) [Edit Page 1](#) [Create](#) [Session](#) [Debug](#) [Show Edit Links](#)

Done Internet

http://htmldb.oracle.com - SIGTABLE1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1

SIGTABLE1 > SIGTABLE1

**SIGTABLE1**

[Cancel](#) [Delete](#) [Apply Changes](#)

Rem

Name

Pid

Descr

Notes

[Edit Application](#) [Edit Page 2](#) [Create](#) [Session](#) [Debug](#) [Show Edit Links](#)

Internet

http://htmldb.oracle.com - Page Definition (SIGTABLE1) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

**ORACLE** **HTML DB** **DATABASE**

User: BRUCE.MATHIS@LHSYSTEMS.COM Workspace: LSA

Application Builder SQL Workshop Administration

Home > Application Builder > Application 45572 > Page Definition Page 1

Page 1 View Definition Go < > Delete Copy Edit Attributes Create >

Name: SIGTABLE1  
Last Updated: 13 hours ago

Page Rendering	Page Processing	Shared Components
<b>Regions</b> <ul style="list-style-type: none"> <li>Display Point: Page Template Body (3) <ul style="list-style-type: none"> <li>Report: SIGTABLE1 (10)</li> </ul> </li> <li>Display Point: Region Position 01 <ul style="list-style-type: none"> <li>Breadcrumb: Breadcrumbs (1)</li> </ul> </li> </ul>	<b>Computations</b> <ul style="list-style-type: none"> <li>After Submit <ul style="list-style-type: none"> <li>10: Reset Pagination</li> <li>20: Reset report search</li> </ul> </li> </ul>	<b>Tabs</b> <ul style="list-style-type: none"> <li>Tab Set: TS1 <ul style="list-style-type: none"> <li>SIGTABLE1</li> </ul> </li> </ul>
<b>Buttons</b> <ul style="list-style-type: none"> <li>Region: SIGTABLE1 <ul style="list-style-type: none"> <li>10: RESET</li> <li>10: CREATE (Redirect)</li> <li>Item: P1_GO</li> </ul> </li> </ul>	<b>Validations</b>	<b>Lists of Values</b> <ul style="list-style-type: none"> <li>Report Row Per Page</li> </ul>
<b>Items</b> <ul style="list-style-type: none"> <li>Region: SIGTABLE1 <ul style="list-style-type: none"> <li>10: P1_REPORT_SEARCH Text Field (always submits page when Enter pressed)</li> <li>20: P1_ROWS Select List</li> <li>30: P1_GO button</li> </ul> </li> </ul>	<b>Processes</b> <ul style="list-style-type: none"> <li>After Processing <ul style="list-style-type: none"> <li>10: Go To Page 1 (Unconditional)</li> </ul> </li> </ul>	<b>Breadcrumbs</b> <ul style="list-style-type: none"> <li>Breadcrumb</li> </ul>
<b>Computations</b>	<b>Branches</b>	<b>Lists</b>
<b>Processes</b>		<b>Theme</b> <ul style="list-style-type: none"> <li>12: Blue</li> </ul>
		<b>Templates</b> <ul style="list-style-type: none"> <li>Page: One Level Tabs</li> <li>Region: Breadcrumb Region</li> <li>Region: Reports Region</li> <li>Label: Optional Label with Help</li> <li>Button: Button</li> <li>Button: Button</li> <li>Breadcrumb: Breadcrumb Menu</li> <li>Report: Standard, Alternating Row Colors</li> </ul>
		<b>Security</b>
		<b>Navigation Bar</b> <ul style="list-style-type: none"> <li>Logout</li> </ul>

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Done Internet

http://htmldb.oracle.com - Report Attributes - Microsoft Internet Explorer

File Edit View Favorites Tools Help

ORACLE DATABASE HTML DB

User: BRUCE.MATHIS@LHSYSTEMS.COM Workspace: LSA

Application Builder SQL Workshop Administration

Home > Application Builder > Application 45572 > Page Definition > Report Attributes

Page 1

Region Definition Report Attributes

Report Attributes

Cancel Apply Changes

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

Column Attributes

Headings Type: ☐ Column Names ☐ Column Names (InitCap) ☒ Custom ☐ PL/SQL ☐ None

	Alias	Link	Edit		Heading	Column Alignment	Heading Alignment	Show	Sum	Sort	Sort Sequence
	ID	✓	✓	▼ ▲	 	right	center	✓	<input type="checkbox"/>	✓	-
	NAME		✓	▼ ▲	Name	left	center	✓	<input type="checkbox"/>	✓	1
	PID		✓	▼ ▲	Pid	right	center	✓	<input type="checkbox"/>	✓	-
	DESCR		✓	▼ ▲	Descr	left	center	✓	<input type="checkbox"/>	✓	-
	NOTES		✓	▼ ▲	Notes	left	center	✓	<input type="checkbox"/>	✓	-
	REM		✓	▼ ▲	Rem	left	center	✓	<input type="checkbox"/>	✓	-

When moving the last column further down, it will show up as the first column of your report.  
When moving the first column up, it will be moved to the end of your report.

Layout and Pagination

Report Template: template: 12. Standard, Alternating Row Colors

[HTML] [Look 1] [Look 2] [Look 3] [Look 4] [CSV] [XML]

Show Null Values as:

Pagination Scheme: Row Ranges 1-15 16-30 in select list (with pagination)

[None] [Use pagination buttons] [Rows X to Y] [Select List] [Search Engine]

Display Position: Bottom - Right

Report Attributes

Use report attributes to precisely control the appearance of a report. You can use these attributes to define report headers, report templates, pagination, sorting, and formatting.

To define column attributes, click the edit icon adjacent to the column Alias. To apply a report template, make a selection from the Report Templates list.

To specify pagination, make a selection from the Pagination Scheme list. For example, to implement pagination using buttons, select **Use Externally Created Pagination Buttons**.

Tasks

- ☐ Find Items
- ☐ Show Query Source
- ☐ Add Column Link
- ☐ Add Derived Column

Done Internet

http://htmldb.oracle.com - Edit Region - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Home > Application Builder > Application 45572 > Page Definition > Edit Region

Page 1

Report attributes updated.

Region Definition Report Attributes

Region: 2 of 2

Cancel Delete Apply Changes

Name > User Interface > Source > Conditions > Header and Footer > Authorization > Customization > Configuration > Comments

Name

Page: 1 SIGTABLE1

\* Title SIGTABLE1 ☐ exclude title from translation

Type SQL Query

[HTML] [HTML w/shortcuts] [SQL Query] [SQL Query Func. Body] [PLSQL]

User Interface

Template Reports Region

\* Sequence 10

Display Point Page Template Body (3. items above region content)

[Body] [Pos.1] [Pos.2] [Pos.3] [Pos.4]

Column 1

Region HTML table cell attributes

Source

Region Source

```
select
"ID",
"NAME",
"PID",
"DESCR",
"NOTES",
"REM"
from "SIGTABLE1"
where
(
```

☒ Use Query-Specific Column Names and Validate Query

☐ Use Generic Column Names (parse query at runtime only)

Page Region

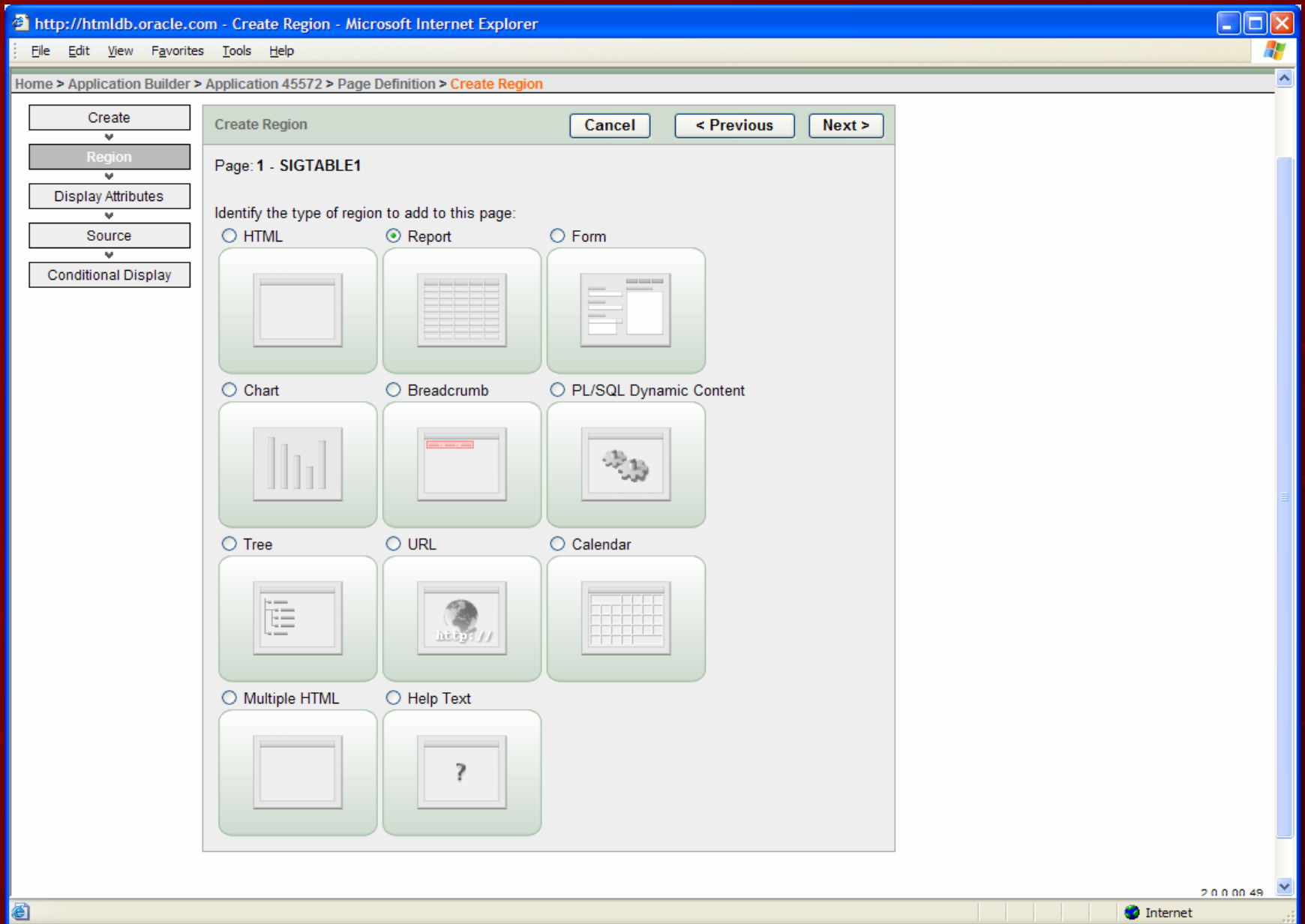
Use this page to edit region attributes. A region is an area on a page that serves as a container for content.

