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JDeveloper 9i: What's Hot? What's Not?

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Agenda

- ◆ Survey
- ◆ Background
- ◆ Java
- ◆ BC4J
- ◆ JDeveloper 9i
 - What's new?
 - Useful tips



Survey

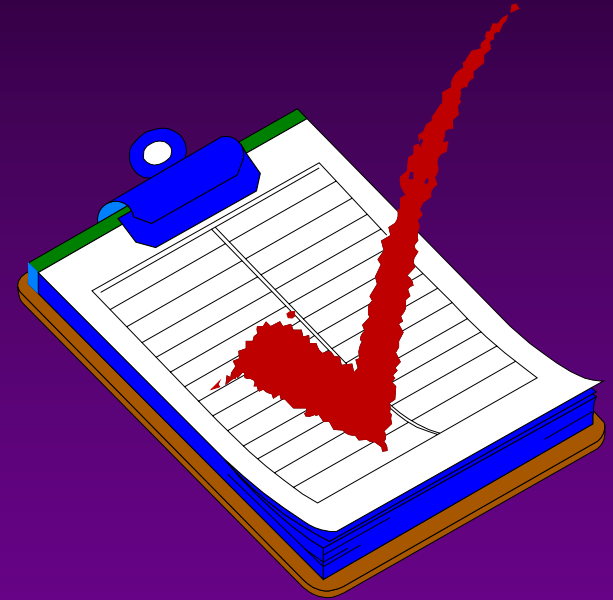
◆ Who is using Oracle Developer

- 1-2 years
- 2-5 years
- 5-15 years

◆ Who is using Java now?

- 1-2 years
- 2-5 years
- 5-15 years

◆ Who has a need to move to Java now?



JDeveloper History

- ◆ Oracle bought some code for Borland's J-Builder in 1997.
- ◆ JDeveloper 1.0 (1998)
 - More or less useless
- ◆ JDeveloper 2.0 (1999)
 - Still useless

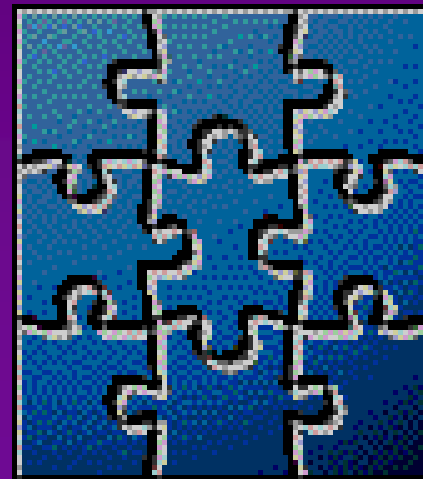


- ◆ JDeveloper 3.0 (2000)
 - BC4J & DAC
 - Finally the right idea!
- ◆ JDeveloper 3.2 (2001)
 - Bug fixes
 - First useful version
- ◆ JDeveloper 9i (2002)
 - First good version
 - Big rewrite
 - Change in direction



Where Does JDeveloper Fit?

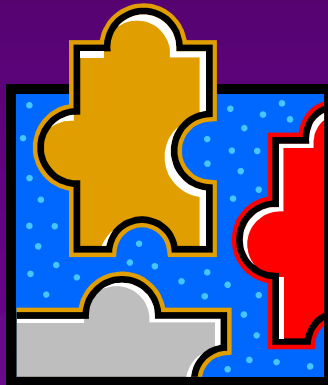
- ◆ A Java development tool
 - JDeveloper has lots of market competition
 - Visual Café - Symantec
 - JBuilder
 - Forte
- ◆ A Java development tool that works with Oracle
 - No real competition





Where JDeveloper fits today

- ◆ Good tool to build Java applications
- ◆ Best tool for building Oracle-based Java applications
- ◆ Most of the solution for building JSPs



JDeveloper in the Development World

◆ Weaknesses

- Inefficient for application development
- Little support for JSP development

◆ Strengths

- Good IDE
- It's an Oracle product.
- Extensible - wizards, property inspectors (customizers), toolbars, code generators
- Excellent Oracle database connectivity
- Supports **all** Java development
- Good user interface
 - Rated high by reviewers, much better than 3.2 release



Extremely important!

