# 

# Building Database-Centric Web Applications Using Oracle HTML DB

# Wayne Abbott Practice Manager, Oracle University

# **Session Objectives**

- Overview of Oracle HTML DB
- Identify advantages of Oracle HTML DB for building applications
- List h/w and and s/w requirements
- List key features
- Identify components and capabilities

#### What Is Oracle HTML DB?

- New feature in Oracle Database 10g
- Browser-based application development tool that resides in the Oracle database
- Environment to develop browser-based Web applications that are database-centric



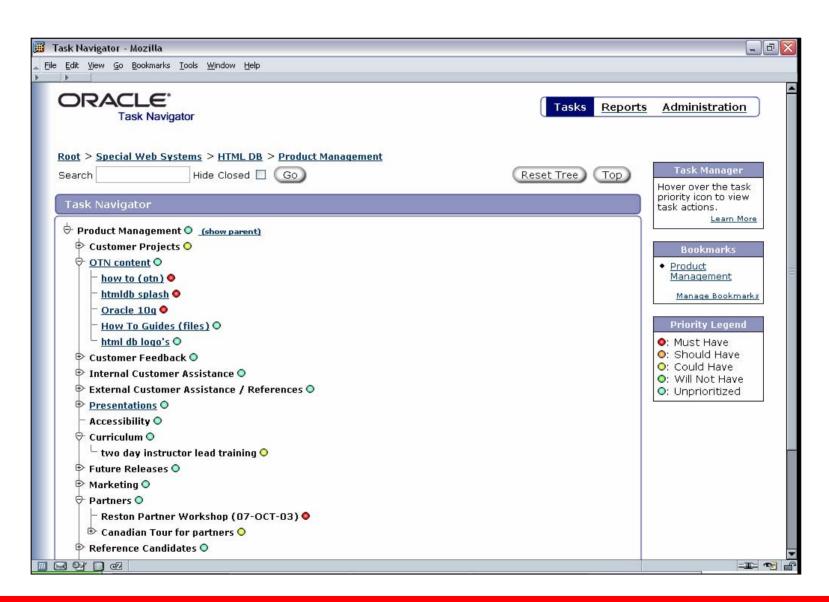




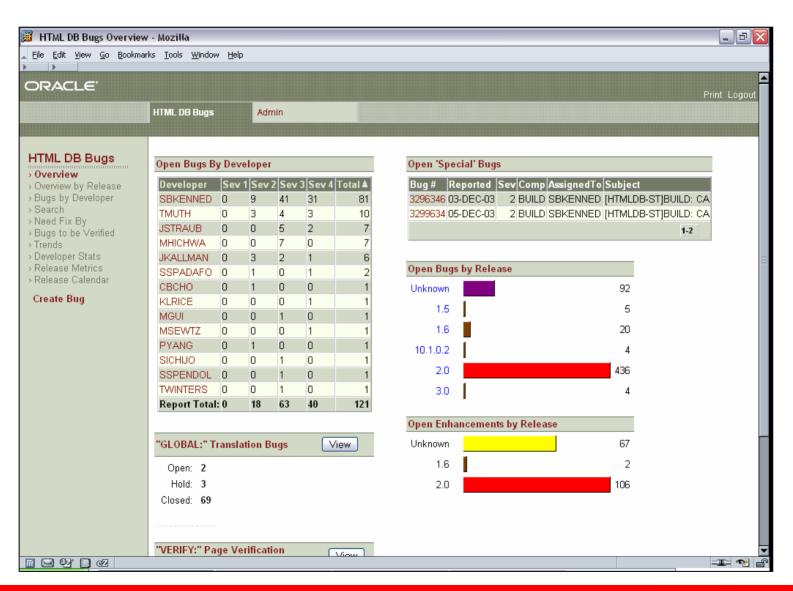
# Benefits of using HTML DB

- Easy-to-use application development environment
- Short learning curve for SQL and PL/SQL programmers
- Simple, self-contained architecture
- Flexible look-and-feel options provided by themes and templates
- Platform-independent environment

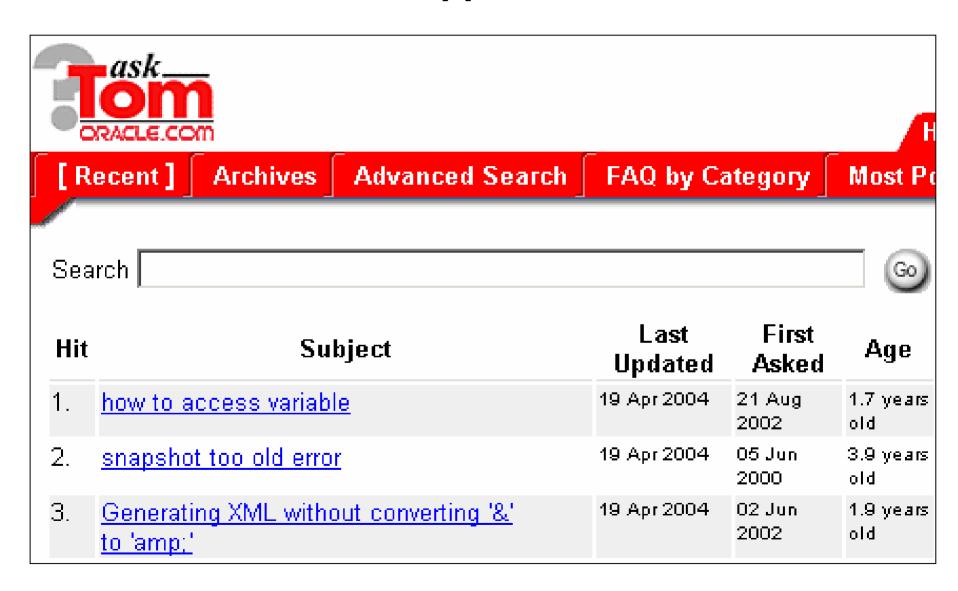
#### Tracking Application (Sample 1)



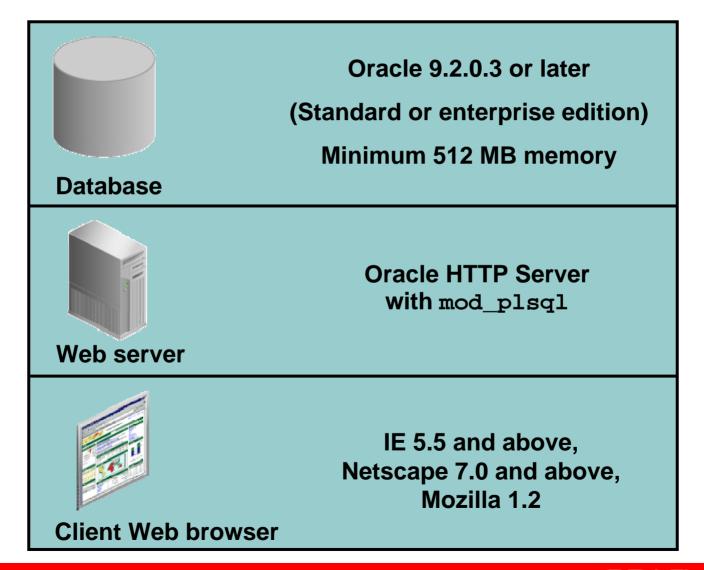
#### **Business Intelligence Application (Sample 2)**



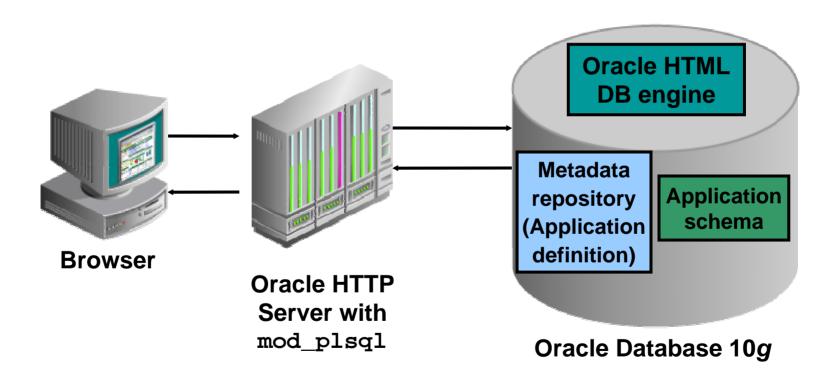
#### Text-search Application (Sample 3)



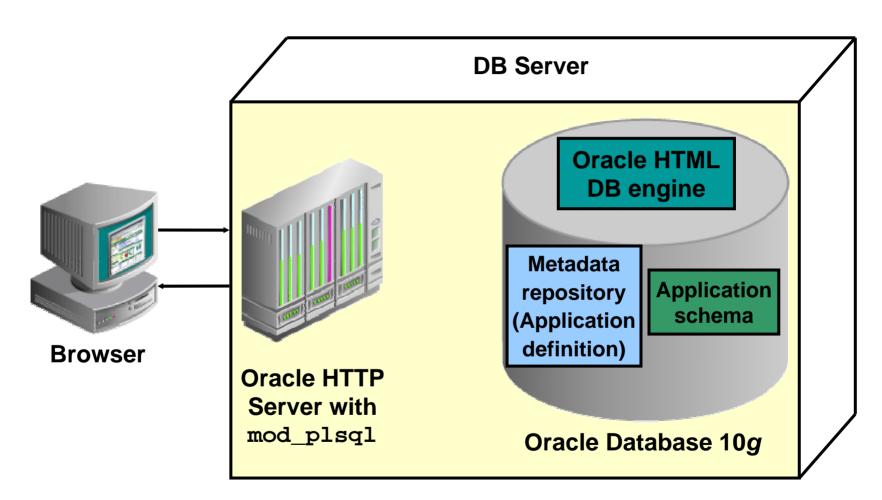
#### **Hardware and Software Requirements**