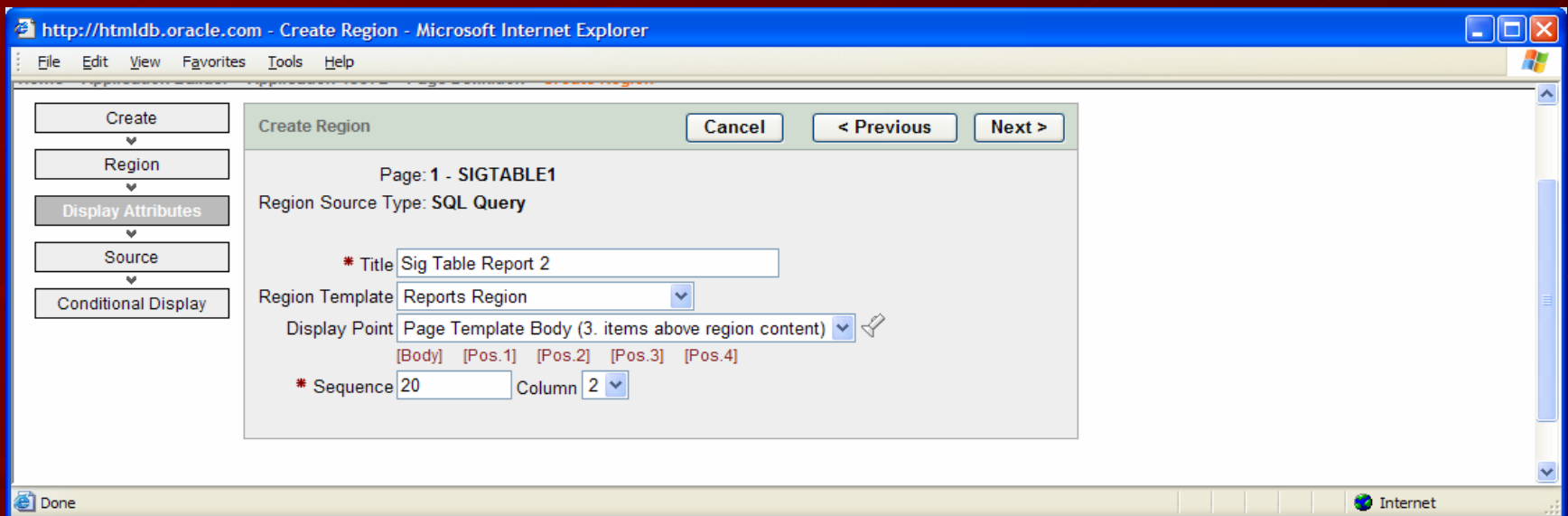
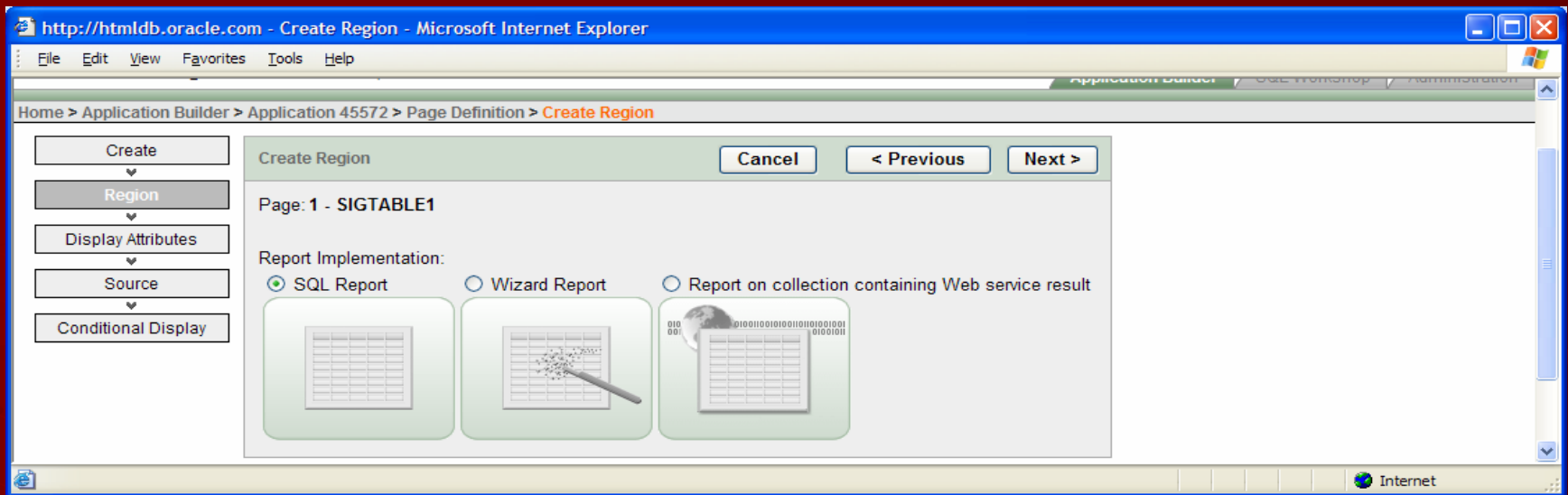
Return to Page ☐

Tasks

- Item Finder
- Undo region source

Internet





http://htmldb.oracle.com - Create Region - Microsoft Internet Explorer

File Edit View Favorites Tools Help

**ORACLE HTML DB**  
DATABASE

User: BRUCE.MATHIS@LHSYSTEMS.COM Workspace: LSA

Application Builder SQL Workshop Administration

Home > Application Builder > Application 45572 > Page Definition > Create Region

Create  
Region  
Display Attributes  
Source  
Conditional Display

Create Region Cancel < Previous Next > Create Region

Page: 1 - SIGTABLE1  
Region Title: Sig Table Report 2

Enter SQL Query or PL/SQL function returning a SQL Query:

```
SELECT ID, RPAD(' ', 2*LEVEL-1, '+') || name Name, -- sigsql10  
       descr, pid, LEVEL "level from start",  
       'Mom is: ' || PRIOR(name) "Mom", -- who's the parent  
       PRIOR(descr) "Moms descr", -- parents description  
       CONNECT_BY_ISCYCLE "loopcheck", -- 1= child is ancestor  
       SYS_CONNECT_BY_PATH(name, ' => ') "My ancestors",  
       CONNECT_BY_ROOT name "Name of Root"  
FROM sigtree
```

Query Builder

Report Template: template: 12. Standard, Alternating Row Colors

Rows Per Page: 15

Break Columns: - No Break Control -

Columns Headings: ☒ Derived from query columns ☐ Generic columns

Max. Columns: 60

> Items  
> SQL Query Example

2.0.0.00.49  
Language: en-us Copyright © 1999, 2005, Oracle. All rights reserved.

Internet



http://htmldb.oracle.com - Page Definition (SIGTABLE1) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

ORACLE HTML DB DATABASE

User: BRUCE.MATHIS@LHSYSTEMS.COM Workspace: LSA

Application Builder SQL Workshop Administration

Home > Application Builder > Application 45572 > Page Definition Page 1

Region created.

Page 1 View Definition Go < > Delete Copy Edit Attributes Create >

Name: SIGTABLE1  
Last Updated: BRUCE.MATHIS@LHSYSTEMS.COM, 0 seconds

Page Rendering	Page Processing	Shared Components
<b>Regions</b> Display Point: Page Template Body (3) ○ Report: SIGTABLE1 (10) ○ Report: Sig Table Report 2 (20) Display Point: Region Position 01 ○ Breadcrumb: Breadcrumbs (1)	<b>Computations</b> <b>Validations</b> <b>Processes</b> After Submit ○ 10: Reset Pagination ○ 20: Reset report search <b>Branches</b> After Processing ○ 10: Go To Page 1 (Unconditional)	<b>Tabs</b> Tab Set: TS1 ○ SIGTABLE1 <b>Lists of Values</b> ○ Report Row Per Page <b>Breadcrumbs</b> ○ Breadcrumb <b>Lists</b> <b>Theme</b> ○ 12. Blue <b>Templates</b> ○ Page: One Level Tabs ○ Region: Breadcrumb Region ○ Region: Reports Region ○ Label: Optional Label with Help ○ Button: Button ○ Button: Button ○ Breadcrumb: Breadcrumb Menu ○ Report: Standard, Alternating Row Colors <b>Security</b> <b>Navigation Bar</b> ○ Logout
<b>Buttons</b> Region: SIGTABLE1 ○ 10: RESET ○ 10: CREATE (Redirect) ○ Item: P1_GO		
<b>Items</b> Region: SIGTABLE1 ○ 10: P1_REPORT_SEARCH Text Field (always submits page when Enter pressed) ○ 20: P1_ROWS Select List ○ 30: P1_GO button		
<b>Computations</b> <b>Processes</b>		

http://htmldb.oracle.com - SIGTABLE1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1

SIGTABLE1

### SIGTABLE1

**Reset Create**

Search  Display 15

Name	Pid	Descr	Notes	Rem
1	108	*1*	{notes 1 notes}	Kreg
1)	127	*1)*	{notes 1) notes}	Henry
10)	133	*10)*	{notes 10) notes}	Robert
2	108	*2*	{notes 2 notes}	Larry
2)	127	*2)*	{notes 2) notes}	Ivan
3	109	*3*	{notes 3 notes}	Mike
3)	128	*3)*	{notes 3) notes}	Jack
4	109	*4*	{notes 4 notes}	Nate
4)	128	*4)*	{notes 4) notes}	Komar
5	109	*5*	{notes 5 notes}	Oscar
5)	131	*5)*	{notes 5) notes}	Luke
6	110	*6*	{notes 6 notes}	Paul
6)	131	*6)*	{notes 6) notes}	Matt
7	110	*7*	{notes 7 notes}	Quenten
7)	131	*7)*	{notes 7) notes}	Noel

row(s) 1 - 15 of 43

[Spread Sheet](#)

### Sig Table Report 2

ID	NAME	DESCR	PID	level from start	Mom	Moms descr	loopcheck	My ancestors	Name of Root
108	D	*D*	103	1	Mom is:	-	0	=> D	D
111	++1	*1*	108	2	Mom is: D	*D*	0	=> D => 1	D
119	++++i)	*i)*	111	3	Mom is: 1	*1*	0	=> D => 1 => i)	D
126	+++++a)	*a)*	119	4	Mom is: i)	*i)*	0	=> D => 1 => i) => a)	D
127	+++++b)	*b)*	119	4	Mom is: i)	*i)*	0	=> D => 1 => i) => b)	D
134	+++++++1)	*1)*	127	5	Mom is: b)	*b)*	0	=> D => 1 => i) => b) => 1)	D
135	+++++++2)	*2)*	127	5	Mom is: b)	*b)*	0	=> D => 1 => i) => b) => 2)	D
120	+++++ii)	*ii)*	111	3	Mom is: 1	*1*	0	=> D => 1 => ii)	D
128	+++++c)	*c)*	120	4	Mom is: ii)	*ii)*	0	=> D => 1 => ii) => c)	D
136	+++++++3)	*3)*	128	5	Mom is: c)	*c)*	0	=> D => 1 => ii) => c) => 3)	D
137	+++++++4)	*4)*	128	5	Mom is: c)	*c)*	0	=> D => 1 => ii) => c) => 4)	D
112	++2	*2-2*	108	2	Mom is: D	*D*	0	=> D => 2	D