JDeveloper's Short-Term Vision

- ◆ Close the gap with Form Builder on development efficiency for Java Server Pages (JSPs)
 - 6-12 months
- ◆ Support full enterprise-level data modeling
 - 1-2 years
- ◆ Java client support is “mature.”



JDeveloper's Long-Term Vision

- ◆ A fully integrated design and development environment
- ◆ Full UML integration
- ◆ The vision of what Designer and Developer never fully achieved
- ◆ Probably never integrate into Designer....maybe
- ◆ JSP is main development direction.



Is JDeveloper ready for production use?

- ◆ Client/Server style application development
 - Yes (but it will take time)
- ◆ Web development
 - Probably (but it will take a LONG time)



Is Java all you need to deploy on the Web?

- ◆ NO!!!!
- ◆ Java Deployment
 - JSP - Web
 - Applet – Web internal
 - Applications – Client/Server
- ◆ Each alternative requires different tools and languages



Moving to a Java-Based Development Environment

- ◆ Don't abandon your old development environment immediately.
 - Java is still bleeding-edge technology.
- ◆ Java alone is not enough for web development.
 - It is a much more complex environment.



Using Form Builder (the good old days)

Forms Client/Server

Required Tools

- ◆ Forms
- ◆ TOAD

Required Languages

- ◆ SQL
- ◆ PL/SQL



Java Applications

- ◆ Client-server
- ◆ Java program runs on PCs JVM

Required Tools

- ◆ JDeveloper
- ◆ TOAD



TOAD®



Required Languages

- ◆ Java
- ◆ XML
- ◆ JDBC
- ◆ SQLJ
- ◆ SQL, PL/SQL

Java Applets

Java applications running over a browser

Required Tools

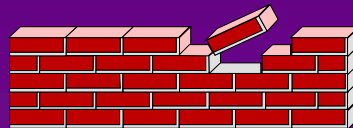
- ◆ JDeveloper
- ◆ TOAD
- ◆ Apache or IAS

Required Languages

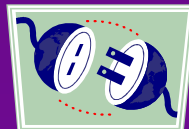
- ◆ Java
- ◆ XML
- ◆ JDBC
- ◆ SQLJ
- ◆ SQL,PL/SQL

◆ Other problems - Security

➤ Firewalls



➤ Secure Sockets





- ❖ Sell over the Internet
- ❖ Java back end, HTML front end

Required Tools

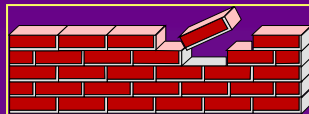
- ◆ JDeveloper
- ◆ TOAD
- ◆ Apache or IAS
- ◆ DreamWeaver or FrontPage

Required Languages

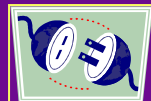
- ◆ Java
- ◆ XML
- ◆ JDBC
- ◆ SQLJ
- ◆ SQL, PL/SQL
- ◆ HTML
- ◆ JavaScript

◆ Other problems - Security

➤ Firewalls



➤ Secure Sockets



Using Java

- ◆ For PL/SQL programmers wanting to move to Java, there are some important conceptual differences to understand.
- ◆ Learning Java is more than just learning a new syntax.
- ◆ You need to take an object-oriented approach.
- ◆ Get “Refactoring” by Martin Fowler