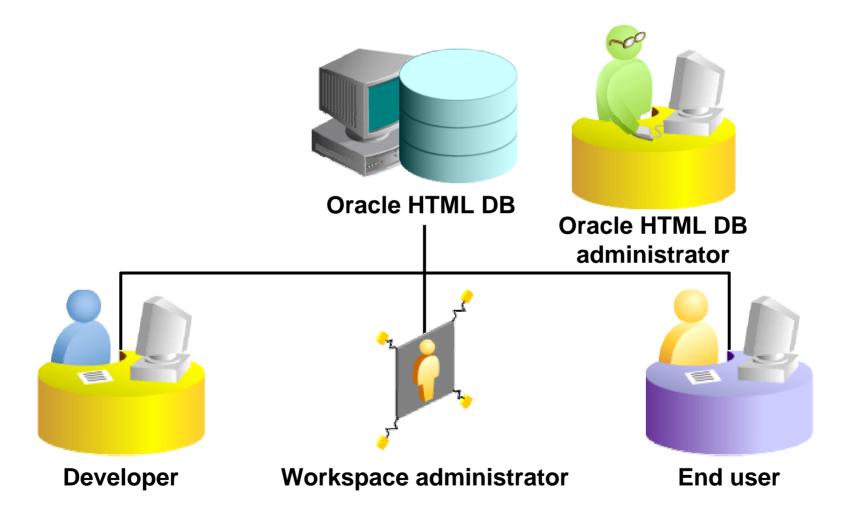
#### **HTML DB Architecture**



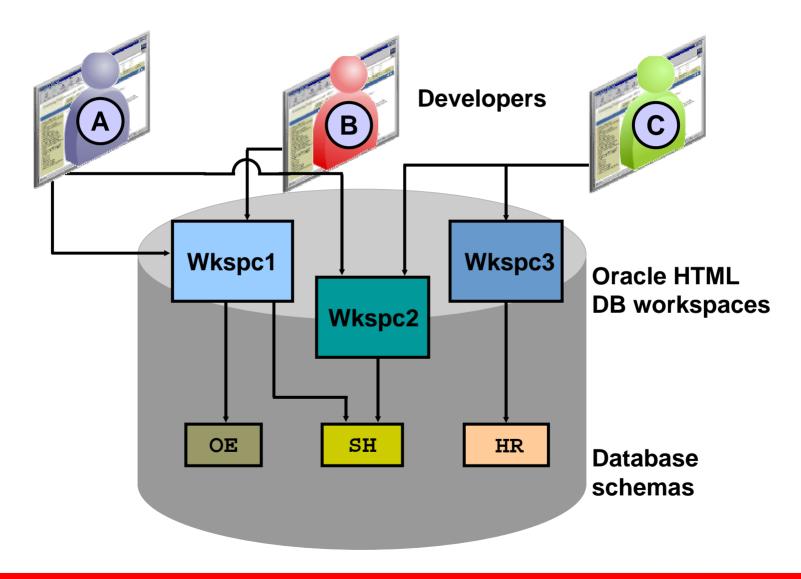
#### **HTML DB Architecture**



# **Defining Roles**



# **Understanding Workspaces**

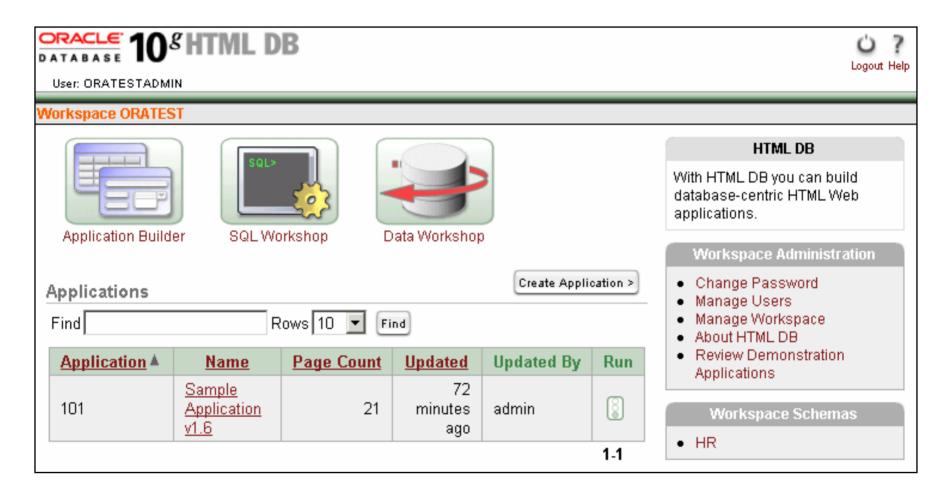


# Logging In to the Workspace

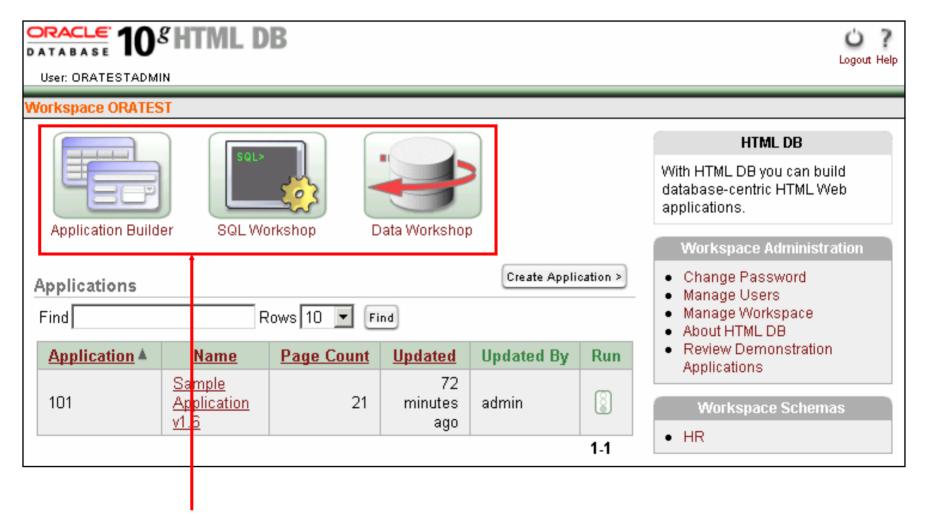
(Developer)

DATABASE 108 HTML DB								
Gain instant access to an integrated online application development suite. With HTML DB you can build robust dynamic Web applications and leverage the full power of the Oracle database all from your favorite browser.								
Login								
Workspace jonathan								
Username jonathan.swift@oracle.com								
Password **********								
Login								
Language: en-us								