1 - 12

Edit Application Edit Page 1 Create Session Debug Show Edit Links

http://htmldb.oracle.com - SIGTABLE1 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1

### SIGTABLE1

**Reset Create**

Search  Display 15

	Name	Pid	Descr	Notes	Rem
	1	108	*1*	{notes 1 notes}	Kreg
	1)	127	*1)*	{notes 1) notes}	Henry
	10)	133	*10)*	{notes 10) notes}	Robert
	2	108	*2*	{notes 2 notes}	Larry
	2)	127	*2)*	{notes 2) notes}	Ivan
	3	109	*3*	{notes 3 notes}	Mike
	3)	128	*3)*	{notes 3) notes}	Jack
	4	109	*4*	{notes 4 notes}	Nate
	4)	128	*4)*	{notes 4) notes}	Komar
	5	109	*5*	{notes 5 notes}	Oscar
	5)	131	*5)*	{notes 5) notes}	Luke
	6	110	*6*	{notes 6 notes}	Paul
	6)	131	*6)*	{notes 6) notes}	Matt
	7	110	*7*	{notes 7 notes}	Quenten
	7)	131	*7)*	{notes 7) notes}	Noel

row(s) 1 - 15 of 43

[Spread Sheet](#)

### Sig Table Report 2

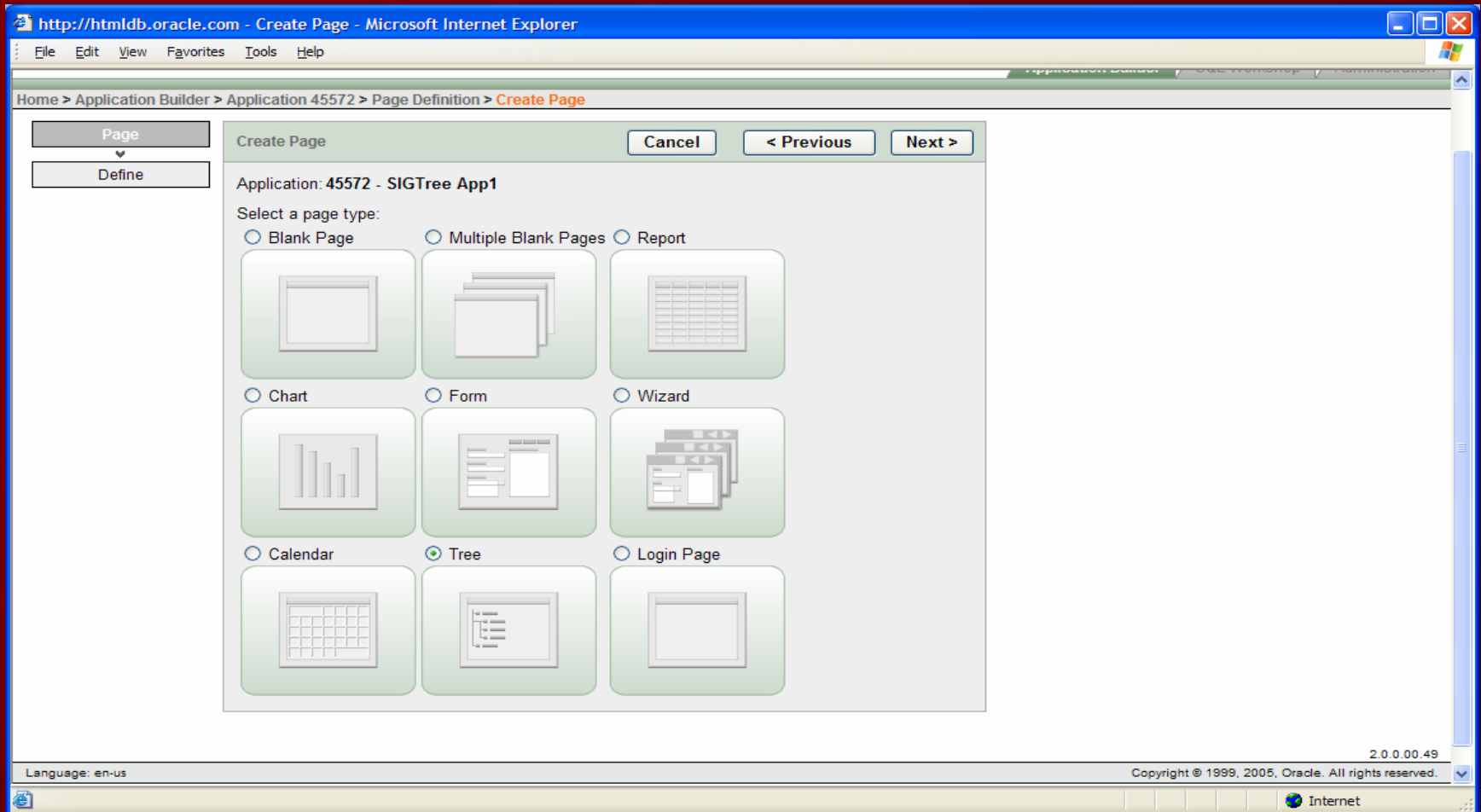
Id	Name	Description	Parent Id	Level From Start	Mom	Moms Description	Loop check	My Ancestors	Name Of Root
108	D	*D*	103	1	Mom is:	-	0	=> D	D
111	++1	*1*	108	2	Mom is: D	*D*	0	=> D => 1	D
119	++++i)	*i)*	111	3	Mom is: 1	*1*	0	=> D => 1 => i)	D
126	+++++a)	*a)*	119	4	Mom is: i)	*i)*	0	=> D => 1 => i) => a)	D
127	+++++b)	*b)*	119	4	Mom is: i)	*i)*	0	=> D => 1 => i) => b)	D
134	+++++++1)	*1)*	127	5	Mom is: b)	*b)*	0	=> D => 1 => i) => b) => 1)	D
135	+++++++2)	*2)*	127	5	Mom is: b)	*b)*	0	=> D => 1 => i) => b) => 2)	D
120	+++++ii)	*ii)*	111	3	Mom is: 1	*1*	0	=> D => 1 => ii)	D
128	+++++c)	*c)*	120	4	Mom is: ii)	*ii)*	0	=> D => 1 => ii) => c)	D
136	+++++++3)	*3)*	128	5	Mom is: c)	*c)*	0	=> D => 1 => ii) => c) => 3)	D
137	+++++++4)	*4)*	128	5	Mom is: c)	*c)*	0	=> D => 1 => ii) => c) => 4)	D
112	++2	*2-2*	108	2	Mom is: D	*D*	0	=> D => 2	D

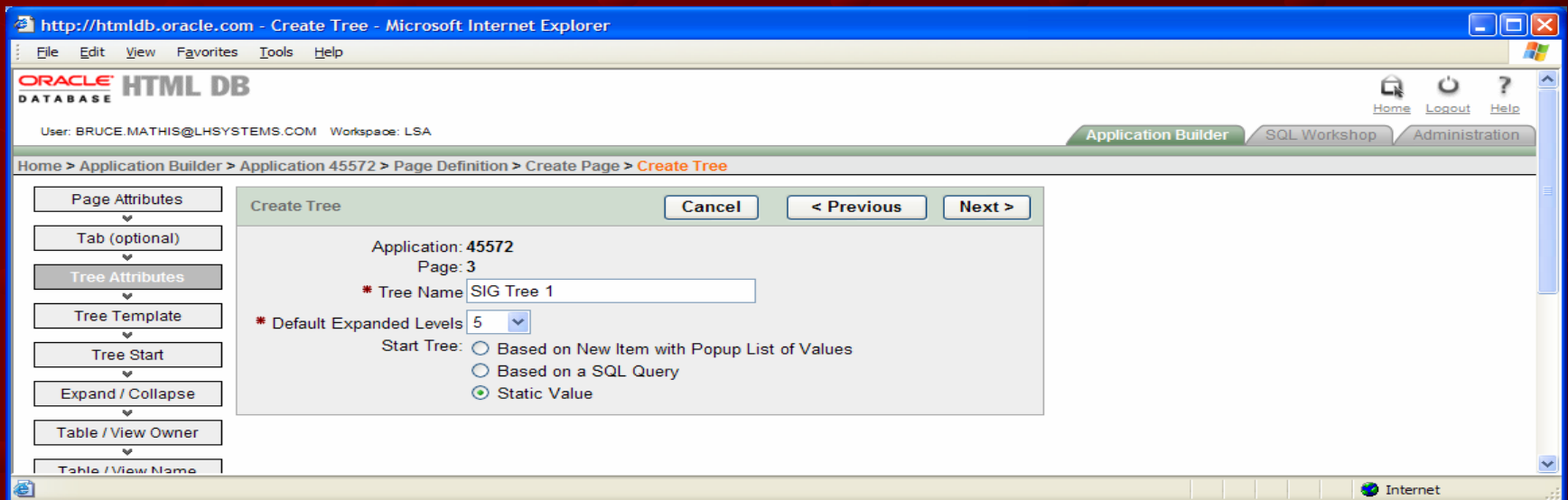
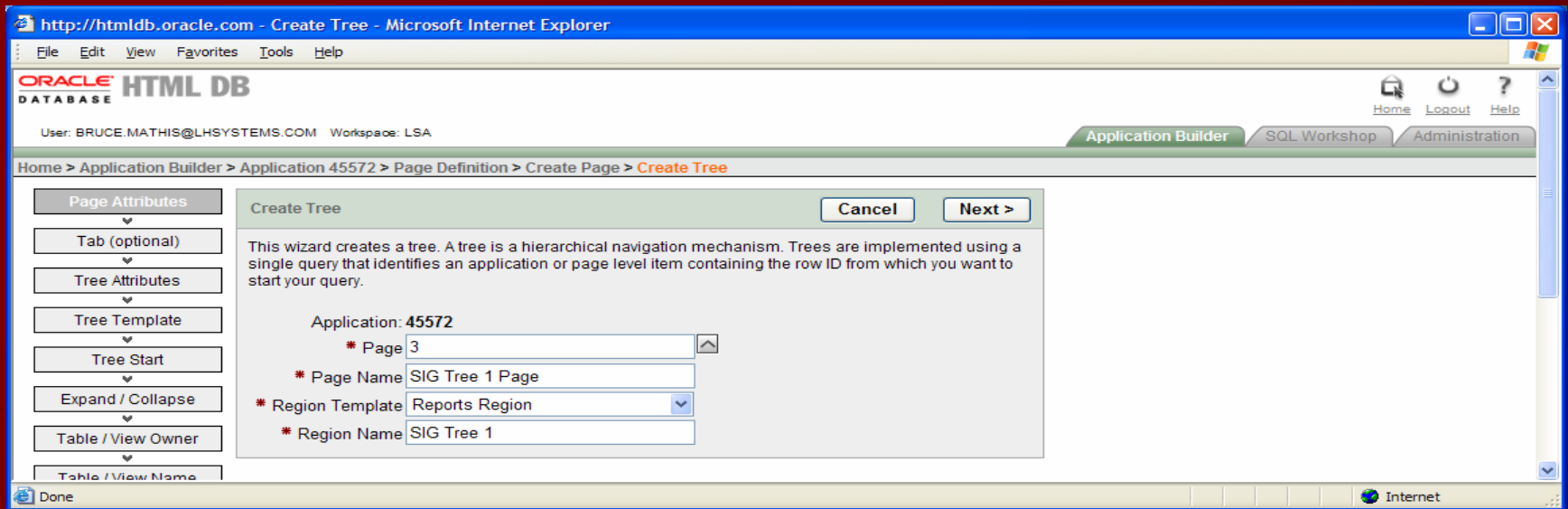
1 - 12