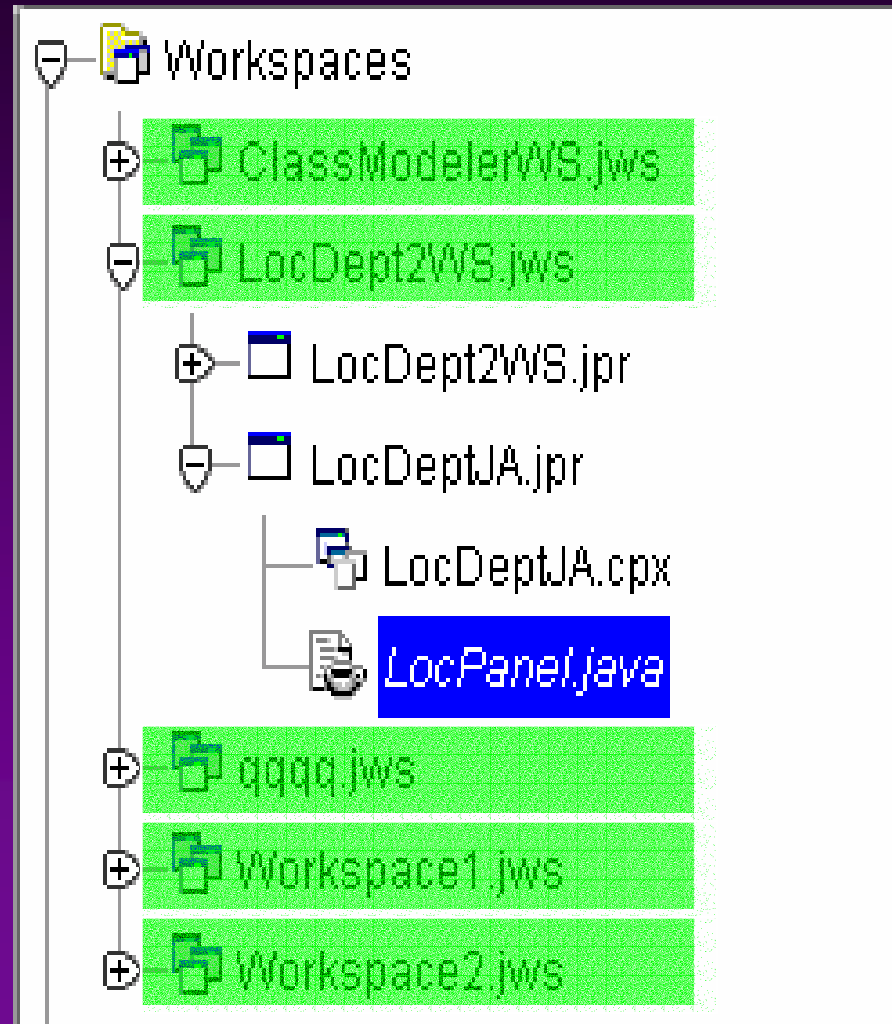
JDeveloper – What is it?

- ◆ Primarily a Java development environment
- ◆ Limited JSP support
- ◆ Main differentiation point – Business Components for Java (BC4J)



Workspaces

- ◆ Can have many open at once (in 9i not 3.2)
- ◆ Logical grouping of ... files
- ◆ Physically a file with names and locations of other files .jws
- ◆ 1 workspace per application (or logical portion of)



Projects

- ◆ Logical grouping of ... stuff
- ◆ Physically - a file with pointers (.jpr)
- ◆ Lives in one package (directory)
- ◆ Usually at least 2 in an application:
 - BC4J
 - UI or JSP

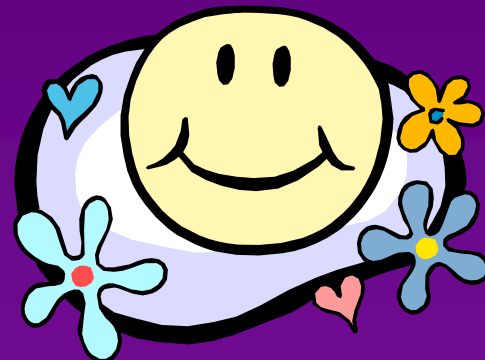


BC4J - Overview

- ◆ Main advantage over other development tools
- ◆ Primary way of handling database DML operations
- ◆ Overcomes hurdle of complex database interface to handle web-based applications
- ◆ BC4J features:
 - Builds a set of Java classes that wrap the DML commands and reference an XML document that stores the data structure
 - Classes make JDBC calls to the database to take over insert, update, delete and lock functions.