# The Developer Interface

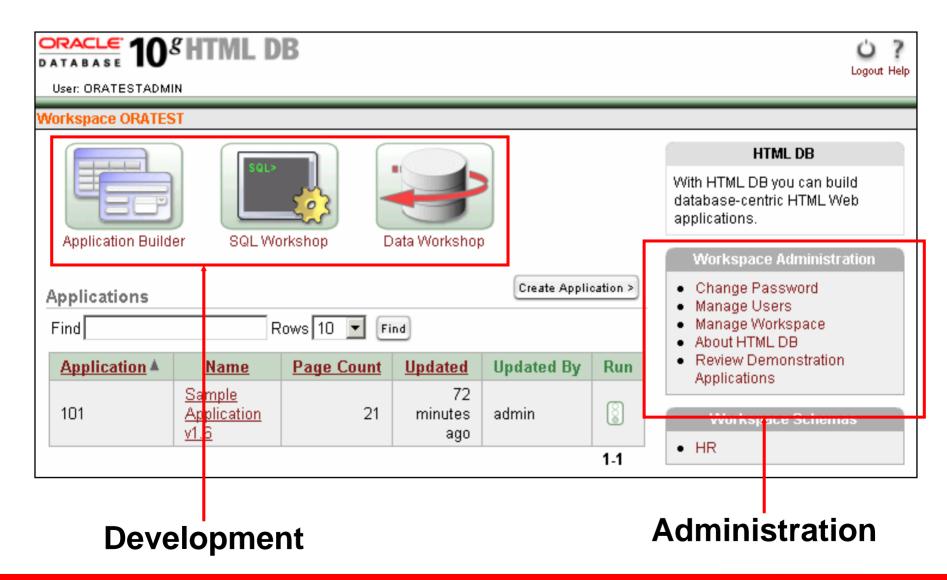


#### 4 Tools-in-1

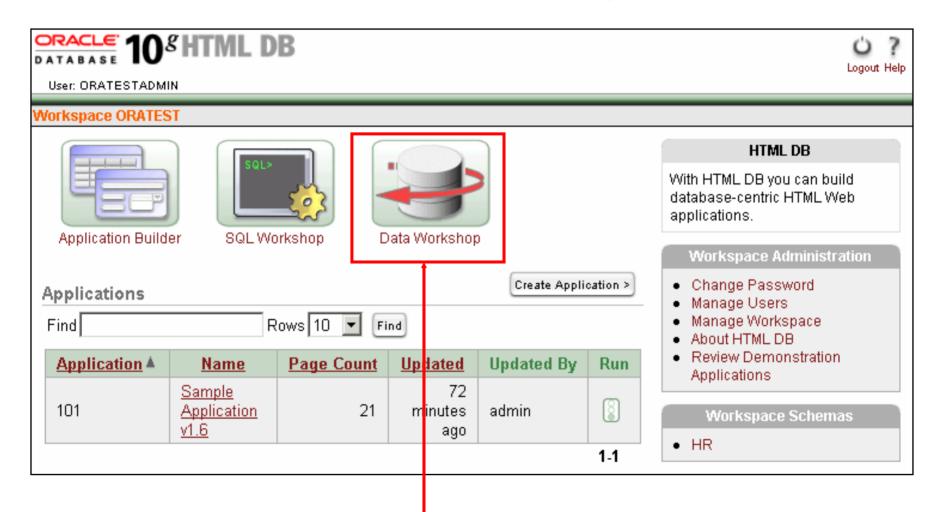


**Development** 

#### 4 Tools-in-1

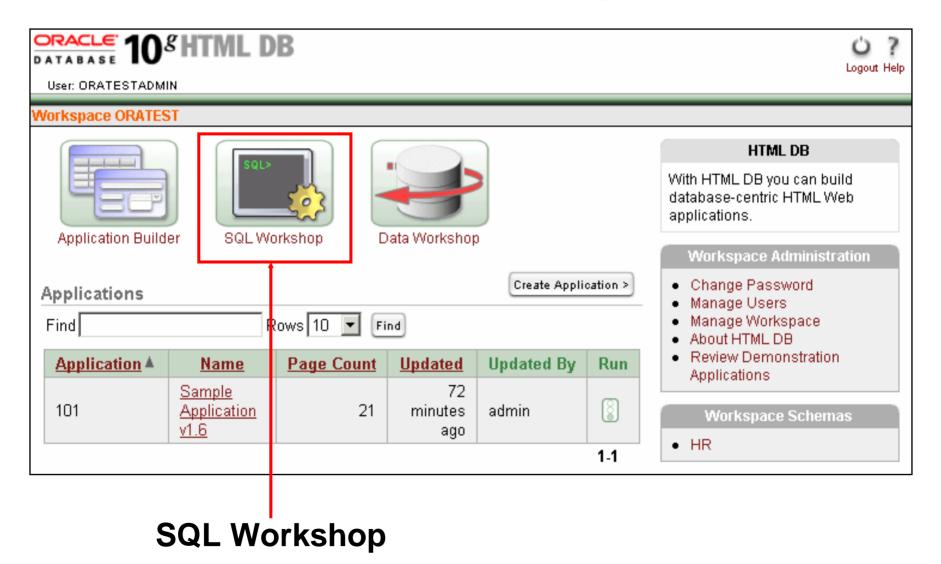


# **Data Workshop**

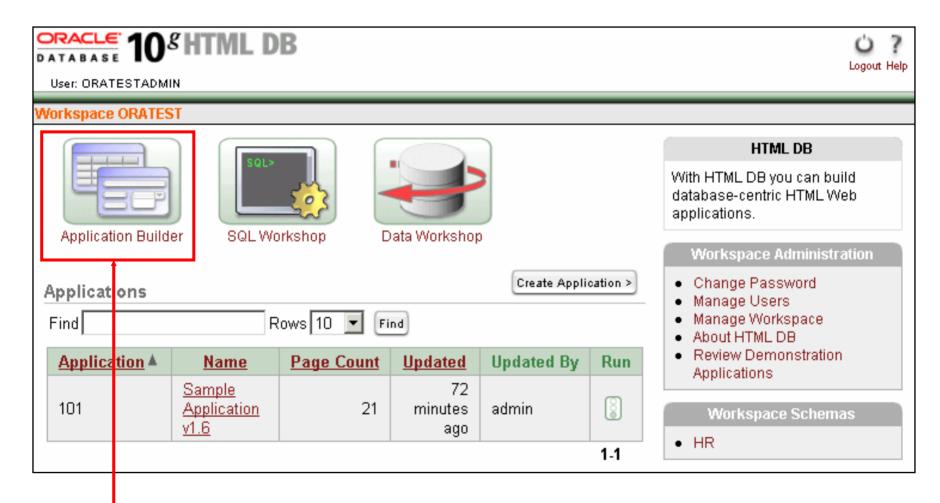


**Data Workshop** 

# **SQL Workshop**

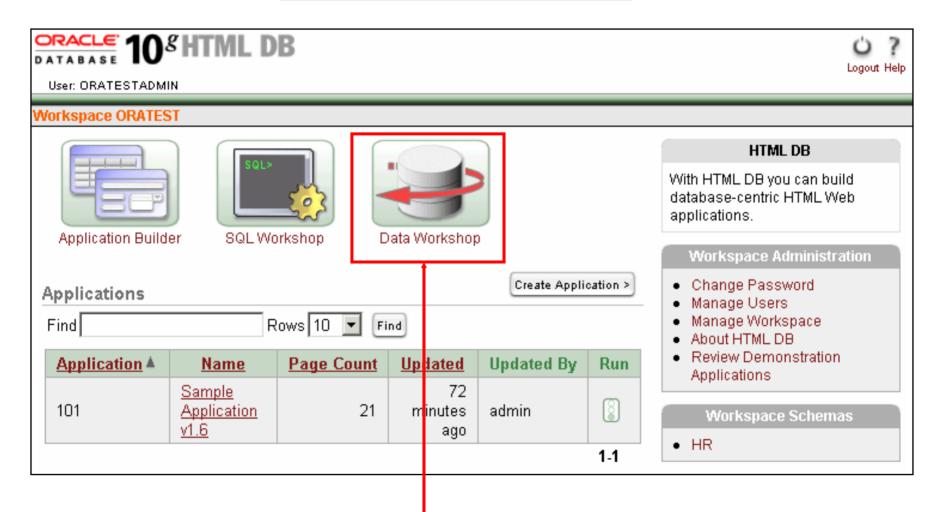


# **Application Builder**



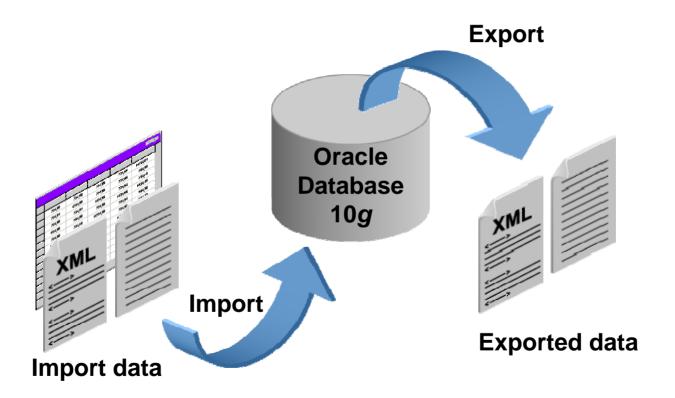
**Application Builder** 

# **Data Workshop**

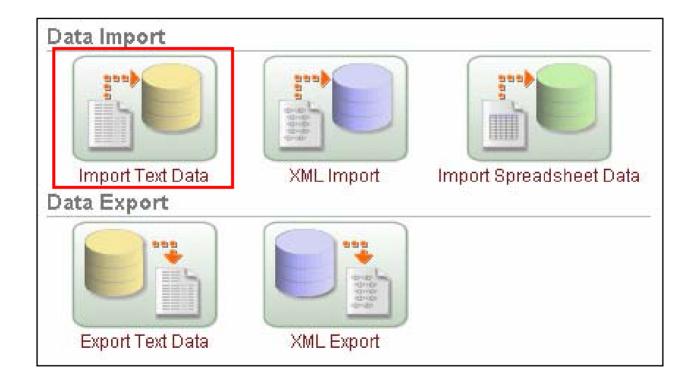


**Data Workshop** 

# **Data Workshop**

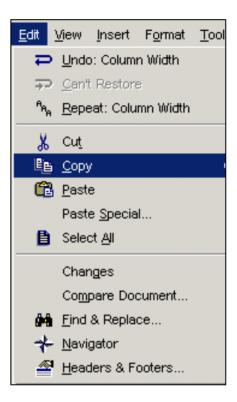


# **Importing Text Data**

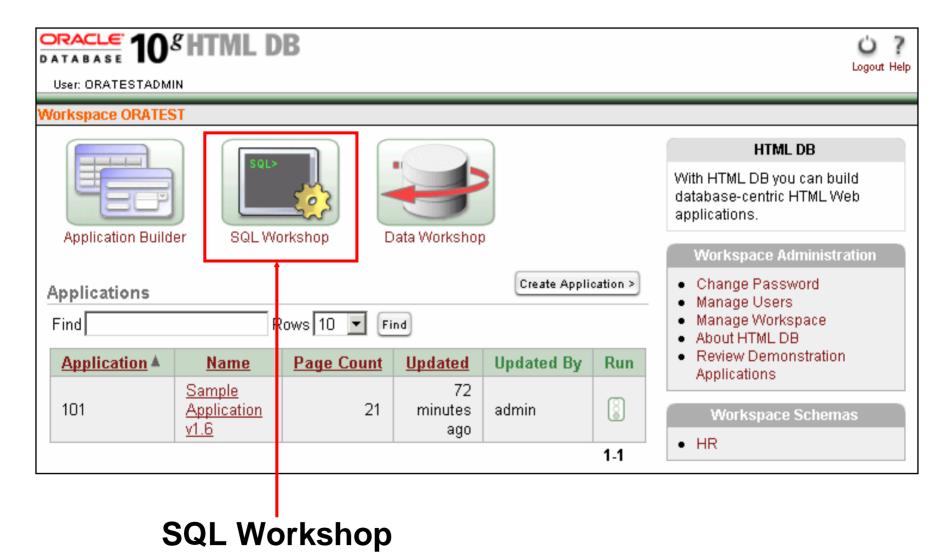


# **Importing Spreadsheet Data**

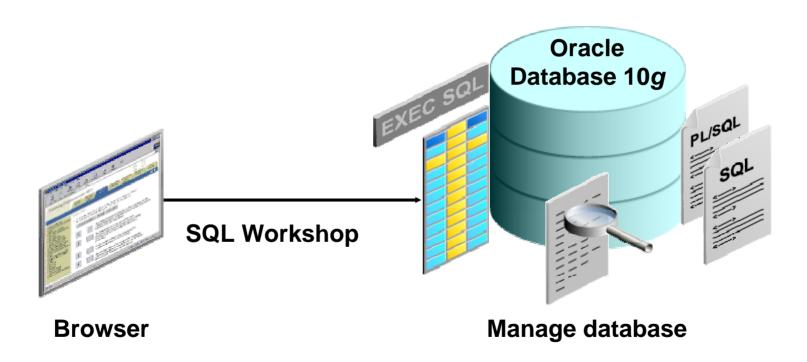
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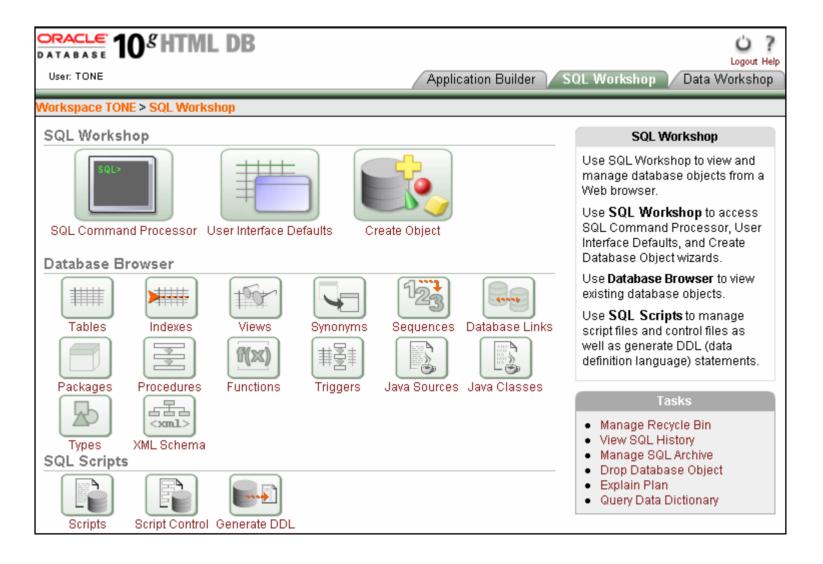