Edit Application Edit Page 1 Create Session Debug Show Edit Links

Done Internet

# Create a Tree Page





http://htmldb.oracle.com - Create Tree - Microsoft Internet Explorer

File Edit View Favorites Tools Help

ORACLE HTML DB DATABASE

User: BRUCE.MATHIS@LHSYSTEMS.COM Workspace: LSA

Application Builder SQL Workshop Administration

Home > Application Builder > Application 45572 > Page Definition > Create Page > Create Tree

Create Tree

Application: 45572  
Page: 3

Tree Template: ☒ Standard Tree

☐ Tree with Folders

☐ Tree with Information Icon

King  
├── Jones  
│ ├── Scott  
│ └── Blake  
└── Clark

King  
├── Jones  
│ ├── Scott  
│ └── Blake  
└── Clark

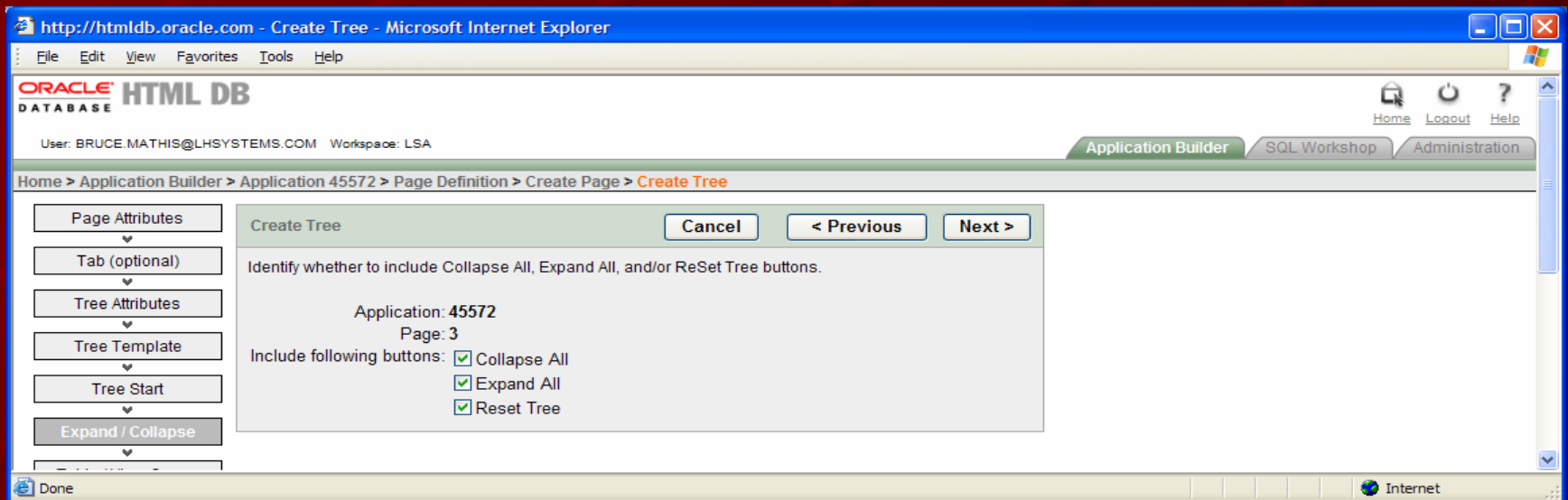
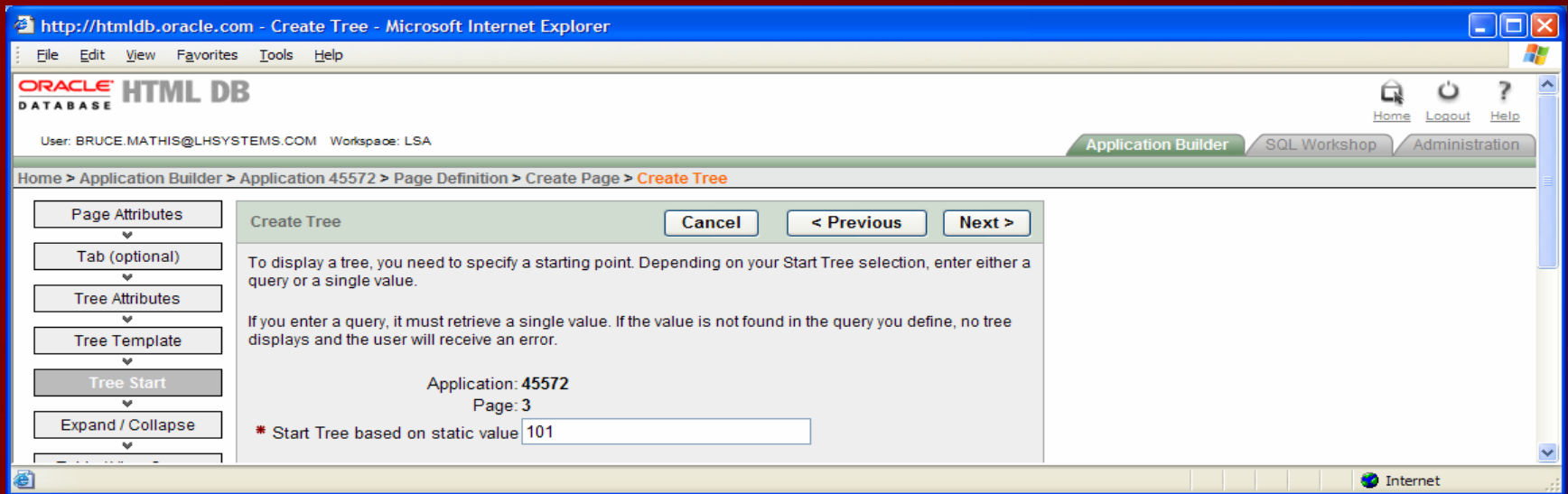
King  
├── Jones  
│ ├── Scott  
│ └── Blake  
└── Clark

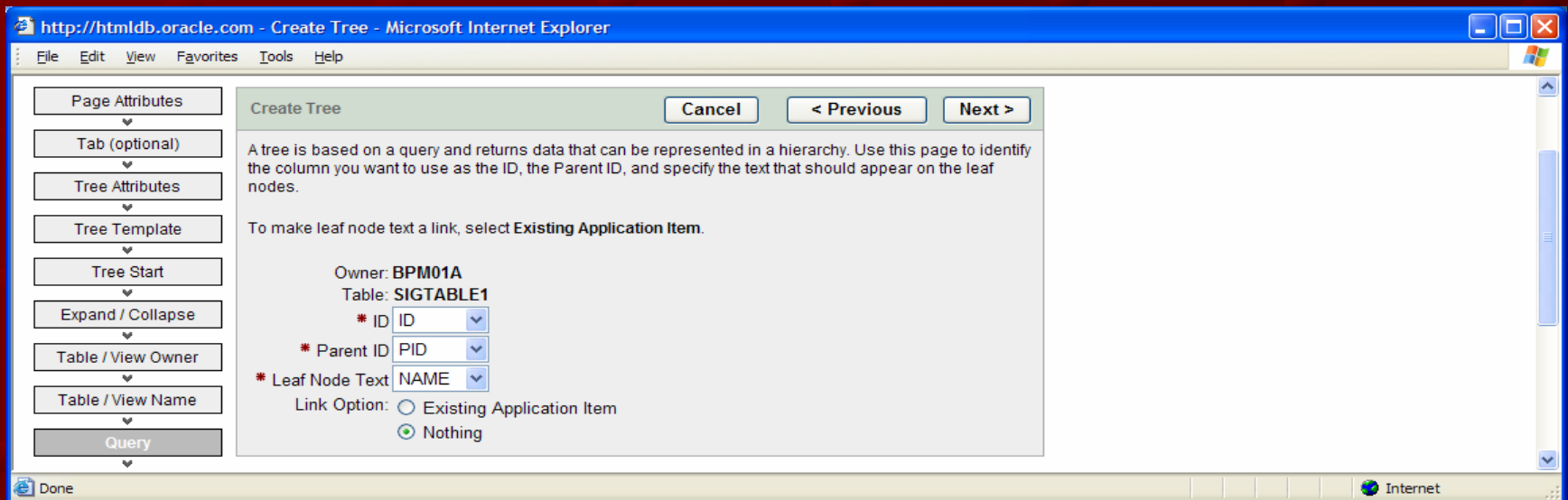
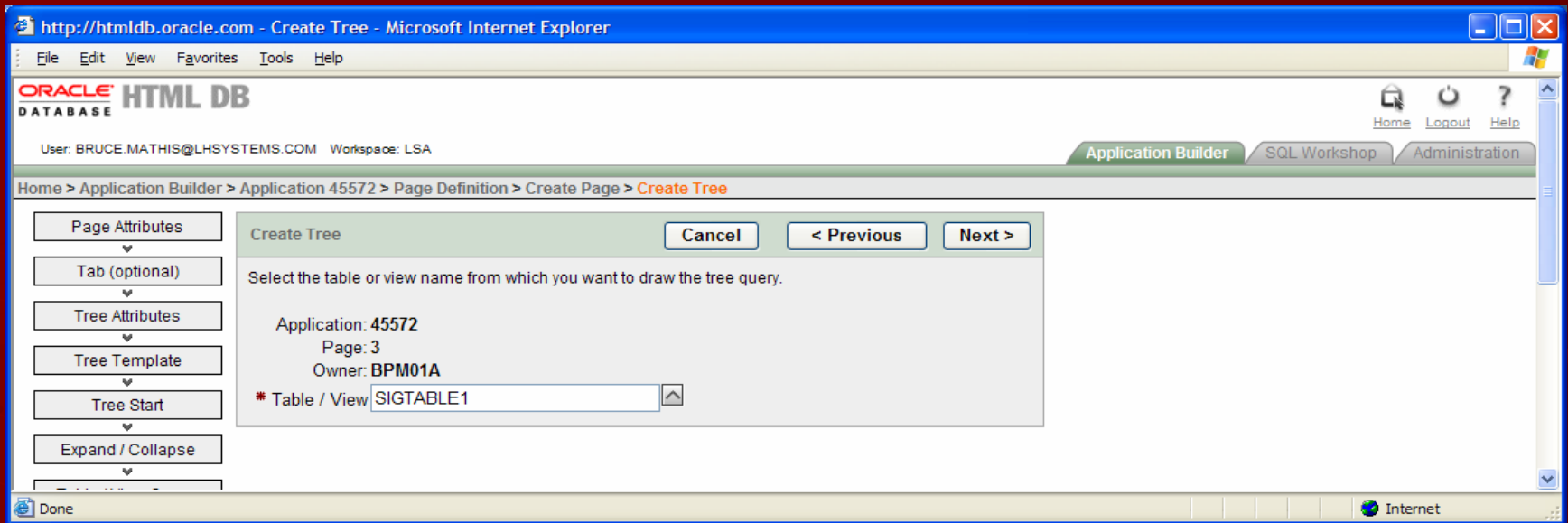
Page Attributes  
▼  
Tab (optional)  
▼  
Tree Attributes  
▼  
Tree Template  
▼  
Tree Start  
▼  
Expand / Collapse  
▼  
Table / View Owner  
▼  
Table / View Name  
▼  
Query  
▼  
Link  
▼  
Where and Order by  
▼  
Buttons  
▼  
Branching  
▼  
Confirm