BC4J - Advantages

- ◆ BC4J classes can implement complex validation
 - Need to think carefully about whether this is the appropriate place for this function
- ◆ Reduced development time
- ◆ Can cache data to be shared among multiple users
 - Allows for tuning capabilities

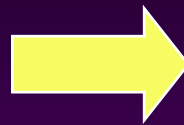


Three areas of BC4J

- ◆ 1. Entities and Associations
 - Cached copy of a portion of the database
 - An entity is linked to, at most, 1 table
- ◆ 2. View objects and view link objects
 - View objects that sit on top of entities (or nothing)
- ◆ 3. Data model
 - Collection of views
 - What the UI applications interact with

Default Generator

DBMS Tables



Entities & Associations



Data Model

Dept
Emp 1
Emp 2



Views & view links



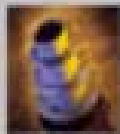
BC4J Files

- ◆ XML – redundantly stores data structure of relational database
- ◆ Java classes – contain complex logic and application calls used by other parts of application
- ◆ Java library – provided by Oracle to handle JDBC generation



What's New in JDeveloper 9i?

(Thanks to Peter Koletzke for some of this)



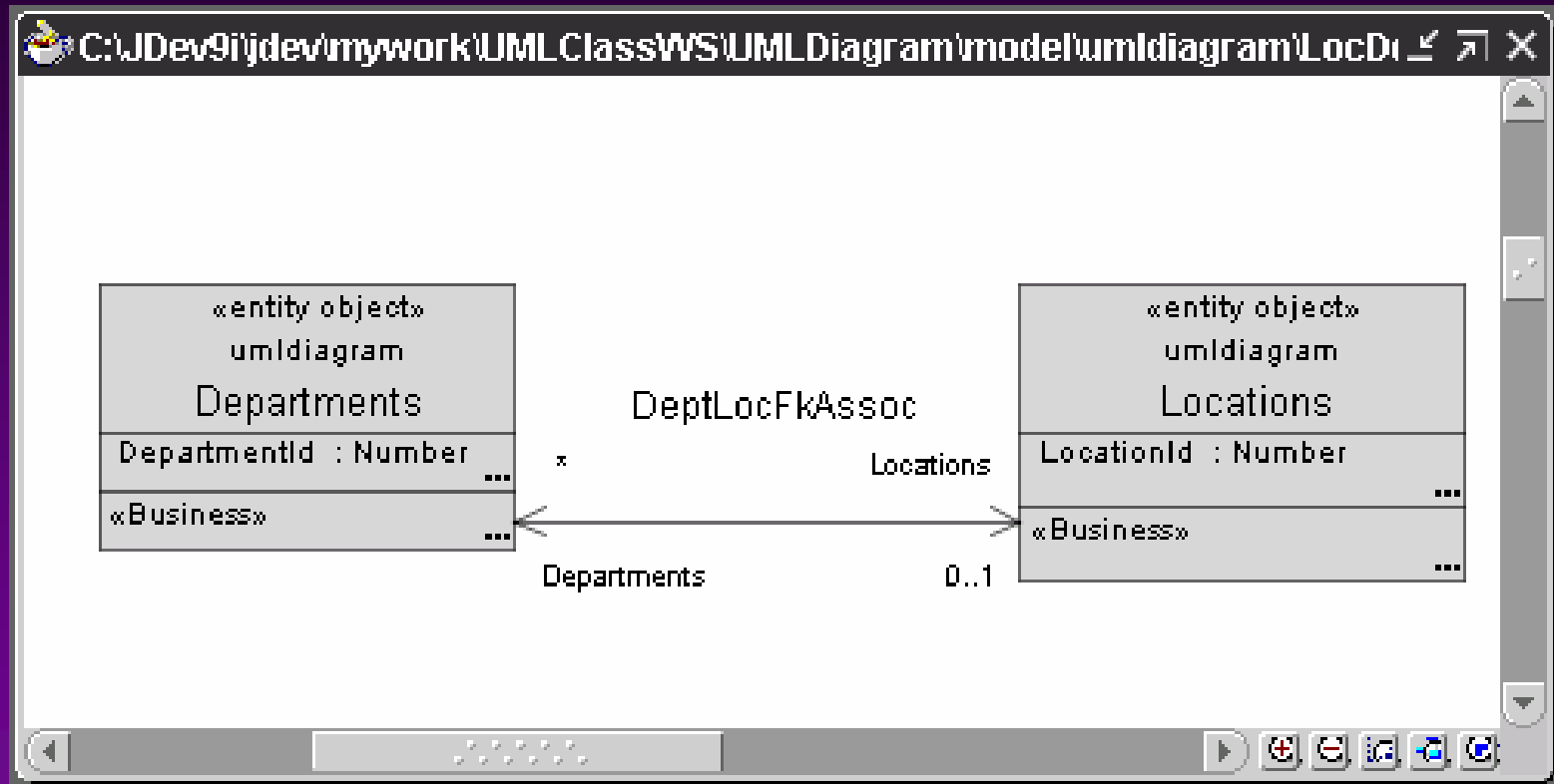
Oracle9i JDeveloper

Now 100% Java

- ◆ Slightly slower IDE
- ◆ Some compilation is faster.
- ◆ All in all – a little slower
- ◆ Much nicer user interface