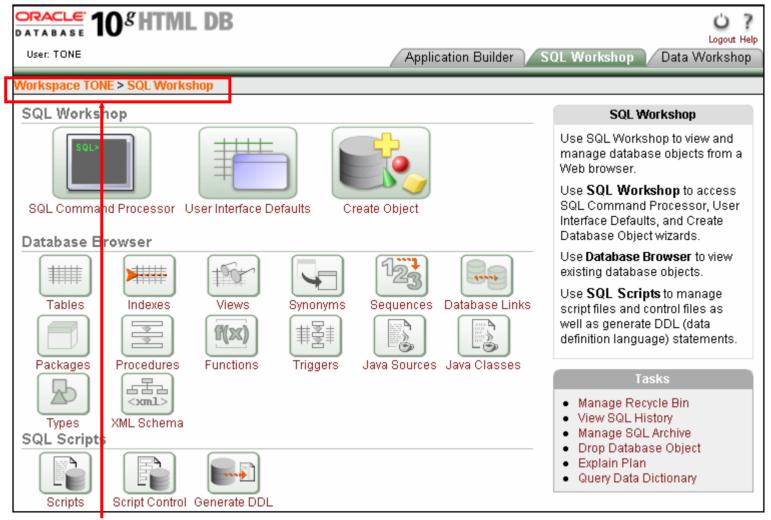
# SQL Workshop



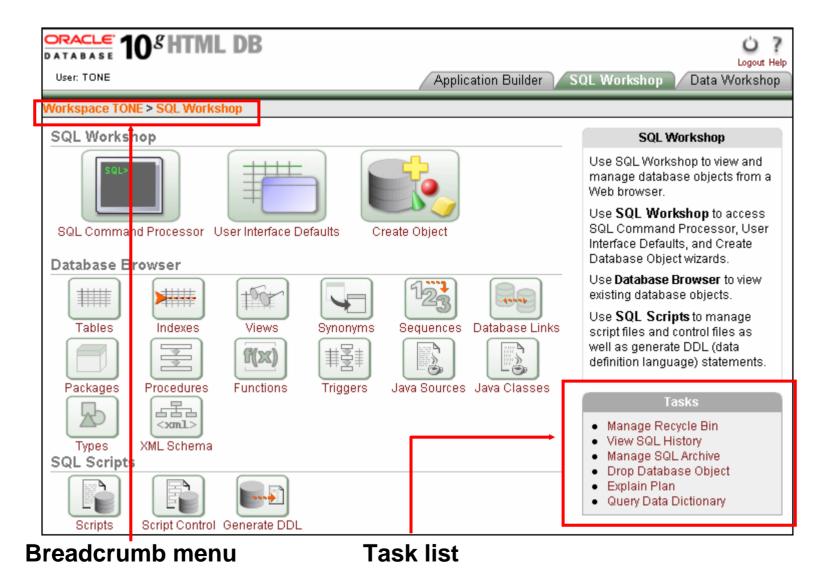
# **SQL Workshop**

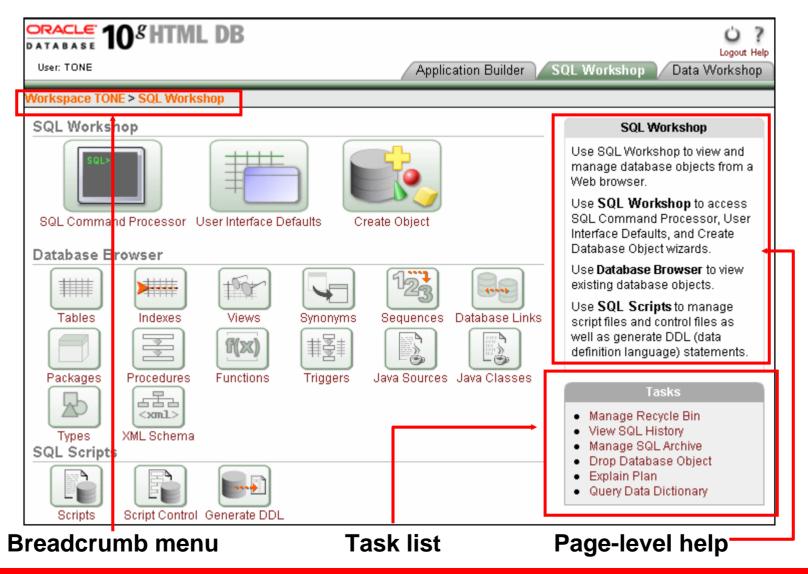






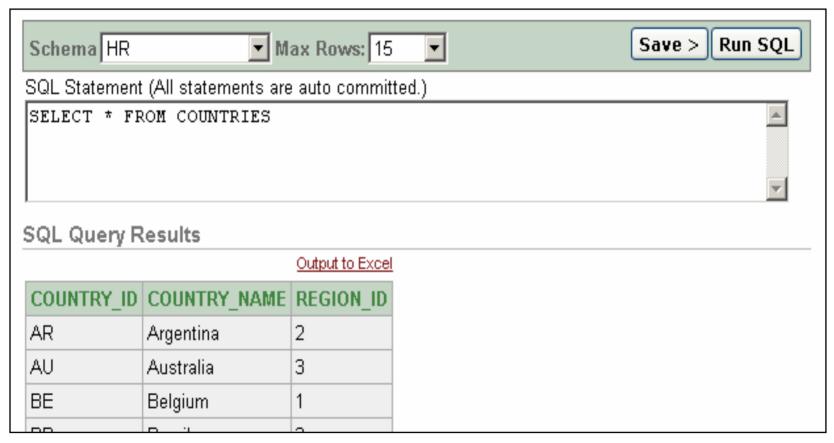
Breadcrumb menu



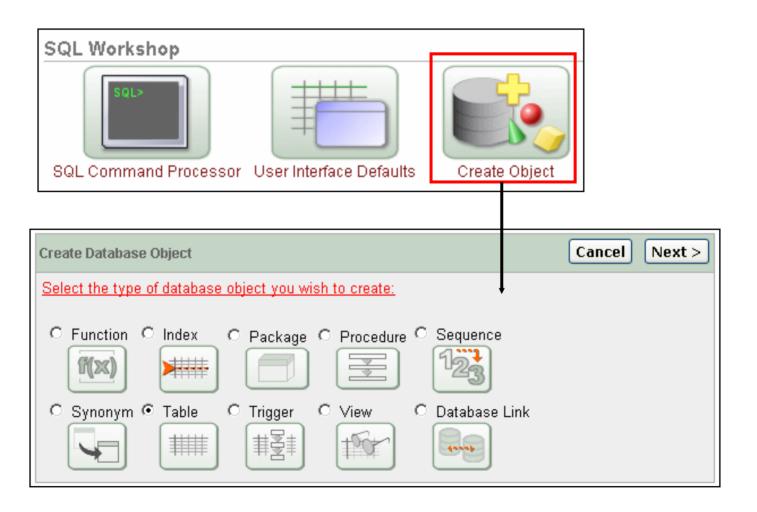


#### **SQL Command Processor**

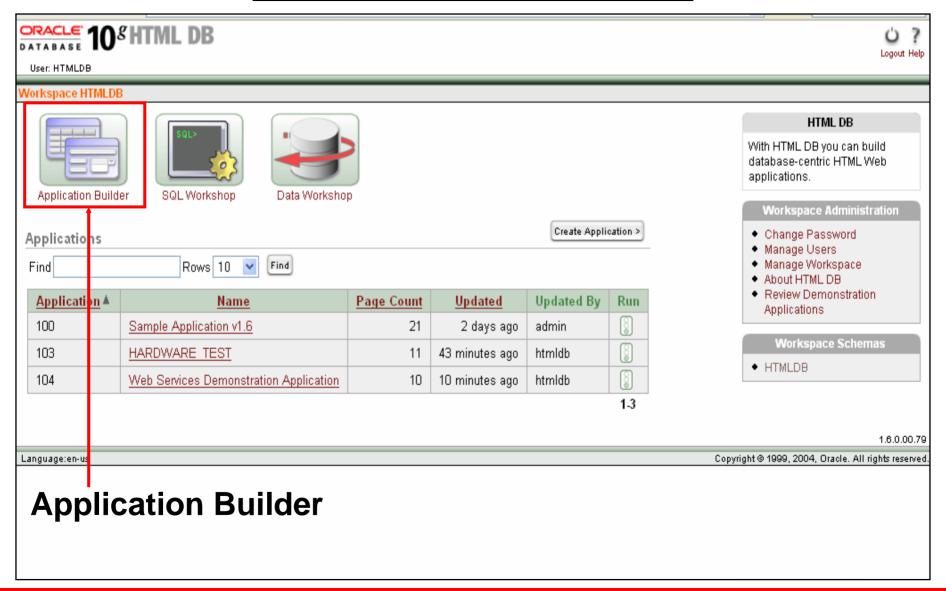




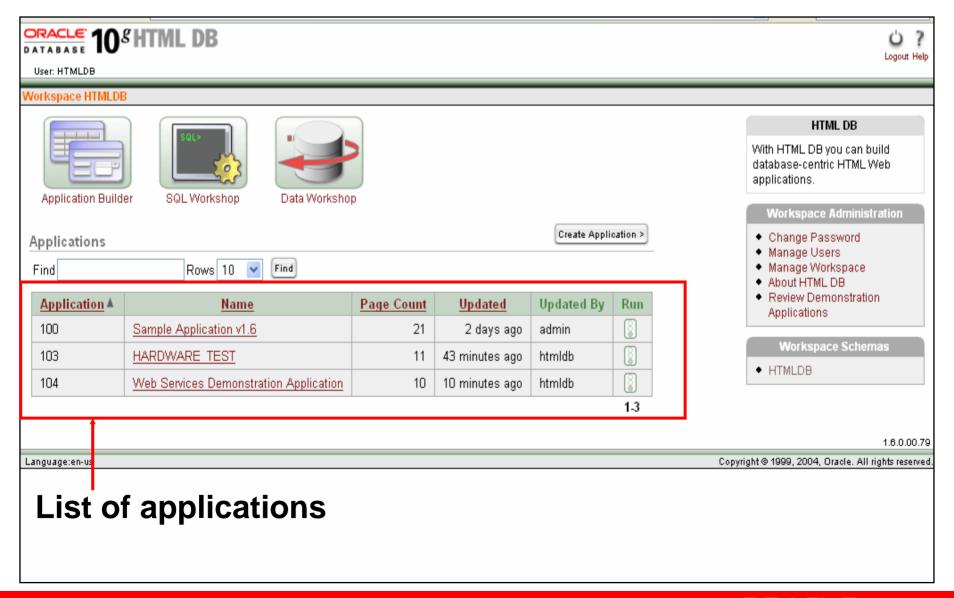
# Creating DB Objects (gui)



# **Application Builder**



#### Viewing the Applications in the Workspace



#### **Developing the User Interface**

You can rapidly design the user interface for your application by using:



Reports



**Wizards** 

**Forms** 



**Calendars** 

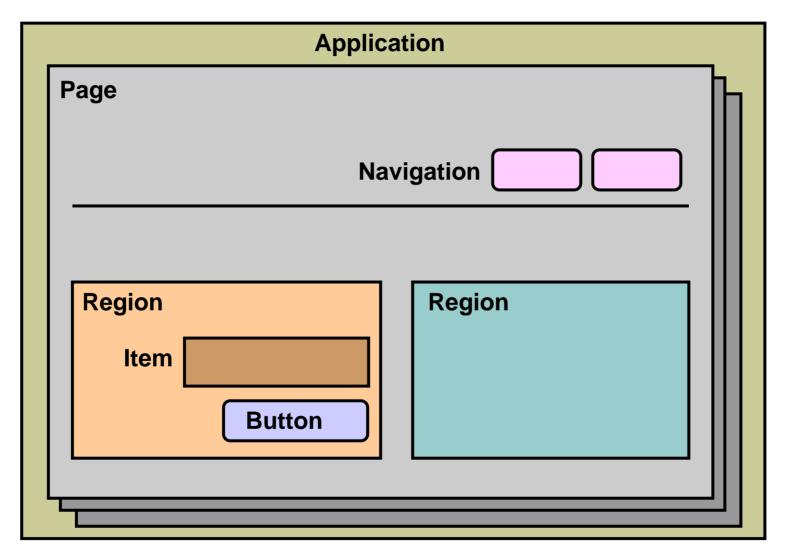


**Charts** 

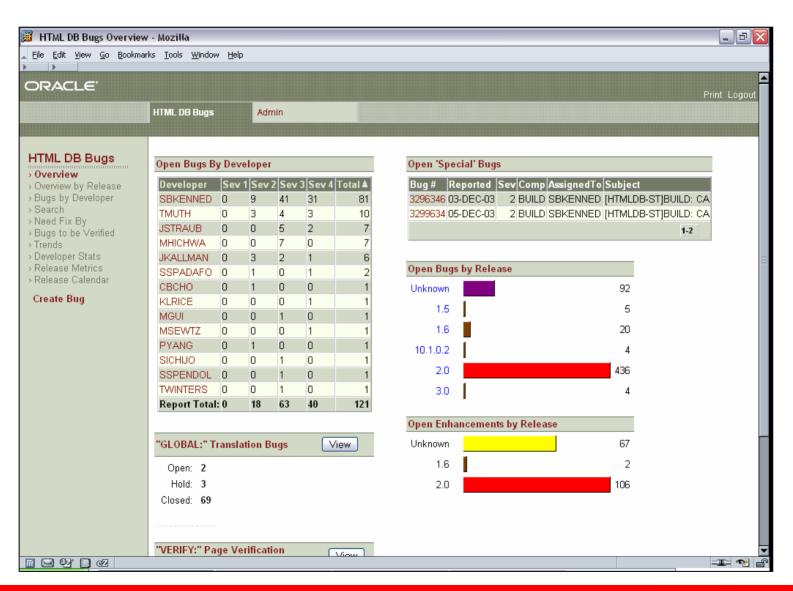


**Trees** 

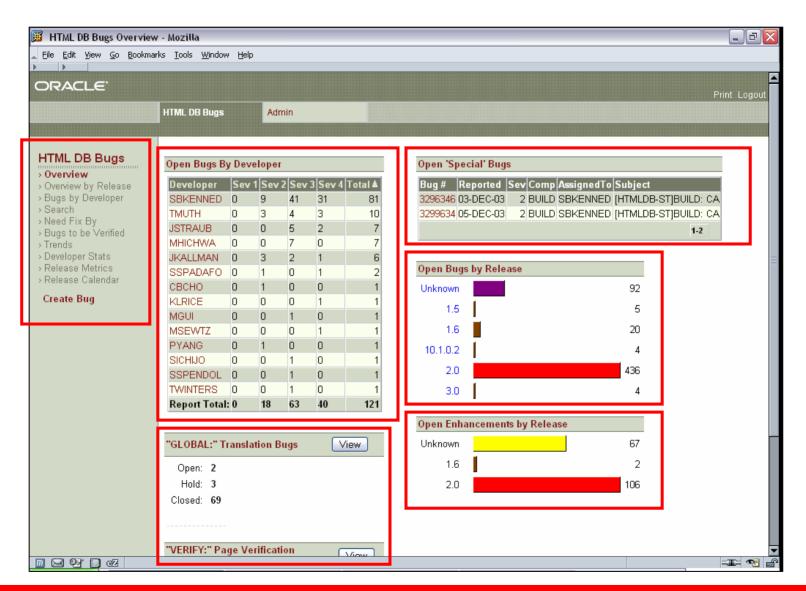
## **Application Builder Terminology**



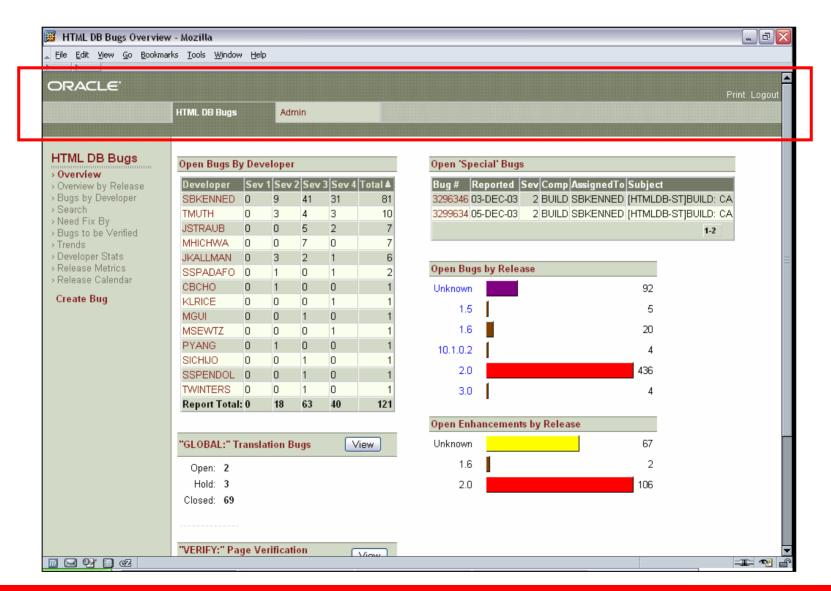
## **Business Intelligence Application (Sample 2)**



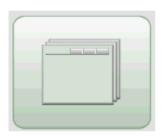
### **Business Intelligence Application (regions)**



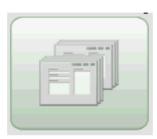
### **Business Intelligence Application** (shared compnents)