Cancel < Previous Next >

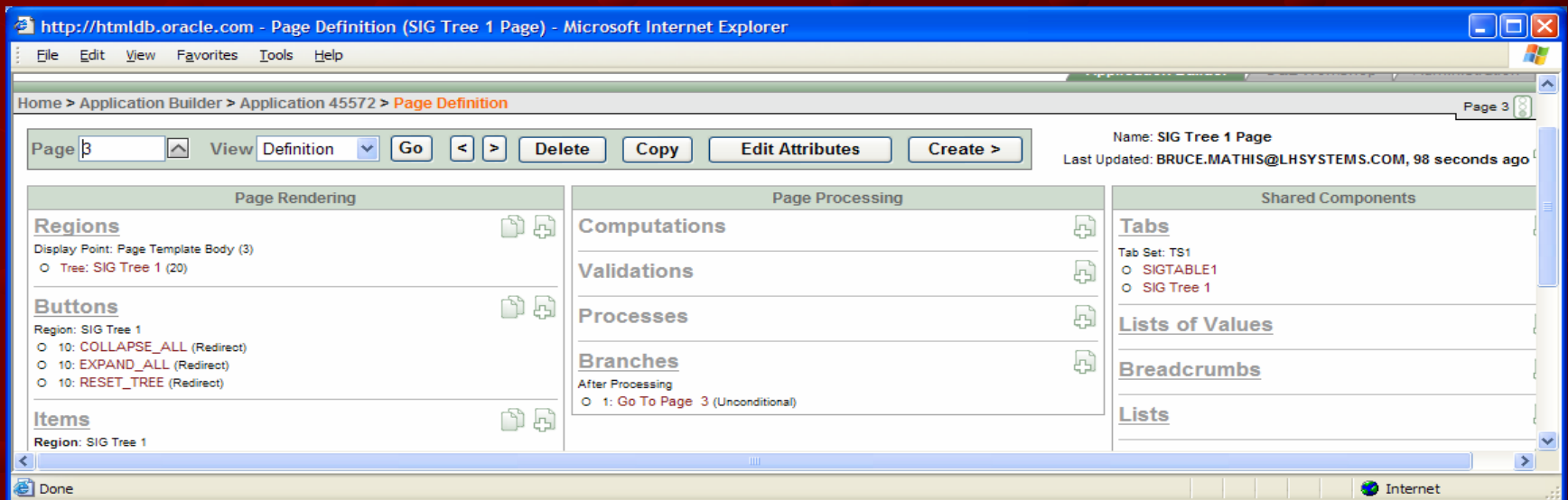
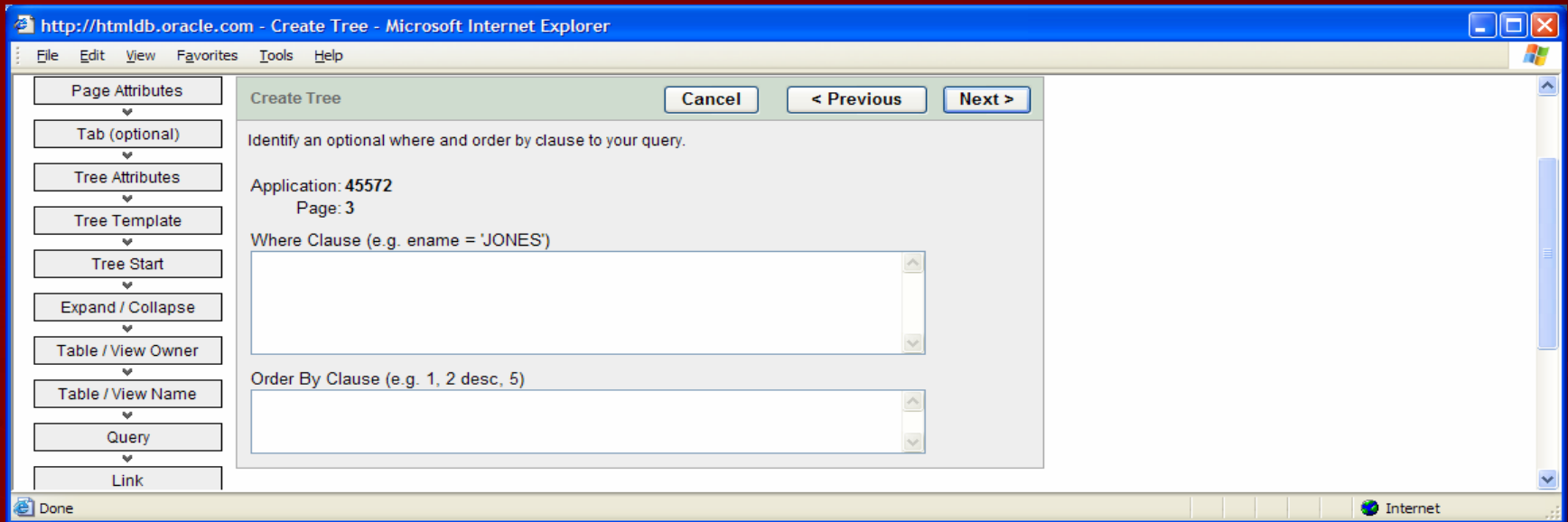
2.0.0.00.49

Done Internet









http://htmldb.oracle.com - SIG Tree 1 Page - Microsoft Internet Exp...

File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1 SIG Tree 1

### SIG Tree 1

[Collapse All](#) [Expand All](#) [Reset Tree](#)

Root

I

A

B

C

II

D

1

i)

ii)

2

E

3

4

iii)

iv)

v)

5

F

6

7

vi)

vii)

8

III

Done Internet

http://htmldb.oracle.com - SIG Tree 1 Page - Microsoft Internet Exp...

File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1 SIG Tree 1

### SIG Tree 1

[Collapse All](#) [Expand All](#) [Reset Tree](#)

Root

[Edit Application](#) [Edit Page 3](#) [Create](#) [Session](#) [Debug](#) [Show Edit Links](#)

javascript:redirect(f?p=45572:3:148545639915 Internet

http://htmldb.oracle.com - SIG Tree 1 Page - Microsoft Internet Exp...

File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1 SIG Tree 1

### SIG Tree 1

**Collapse All** **Expand All** **Reset Tree**

javascript:redirect('fp=45572:3:148545639915') Internet

http://htmldb.oracle.com - SIG Tree 1 Page - Microsoft Internet Exp...

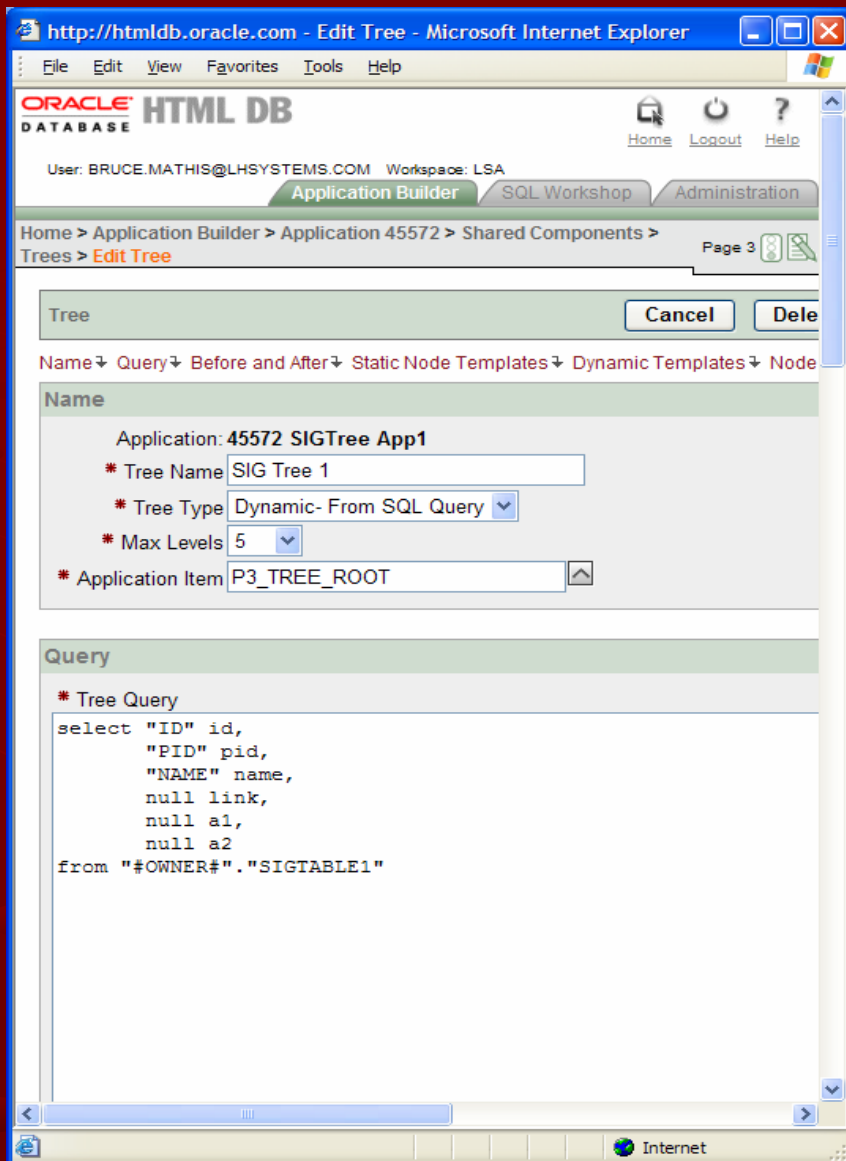
File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1 SIG Tree 1

### SIG Tree 1

**Collapse All** **Expand All** **Reset Tree**

javascript:redirect('fp=45572:3:148545639915') Internet



http://htmldb.oracle.com - Edit Region - Microsoft Internet Explorer

File Edit View Favorites Tools Help

ORACLE DATABASE HTML DB

User: BRUCE.MATHIS@LHSYSTEMS.COM Workspace: LSA

Application Builder SQL Workshop Administration

Home > Application Builder > Application 45572 > Page Definition > Edit Region

Page 3

Region: 1 of 1 Cancel

Name > User Interface > Source > Conditions > Header and Footer > Authorization > Cus

**Name**

Page: 3 SIG Tree 1 Page

\* Title: SIG Tree 1

Type: TREE

**User Interface**

Template: Reports Region

\* Sequence

Display Point: Page Template Body (3. items above region content)

[Body] [Pos.1] [Pos.2] [Pos.3] [Pos.4]

Region HTML table cell attributes

**Source**

Tree Name: SIG Tree 1

Type: DYNAMIC

Item: P3\_TREE\_ROOT

Tree Query: select "ID" id, "PID" pid, "NAME" name, null link, null a1, null a2 from "#OWNER#."SIGTABLE1"

**Source**

Region Source

1561570112840067841

Internet

http://htmldb.oracle.com - Edit Region - Microsoft Internet Explorer

File Edit View Favorites Tools Help

**Conditional Display**

Condition Type

- No Condition -

[PL/SQL] [item=value] [item not null] [request=e1] [page in] [page not in] [exists] [nc

Expression 1

Expression 2

**Header and Footer**

Region Header

Region Footer

<br><i>This tree was generated for the LI SIG meeting</i>

**Authorization**

Authorization Scheme

- No Authorization Required -

Internet

http://htmldb.oracle.com - SIG Tree 1 Page - Microsoft Internet Exp...