JDeveloper Class Diagram



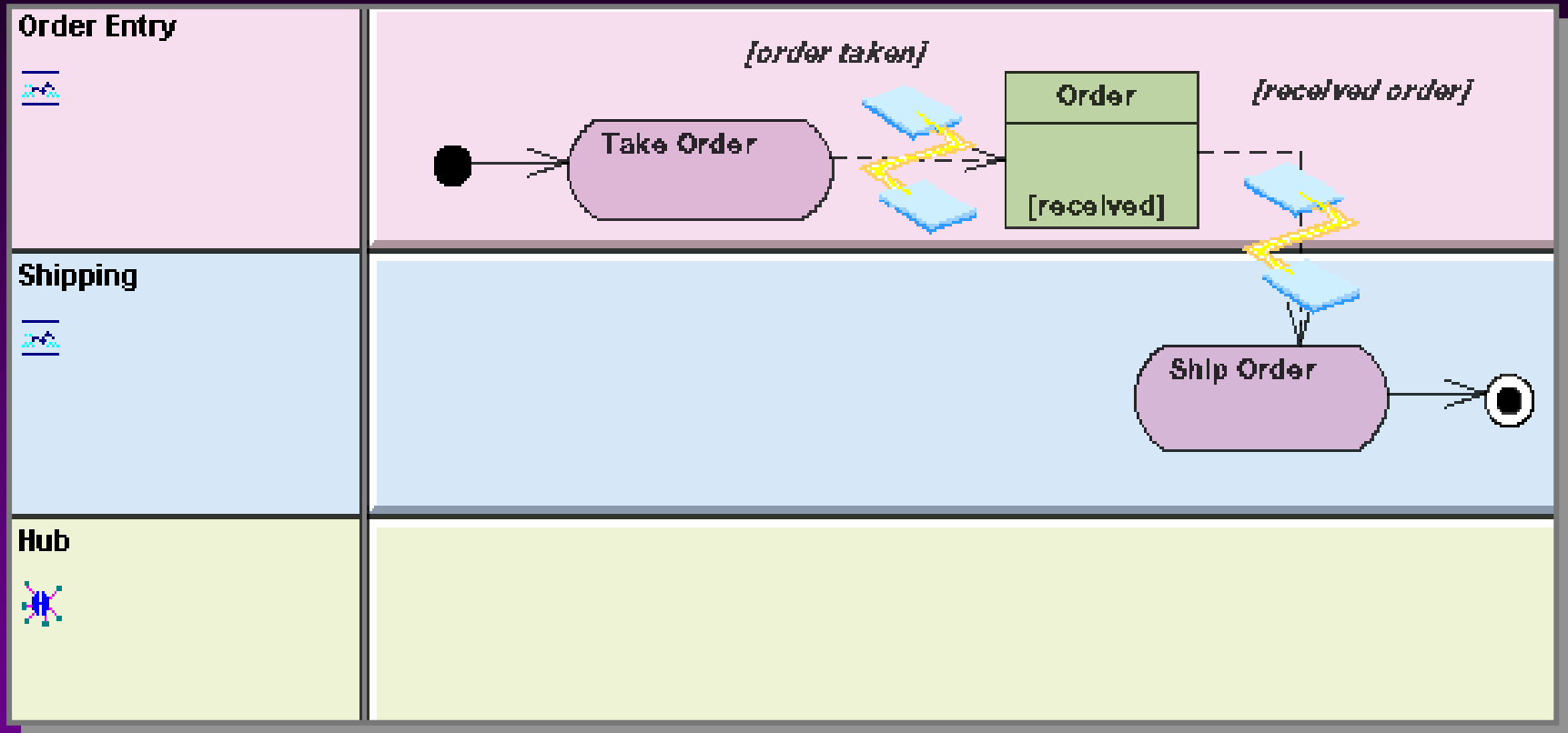


UML Modeling

- ◆ Java classes
 - Quite good
 - Useful?
- ◆ BC4J
 - Only entity objects (not view objects)
- ◆ Data Modeling
 - Use Dulcian's BRIM™



JDeveloper Activity Modeler



- ◆ Swim lanes and activities
- ◆ Vaguely familiar if you know Designer



Software Configuration Management

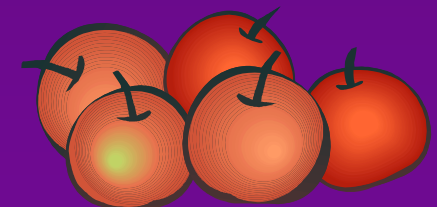
- ◆ Linked to the Oracle SCM Repository
 - Formerly known as “Designer Repository”
 - Same engine as Designer 6i
- ◆ Use for version control and configuration management
 - Check-in and Check-Out
 - Compare
 - Merge
 - In the menu and navigator





Java Applications and Applets

- ◆ Called Java Client or JClient
- ◆ No DAC
 - Beta does not include support for Data Aware Controls
 - Backwards compatibility-only for DAC in production
- ◆ MVC instead
 - Bind Swing controls to BC4J
 - No DAC needed