## **Creating an Application**



From the beginning



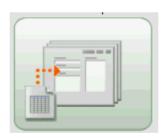
Based on an existing application



Based on an existing table



**Demonstration** application

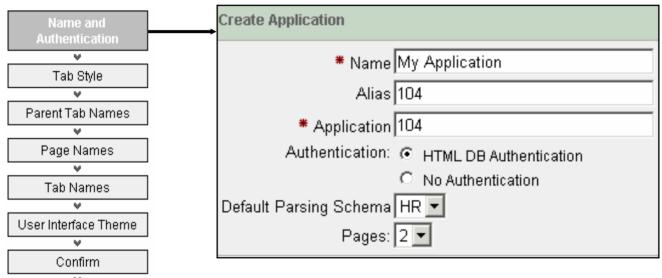


Based on spreadsheet



From an application export file

#### **Steps**



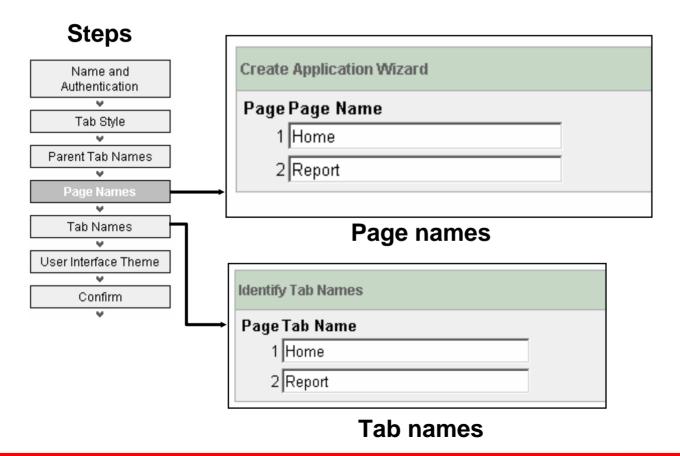
Name and authentication

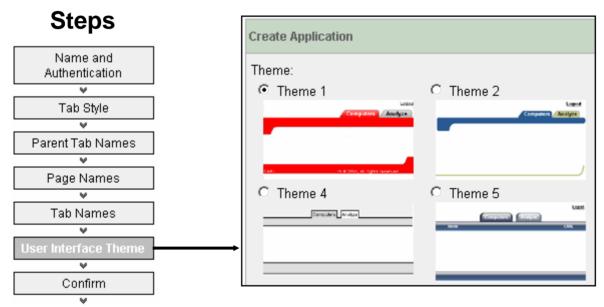


#### **Steps**



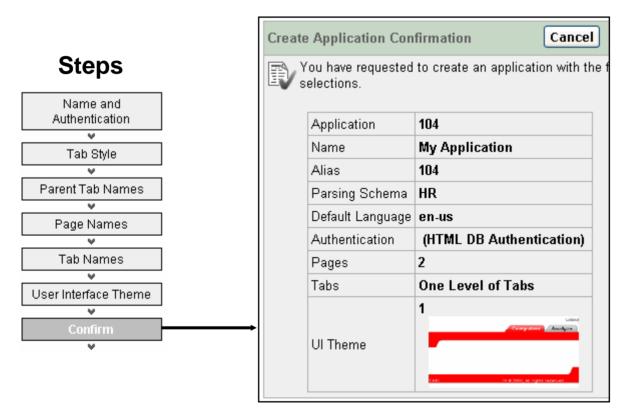
Tab style





**Select theme** 

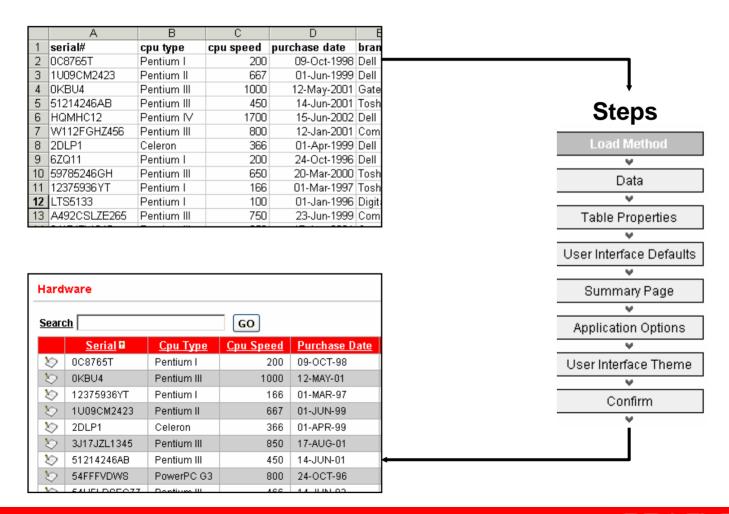




**Confirm selections** 

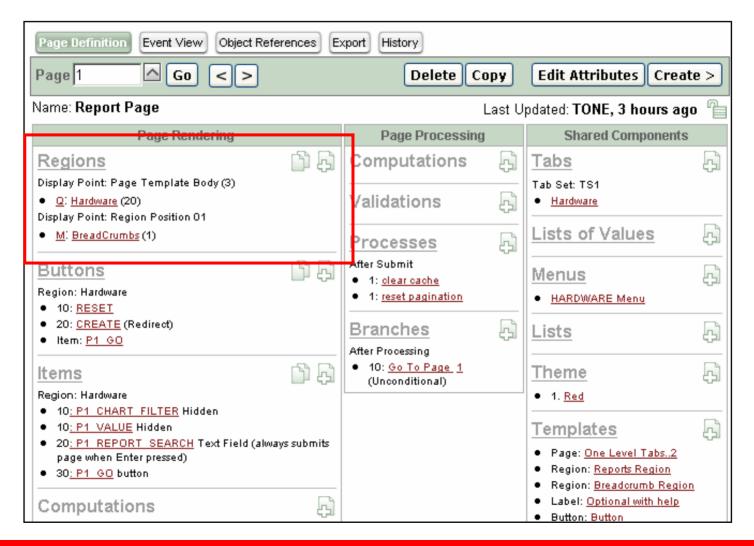


## **Creating an Application Based on a Spreadsheet**

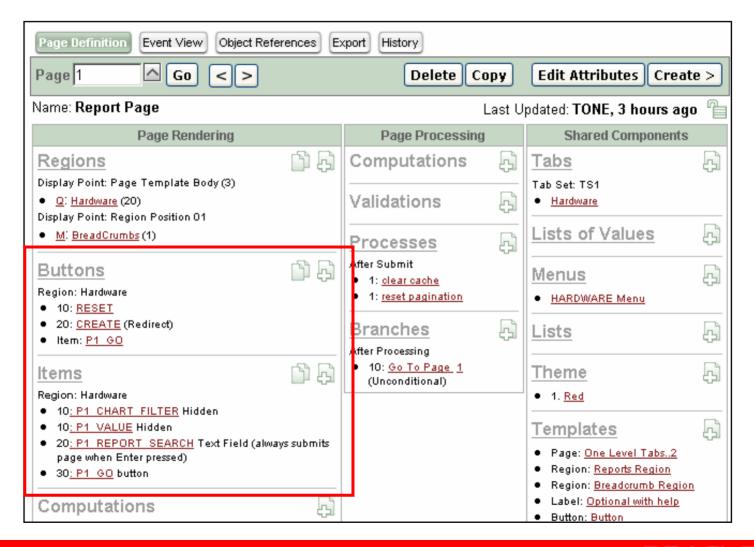




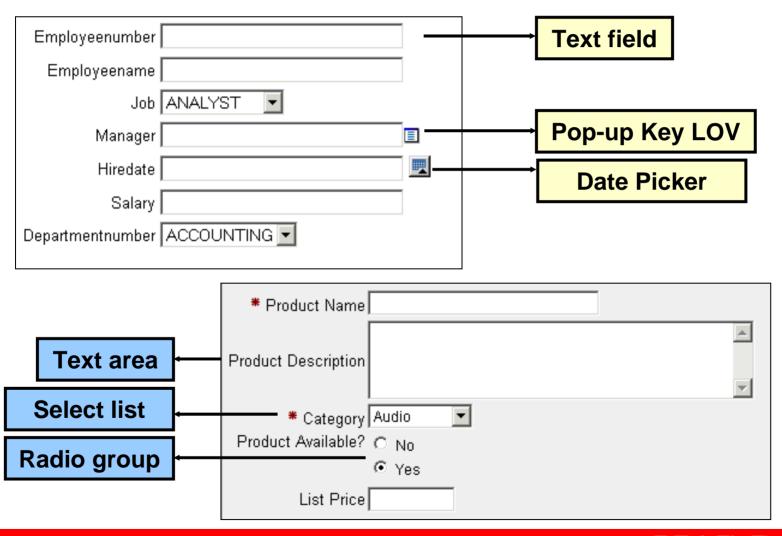
## **Creating a New Region**



### **Creating Interactive Items**

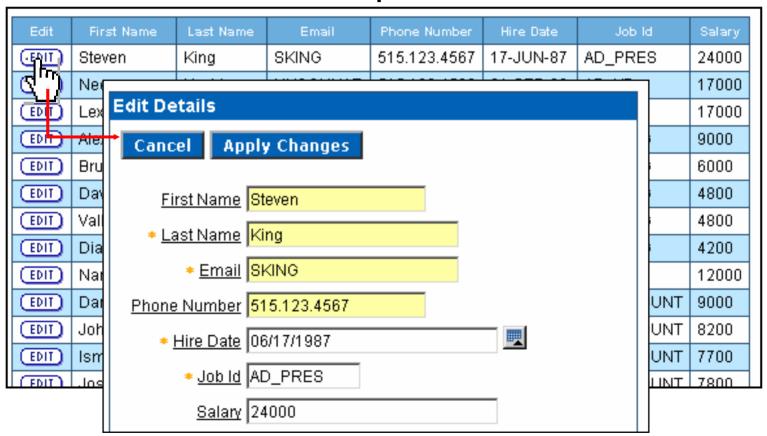


## Input Items (form)



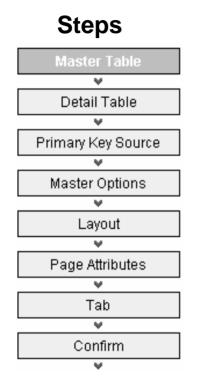
## Creating a Report Linked to a Form

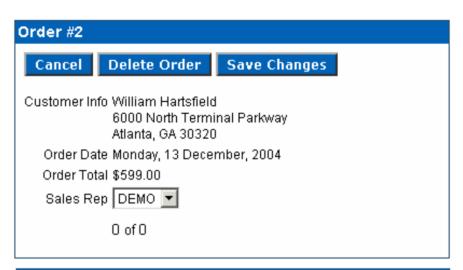
#### Report

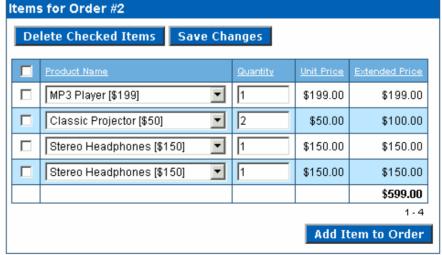


**Form** 

#### **Master Detail Form**

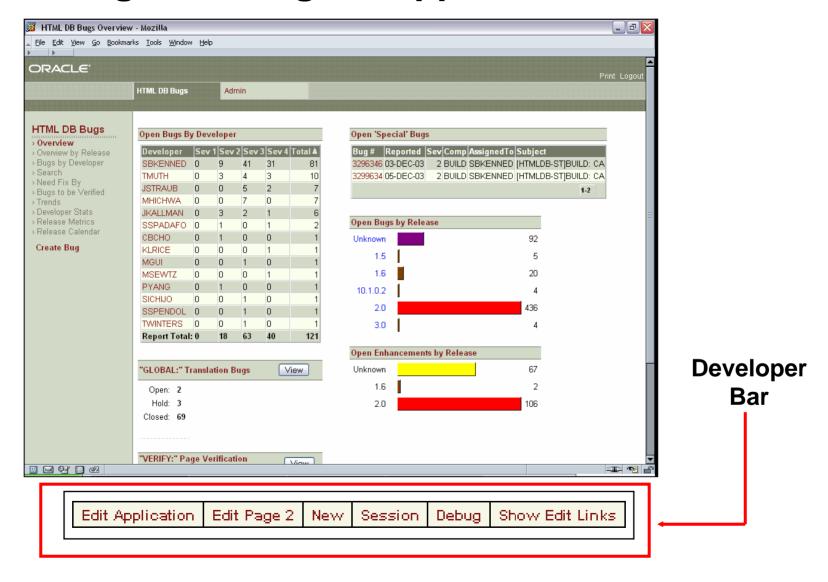




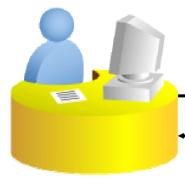




### Building & Testing the application (wysiwyg)



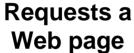
#### How does it know?



Request from browser to Web server

**Connection 1** 

Response from Web server to client