File Edit View Favorites Tools Help

### SIG Tree 1

**Collapse All** **Expand All** **Reset Tree**

This tree was generated for the LI SIG meeting

Done Internet

http://htmldb.oracle.com - SIG Tree 1 Page - Microsoft Internet Exp...

File Edit View Favorites Tools Help

### SIG Tree 1

**Collapse All** **Expand All** **Reset Tree**

Done Internet

http://htmldb.oracle.com - SIG Tree 2 Page - Microsoft Internet Explorer

File Edit View Favorites Tools Help

PUBLIC\_USER Logout SIGTABLE1 SIG Tree 1 SIG Tree 2

**Select Root:**

Tree Root: E - Igor

**Go**

**SIG Tree 2**

**Collapse All Expand All Reset Tree**

- 1) E Igor (up)
  - 3) Mike
    - 4) Nate
      - iii) Uma
        - iv) Victor
          - d) Chuck
          - e) Donald
            - f) Everet
              - 5) Luke
              - 6) Matt
              - 7) Noel
            - vi) Walter
              - g) Francis
              - h) Gerry
                - 8) Omar
                - 9) Peter
                - 10) Robert
    - 5) Oscar

*Click on name to see details.*

**Form on SIG Table1**

**Cancel Delete Apply Changes**

Name:

Pid:

Descr:

Notes:

Rem:

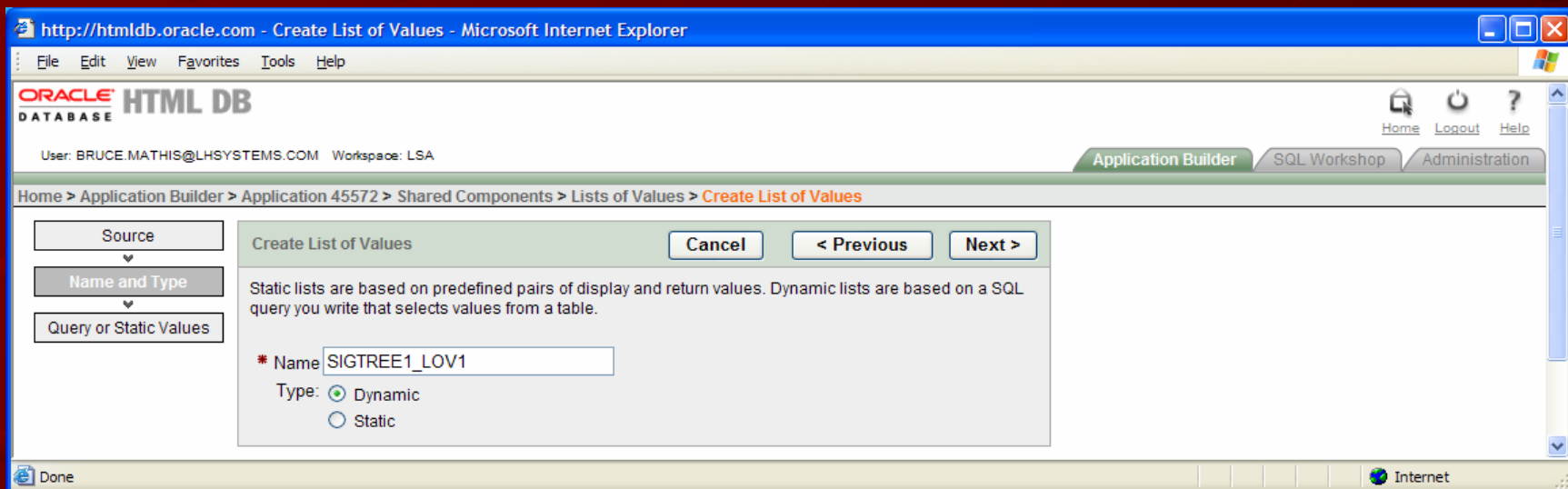
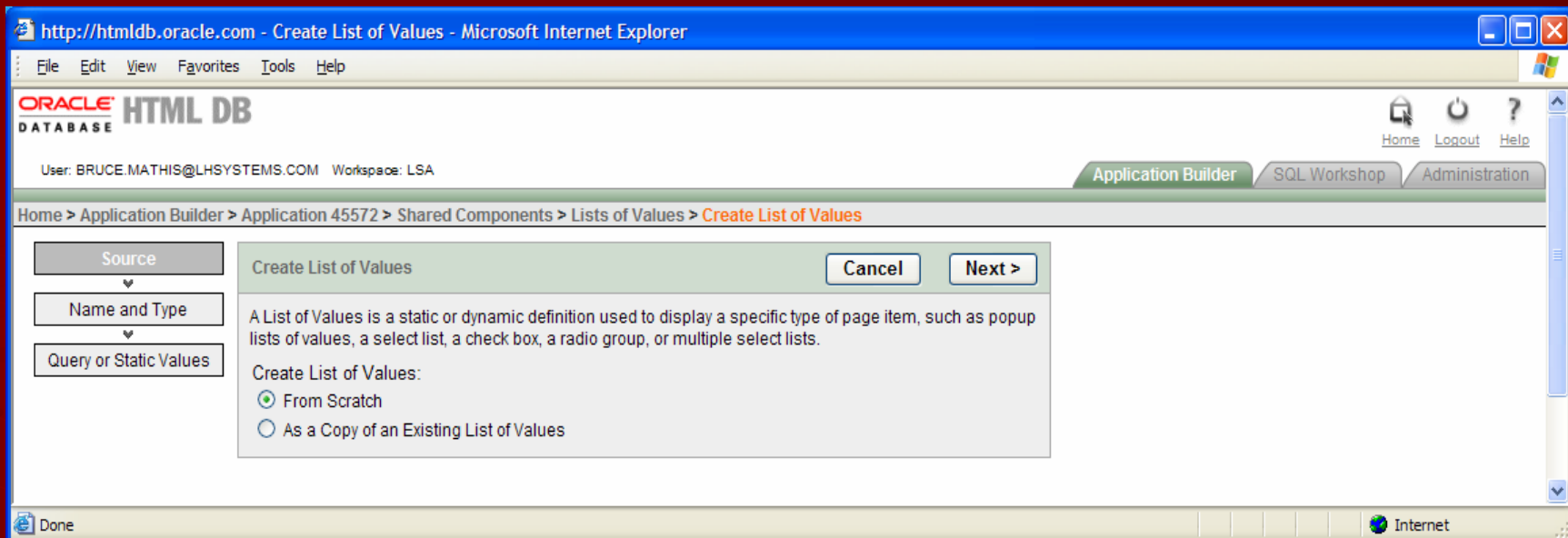
[Edit Application](#)
[Edit Page 4](#)
[Create](#)
[Session](#)
[Debug](#)
[Show Edit Links](#)

Internet

# Create an LOV

- L – list
- O – of
- V – values
- Used as source for a select list
- Can be static or dynamic
- Create a dynamic LOV =>





http://htmldb.oracle.com - Create List of Values - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Home > Application Builder > Application 45572 > Shared Components > Lists of Values > Create List of Values

Source

Name and Type

Query or Static Values

Create List of Values

Cancel

< Previous

Create List of Values

List of Values Name: SIGTREE1\_LOV1

\* Query (SELECT DISPLAY\_VALUE, RETURN\_VALUE FROM...):

```
SELECT name||' - '||rem DV, id RV
FROM sigtree
WHERE LEVEL < 4
START WITH id = 101 CONNECT BY NOCYCLE pid = PRIOR id
ORDER BY DV
```

List of Values

Enter a SQL query that returns two columns.

The first column is the display value. The display value is the value you see in a list of values. This column should be aliased and a different name then the return column.

The second column is the return value. The return value is the value returned when the display value is selected. The return column should be aliased if it includes any operations.

Done Internet

http://htmldb.oracle.com - Lists of Values - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Home > Application Builder > Application 45572 > Shared Components > Lists of Values

Page 4

Dynamic list of values created.

Lists of Values Search Subscription Utilization History

List of Values  View Details Display 15 Go Create >

| Name                | Type    | Used On Page(S) | Last Updated  |
|---------------------|---------|-----------------|---------------|
| Report Row Per Page | Static  | 1               | 14 hours ago  |
| SIGTREE1_LOV1       | Dynamic | (null)          | 1 seconds ago |