JSP Enhancements

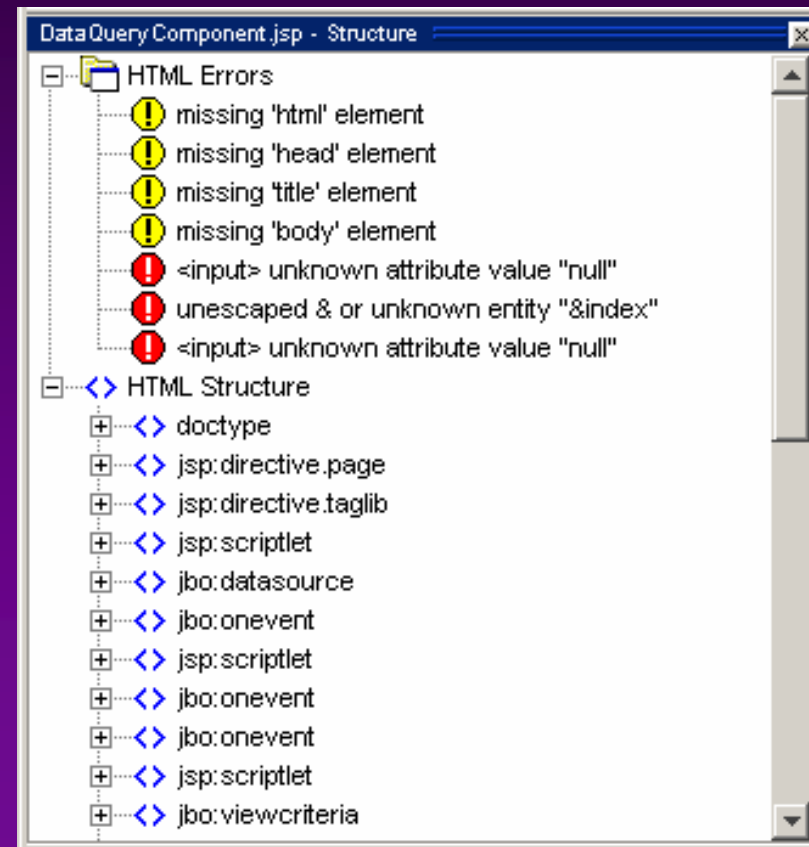
◆ Code Insight for JSP files

- Auto fill-in of names and arguments
- Color coding in the editor

◆ Hierarchical view of JSP and HTML

- Appears in the Structure Pane
- Lists errors as well

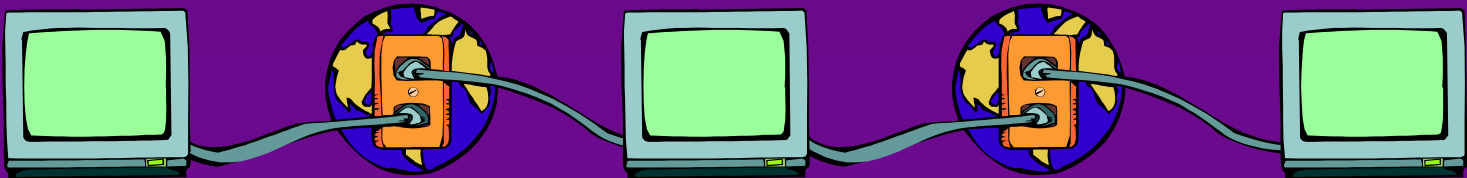
◆ Expanded tag library

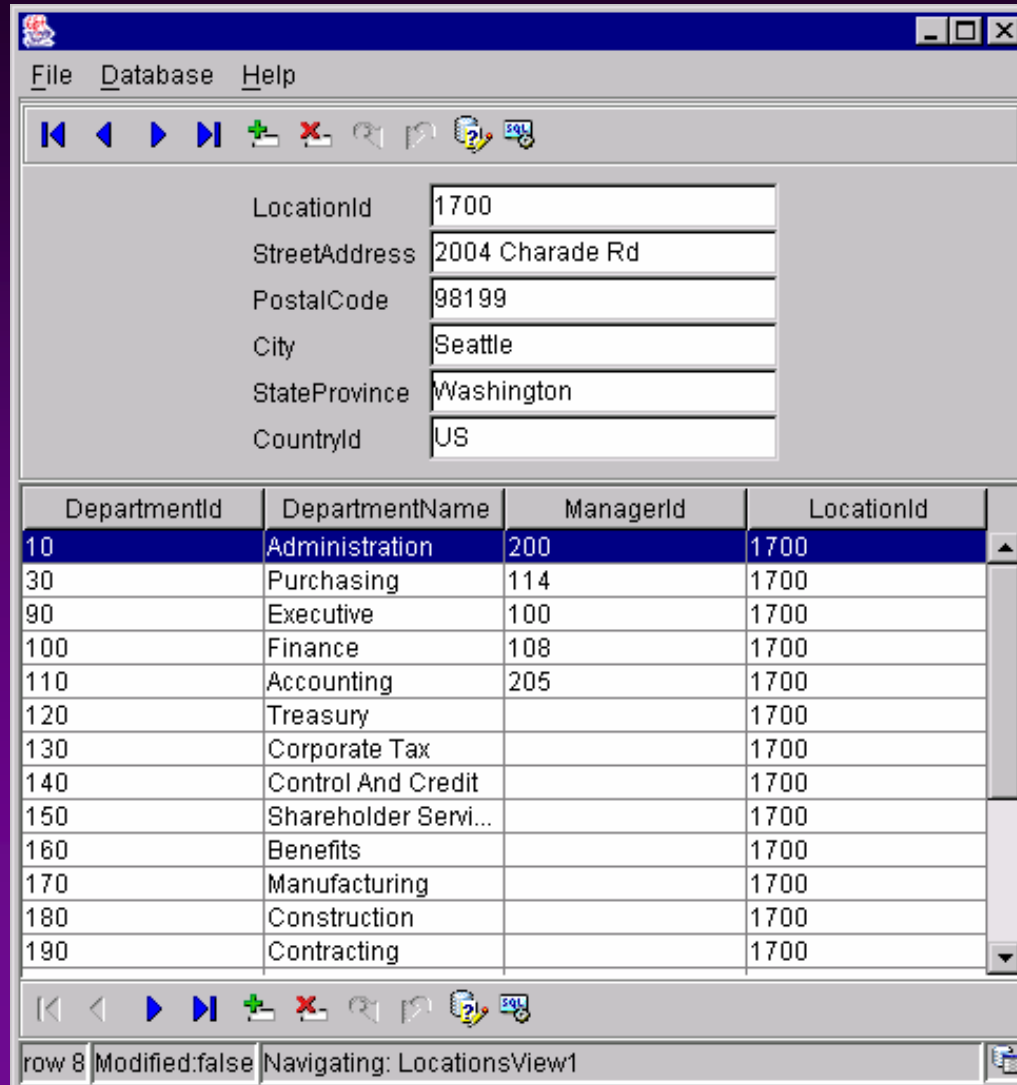


Connections

- ◆ Database – same as in version 3.2
- ◆ AppServer – 9i App Server
- ◆ Repository – for Configuration Management

Haven't tried them yet





The screenshot shows a Java Swing window titled "Nicer BC4J Tester". The window has a menu bar with "File", "Database", and "Help". Below the menu bar is a toolbar with navigation and action icons. The main area is divided into two sections: a form and a table.

The form contains the following fields:

- LocationId: 1700
- StreetAddress: 2004 Charade Rd
- PostalCode: 98199