Web server responds



New connection to Web server established

**Connection 2** 

**Connection from Web server to client** 

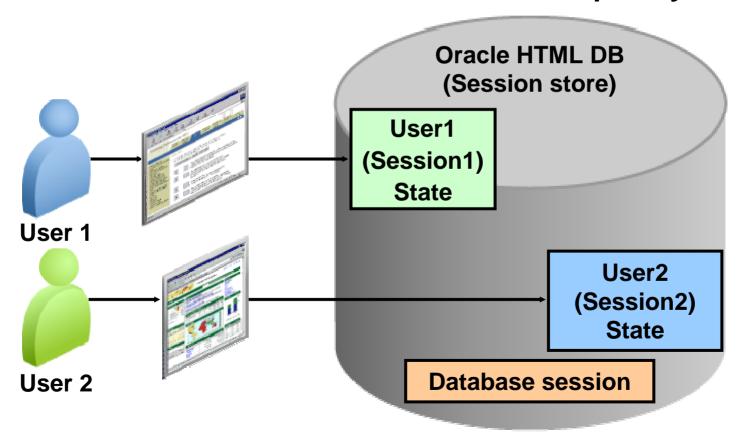
Requests a new Web page

Web server responds



## How Does Oracle HTML DB Implement Session State?

Oracle HTML DB maintains session state implicitly.



## Understanding Oracle HTML DB URL Syntax

#### Syntax:

http://<servername>:<port>/pls/DAD/f?p=App:Page: Session

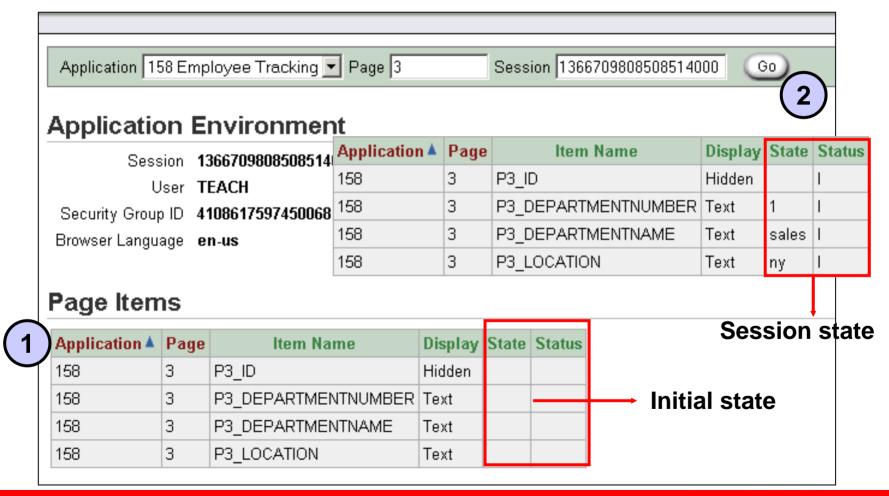
#### **Example:**

http://localhost:7778/pls/htmldb/f?p=100:5:136670980850851

<u>4000</u>

## **Viewing Session State**

Edit Application | Edit Page 1 | New | Session | Debug | Show Edit Links |

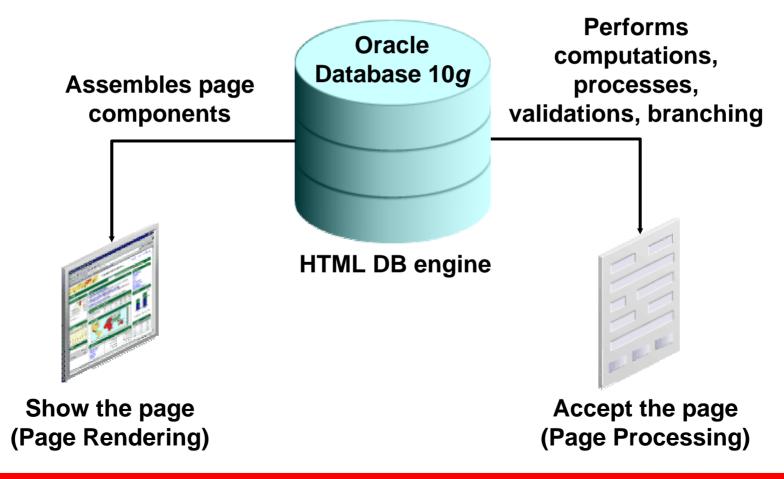


## Referencing Item Values and Getting Session State

#### You can reference session state by using:

Environment	Syntax	Example
SQL	Use bind variable syntax.	:MY_ITEM
PL/SQL	Use bind variable syntax or v function.	:MY_ITEM v('MY_ITEM') nv('MY_ITEM')
Static text	Use &item name followed by period (.).	&MY_ITEM.

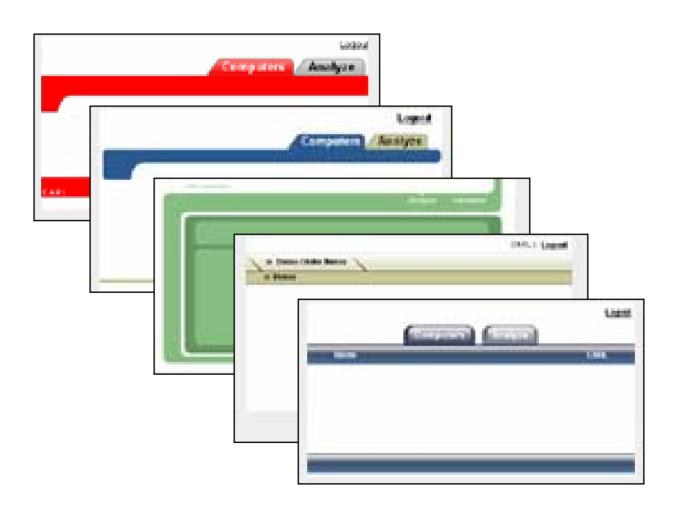
## Page <u>Processing</u> and Page <u>Rendering</u>



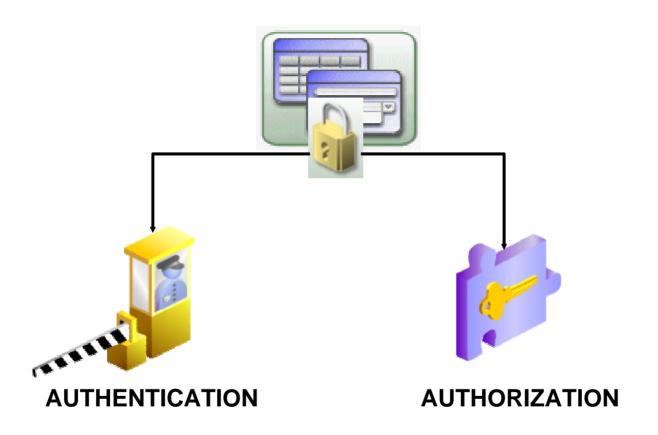
### **Overview of Templates**

- Templates define how the pages or the page components of an application are displayed.
- You can use the following templates:
  - Page
  - Region
  - Report
  - List
  - Label
  - Menu
  - Button