row(s) 1 - 2 of 2

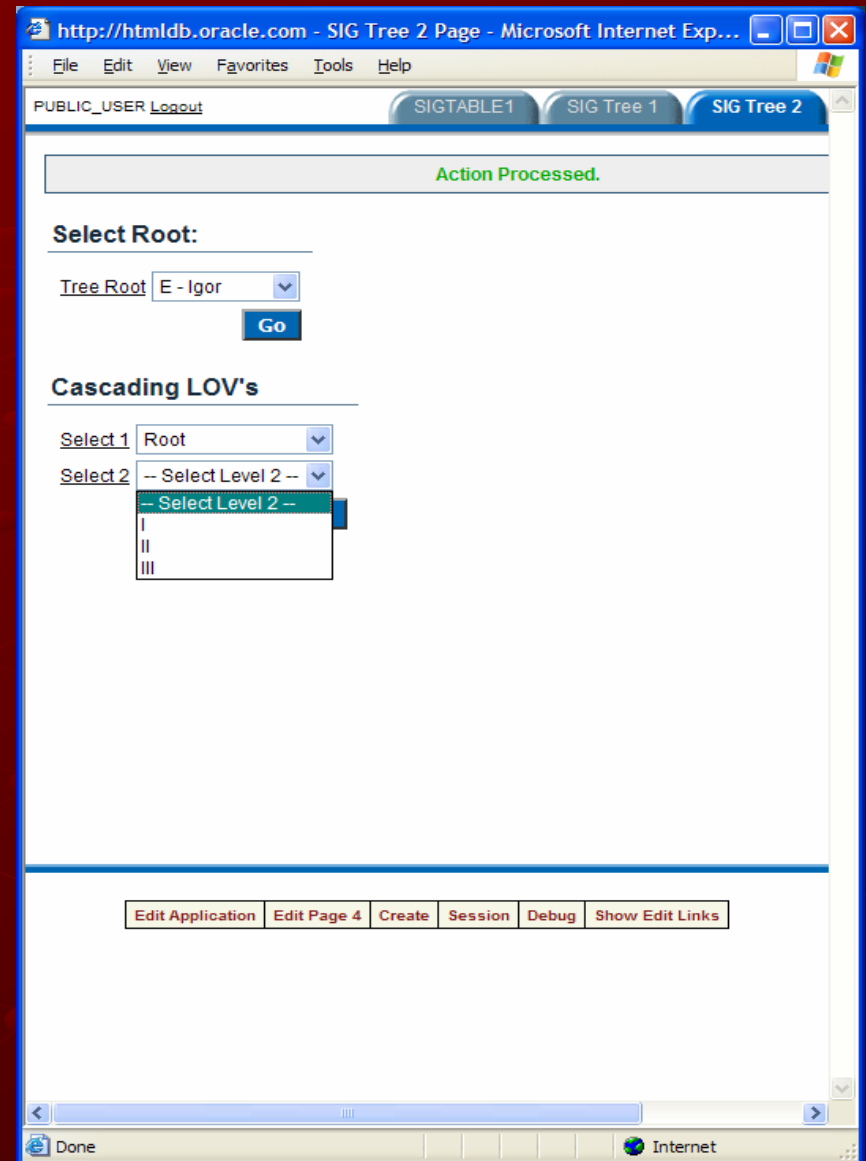
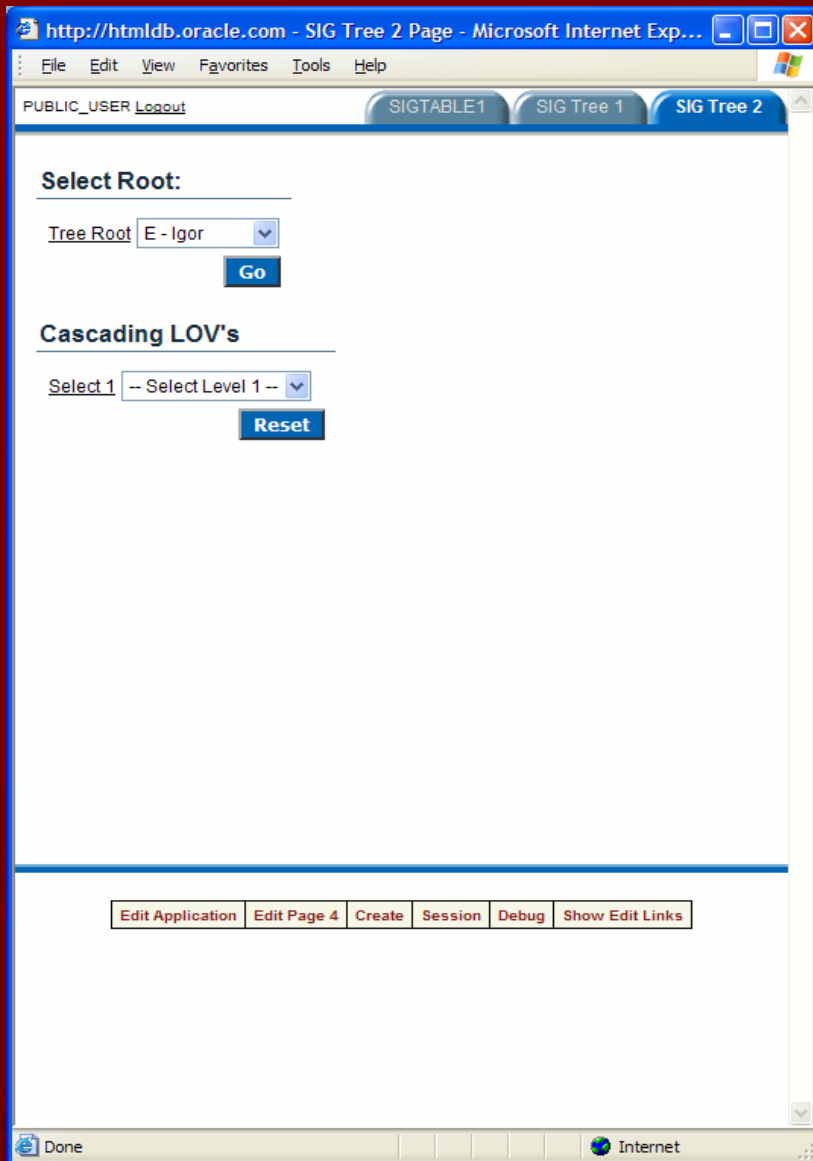
List of Values

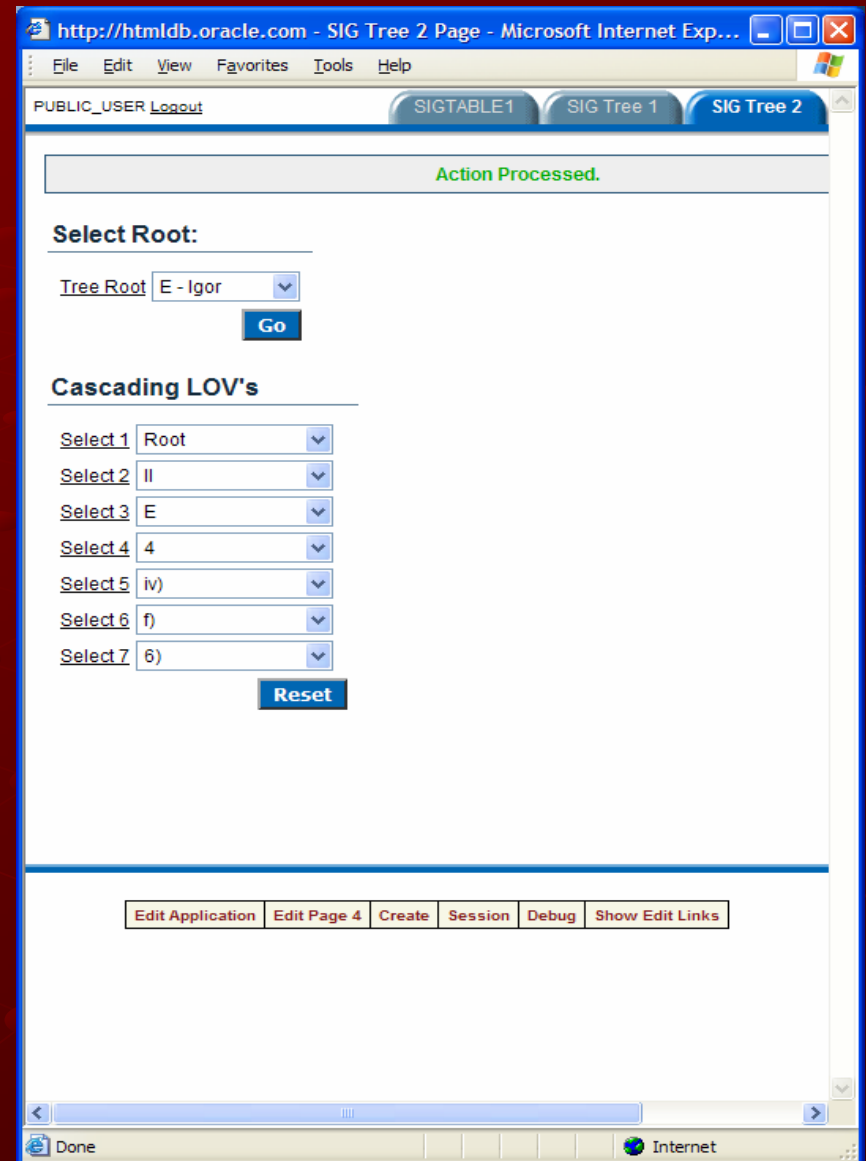
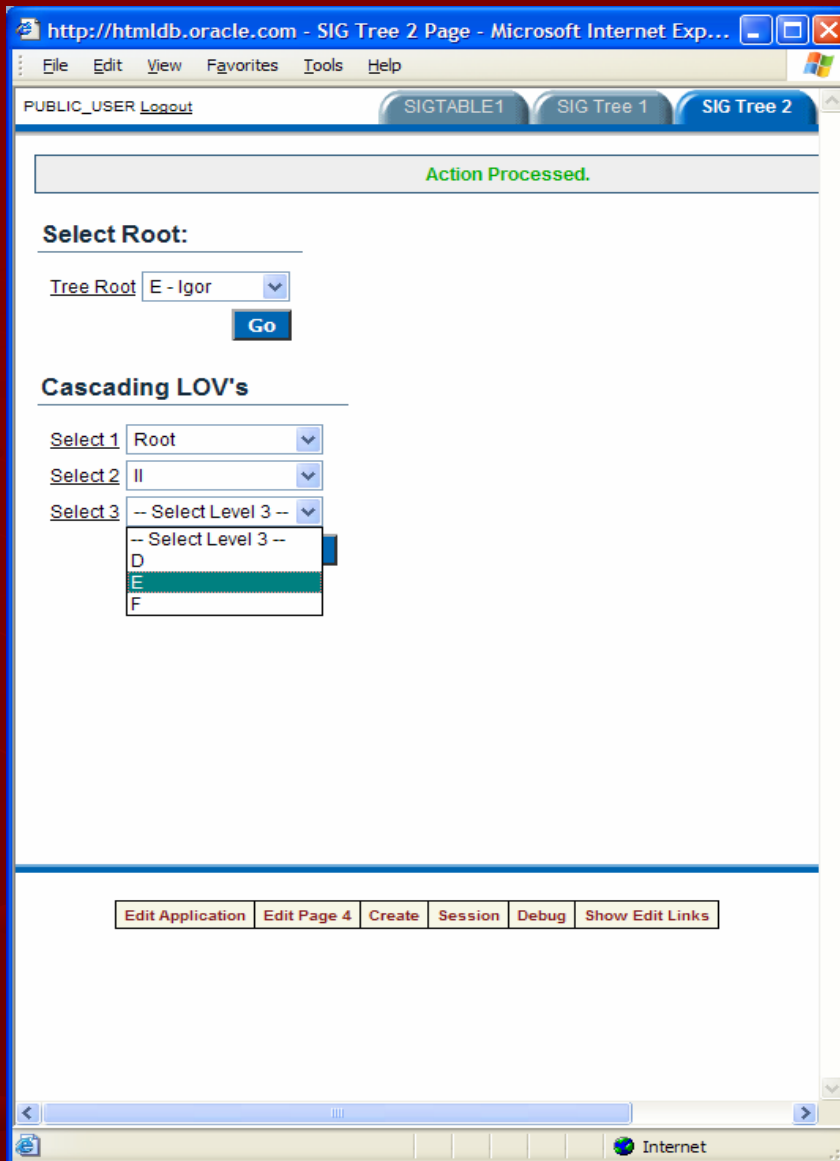
A List of Values can be referenced by page items as well as report fields. It controls the values displayed and limits the user's selection. Lists of Values can be static (based on values you enter) or dynamic (based on a SQL query).