- City: Seattle
- StateProvince: Washington
- CountryId: US

Below the form is a table with the following data:

DepartmentId	DepartmentName	ManagerId	LocationId
10	Administration	200	1700
30	Purchasing	114	1700
90	Executive	100	1700
100	Finance	108	1700
110	Accounting	205	1700
120	Treasury		1700
130	Corporate Tax		1700
140	Control And Credit		1700
150	Shareholder Servi...		1700
160	Benefits		1700
170	Manufacturing		1700
180	Construction		1700
190	Contracting		1700

At the bottom of the window, there is a status bar showing "row 8 Modified:false Navigating: LocationsView1".

Two Tips

- ◆ Use low-level wizards.
- ◆ Don't rename objects after they are created in BC4J
 - Entities
 - Views
 - Associations
 -
 - Code doesn't clean up correctly



More Information about JDev 9i

◆ otn.oracle.com

- Products area
- The discussion forums are quite active.



◆ ODTUG lists



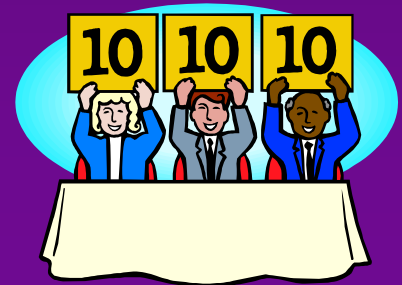
◆ Oracle support

Oracle Support Services



So, is JDev ready for prime time?

- ◆ For Java applications
 - Absolutely - but it will take some effort
- ◆ For JSPs
 - Probably - but you are going to need to be very smart
 - ...or very patient
- ◆ As a replacement for Designer (the grand vision)
 - No way





Share your Knowledge: Call for Articles for the SELECT Journal

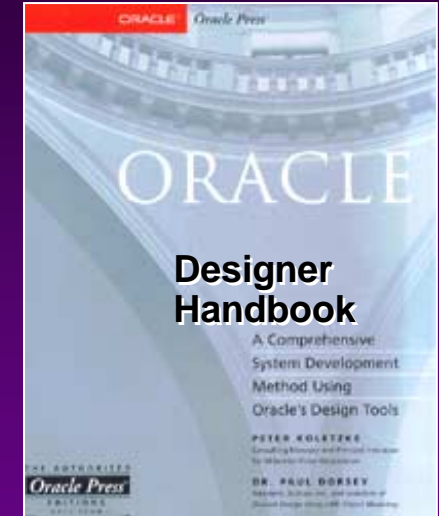
- ◆ Help contribute your knowledge to the larger Oracle community:
 - Make the SELECT Journal an even more valuable resource.
 - Articles wanted on topics of interest to the Oracle community.
 - Sign up to be a reviewer of articles.
- ◆ Submit articles, questions, ... to select@ioug.org.





Contact Information

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- ◆ Dulcian website - www.dulcian.com



Coming by year end
Oracle 9i JDeveloper Handbook