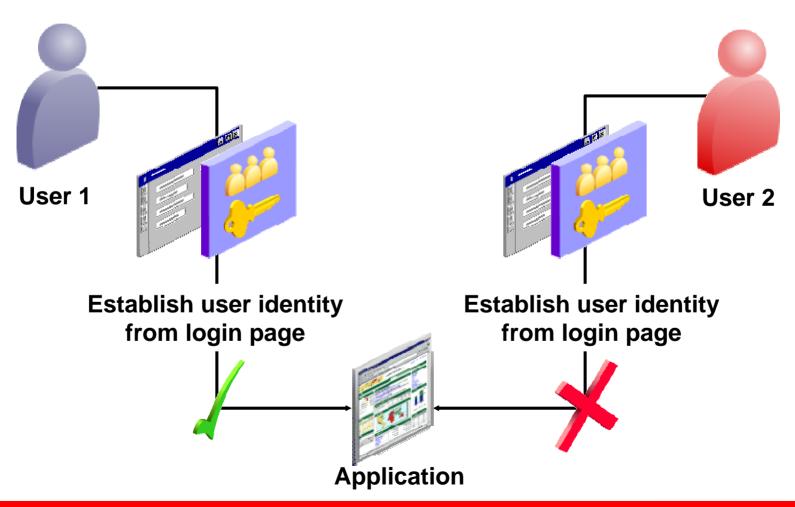
### **Themes**



## **Securing Your Application**



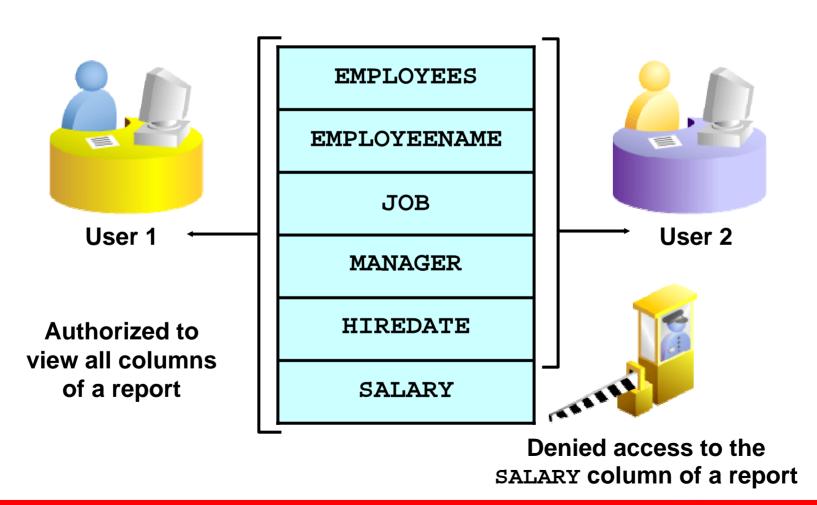
## **Establishing User Identity Through AUTHENTICATION**



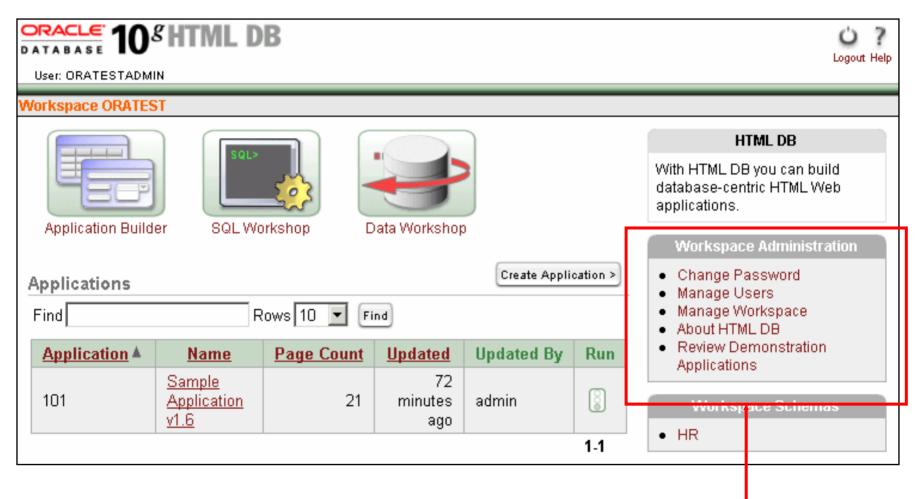
## **Authentication Schemes (choices)**



## Implementing Security Through AUTHORIZATION

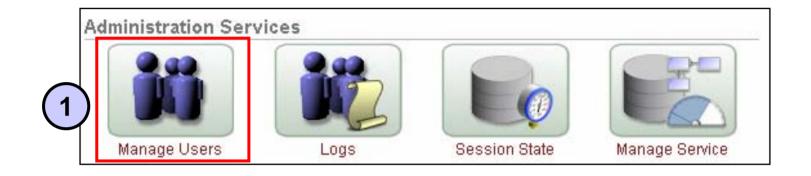


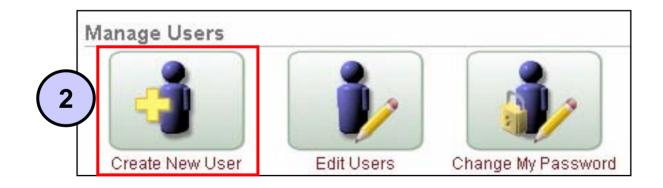
## **Workspace Administration**



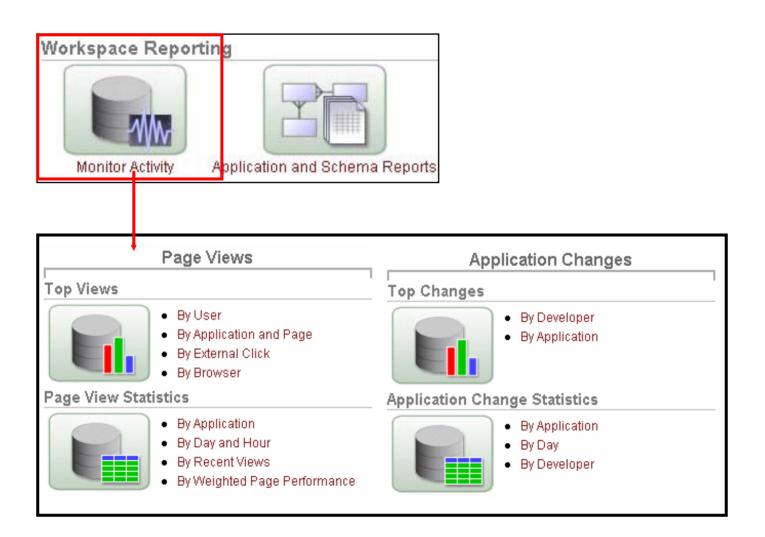
**Administration** 

## **Creating a New User**

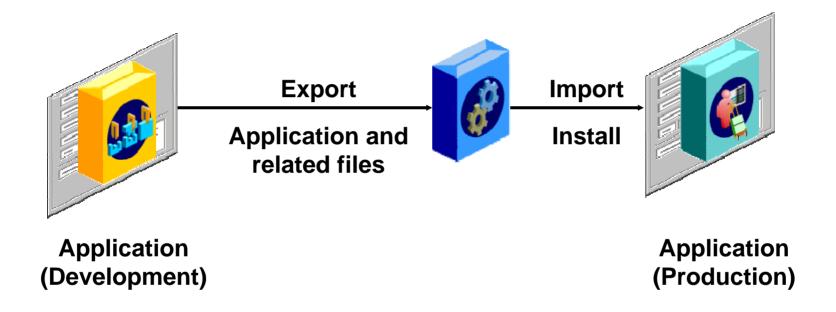




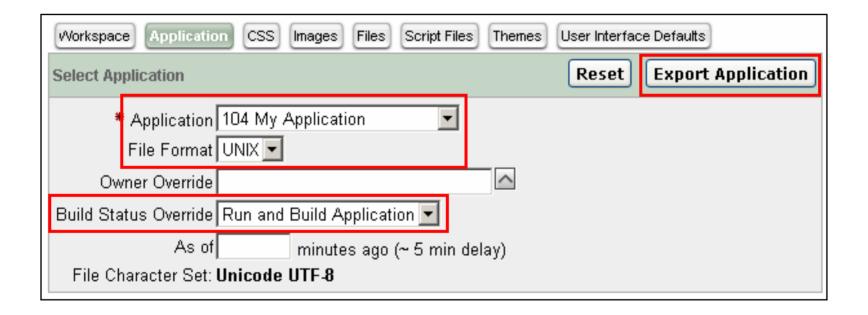
## **Monitoring Workspace Utilization**



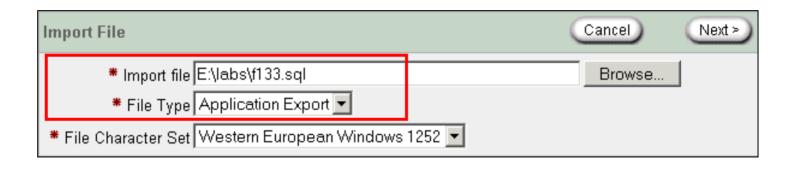
## Deploying Your Application by Using Oracle HTML DB Utilities



## **Exporting Your Application**



## **Importing Your Application**





## http://Htmldb.oracle.com

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- Sign up for a free workspace