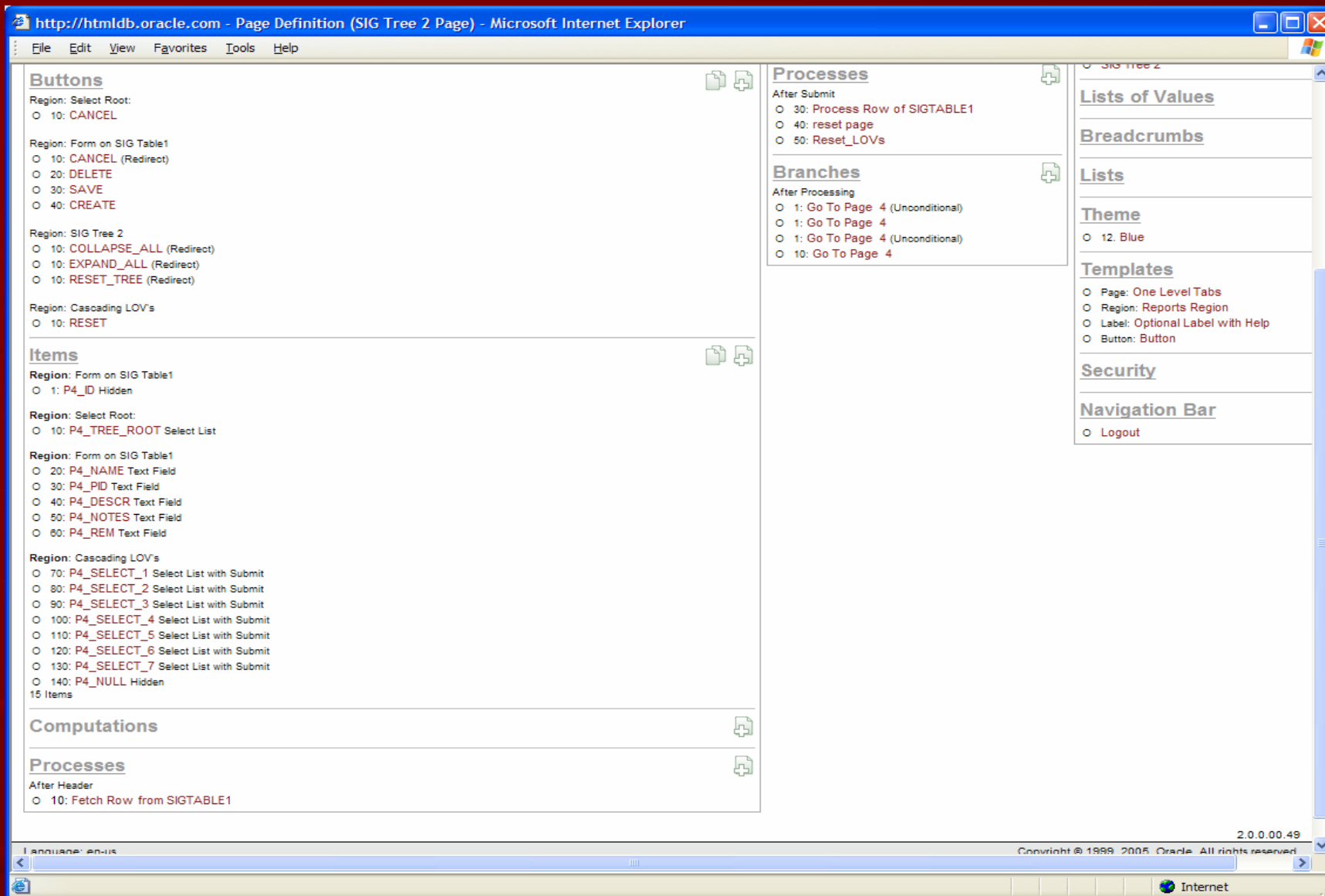
Done Internet

# Cascading LOV's

- Values displayed in LOV are dependent upon values selected in prior LOV(s).
- Useful for following a path down a tree.







http://htmldb.oracle.com - Edit Page Item - Microsoft Internet Explo...

Page: 4 SIG Tree 2 Page

\* Name: P4\_SELECT\_1

Display As: Select List with Submit

[Text] [Text Area] [Select List] [Radio] [Popup List of Values] [Check]

**Displayed**

\* Sequence: 70

\* Region: Cascading LOV's (1) 30

Begin On New Line: Yes ...Field: Yes ColSpan: 1 Row Span: 1

**Label**

Label: Select 1

Horizontal / Vertical Alignment: Right

Template: Optional Label with Help

HTML Table Cell Attributes: nowrap="nowrap"

Post Element Text:

**Element**

Width: 30 Maximum Width: 2000 Height: 1

Horizontal / Vertical Alignment: Left

HTML Table Cell Attributes:

HTML Form Element Attributes:

Form Element Option Attributes:

**Source**

Source Used: Only when current value in session state is null

http://htmldb.oracle.com - Edit Page Item - Microsoft Internet Explo...

**List of Values**

Named LOV: - Select Named LOV -

Display Extra Values: No

Columns: 1

Null display value: -- Select Level 1 --

Dynamic Trans: Displa

Null return:

List of values definition

```
SELECT name dv, id rv
FROM sigtable1
WHERE LEVEL = 1
START WITH id = 101
CONNECT BY NOCYCLE pid = PRIOR id
```

Create or edit static List of Values

**Security**

Authorization Scheme: - No Authorization Required -

Cross-Site Scripting Protection: Yes

Session State Protection: Unrestricted

**Conditions**

Condition Type: - Item Not Conditional

[PL/SQL] [item=value] [item not null] [request=e1] [page in] [page not in] [exists] [nc

Expression 1:

Expression 2:

http://htmldb.oracle.com - Edit Page Item - Microsoft Internet Explo...

Page: 4 SIG Tree 2 Page

\* Name P4\_SELECT\_2

Display As Select List with Submit

[Text] [Text Area] [Select List] [Radio] [Popup List of Values] [Check]

**Displayed**

\* Sequence 80

\* Region Cascading LOV's (1) 30

Begin On New Line Yes ...Field Yes ColSpan 1 Row Span 1

**Label**

Label Select 2

Horizontal / Vertical Alignment Right

Template Optional Label with Help

HTML Table Cell Attributes nowrap="nowrap"

Post Element Text

**Element**

Width 30 Maximum Width 2000 Height 1

Horizontal / Vertical Alignment Left

HTML Table Cell Attributes

HTML Form Element Attributes

Form Element Option Attributes

**Source**

Source Used Only when current value in session state is null

http://htmldb.oracle.com - Edit Page Item - Microsoft Internet Explo...

**List of Values**

Named LOV - Select Named LOV -

Display Extra Values No

Columns 1

Null display value -- Select Level 2 --

Dynamic Trans

Displa

Null return

List of values definition

```
SELECT name dv, id rv
FROM sigtable1
WHERE LEVEL = 2 AND PRIOR id = :p4_select_1
START WITH id = :p4_select_1
CONNECT BY NOCYCLE pid = PRIOR id
```

Create or edit static List of Values

**Security**

Authorization Scheme - No Authorization Required -

Cross-Site Scripting Protection Yes

Session State Protection Unrestricted

**Conditions**

Condition Type

Value of Item in Expression 1 Is NOT NULL

[PL/SQL] [item=value] [item not null] [request=e1] [page in] [page not in] [exists] [no]

Expression 1

P4\_SELECT\_1

Expression 2



http://htmlldb.oracle.com - SIG Tree 2 Page - Microsoft Internet Explorer

PUBLIC\_USER Logout

SIGTABLE1 SIG Tree 1 SIG Tree 2

### Select Root:

Tree Root:

### Cascading LOV's

Select 1:   
 Select 2:   
 Select 3:   
 Select 4:   
 Select 5:   
 Select 6:   
 Select 7:

### SIG Tree 2

- 1) E Igor (up)
  - 3) Mike
    - 4) Nate
      - iii) Uma
        - iv) Victor
          - d) Chuck
          - e) Donald
          - f) Everet
            - 5) Luke
            - 6) Matt
            - 7) Noel
        - vi) Walter
          - g) Francis
          - h) Gerry
            - 8) Omar
            - 9) Peter
            - 10) Robert
    - 5) Oscar

*Click on name to see details.*

### Form on SIG Table1

Name:   
 Pid:   
 Desc:   
 Notes:   
 Rem:

Done Internet

http://htmldb.oracle.com - Page Attributes Reported as a Tree ...

File Edit View Favorites Tools Help

Application Builder SQL Workshop Administration

Home > Application Builder > Application 45572 > Application Reports  
> Page Components > Page Attributes Reported as a Tree Page 4

Page 4 Go < >

Last Updated: BRUCE.MATHIS@LHSYSTEMS.COM, 94 seconds ago  
Name: SIG Tree 2 Page

Page

4: SIG Tree 2 Page

Regions

- (10) Select Root:
  - Items
    - (10) P4\_TREE\_ROOT
  - Buttons
    - (10) CANCEL
- (20) SIG Tree 2
  - Buttons
    - (10) COLLAPSE\_ALL
    - (10) EXPAND\_ALL
    - (10) RESET\_TREE
- (10) Form on SIG Table1
  - Items
    - (1) P4\_ID
    - (20) P4\_NAME
    - (30) P4\_PID
    - (40) P4\_DESCR
    - (50) P4\_NOTES
    - (60) P4\_REM
  - Buttons
    - (10) CANCEL
    - (20) DELETE
    - (30) SAVE
    - (40) CREATE

Use the page attributes following the tree structure.

Page ... Re ... .. I ... .. E ... Pro ... Co ... Val ... Bra ... Click

Done Internet

http://htmldb.oracle.com - Page Attributes Reported as a Tree ...

File Edit View Favorites Tools Help

(60) P4\_REM

Buttons

- (10) CANCEL
- (20) DELETE
- (30) SAVE
- (40) CREATE

(30) Cascading LOV's

Items

- (80) P4\_SELECT\_2
- (90) P4\_SELECT\_3
- (70) P4\_SELECT\_1
- (100) P4\_SELECT\_4
- (110) P4\_SELECT\_5
- (120) P4\_SELECT\_6
- (130) P4\_SELECT\_7
- (140) P4\_NULL

Buttons

- (10) RESET

Processes

- \_Reset\_LOV's
- \_Fetch Row from SIGTABLE1
- \_Process Row of SIGTABLE1
- \_reset page

Computations

Validations

Branches

- (1) After\_Processing...f?p=&APP\_I
- (1) After\_Processing...f?p=&APP\_I
- (1) After\_Processing...f?p=&APP\_I
- (10) After\_Processing...f?p=&FLOW\_

2.0.0.00.49

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Done Internet

# Review & Questions

Working public application:

<http://htmldb.oracle.com/pls/otn/f?p=45572>

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- [bruce@mathisIT.com](mailto:bruce@mathisIT.com)