

OBIEE

Course Overview



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Document History

Date	Course Version No.	Software Version No.	Developer / SME	Change Record Remarks
31-July-2011	1.0	OBIEE 10g	Vandana	Content Creation
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Course Goals and Non Goals

➤ Course Goals

- To understand the concepts of OBIEE

➤ Course Non Goals

- Oracle Fusion Middleware Administration



Pre-requisites

- Good knowledge of RDBMS (must have)
- Fair knowledge of Data Warehousing Concepts (must have)
- Fair knowledge of Dimensional Modeling
- Fair knowledge of SQL

Intended Audience

- Analysts, Report Designers and Developers involved in design, development, and maintenance of OBIEE Reports.



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Oracle Business Intelligence Enterprise Edition (OBIEE) 11g

Lesson 1: Introduction to OBIEE

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Lesson Objectives

➤ **To understand the following topics:**

- What is OBIEE 11g? – An Overview
- OBI Foundation Suit – An Overview
- Oracle Fusion Middle Ware - Overview
- Key Features of OBIEE 11g
- High Level Architecture
- Detailed Architecture
- Security – An Overview



Oracle Business Intelligence 11g - Overview

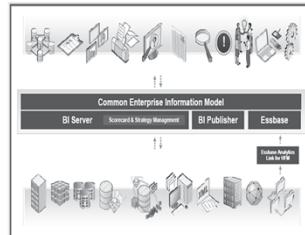
- **OBIEE - Oracle Business Intelligence Enterprise Edition**
- **Formerly known as Siebel Analytics**
- **Re-branded as OBIEE after Oracle acquired Siebel in 2006**
- **Comprehensive set of enterprise BI tools and infrastructure, including**
 - a scalable and efficient query and analysis server
 - an ad-hoc query and analysis tool
 - interactive dashboards
 - proactive intelligence and alerts,
 - and an enterprise reporting engine
- **Provides intelligence & analytics from data spanning enterprise sources**

Oracle Business Intelligence 11g – Overview (Cont..)

- OBIEE 11g is an enhanced version from the OBIEE 10.x

Oracle BI Foundation Suit - Overview

- The Oracle BI Foundation Suite provides powerful capabilities that offer significant value for BI applications across the enterprise
- Oracle BI Foundation Suite consists of:
 - OBIEE 11g
 - Oracle BI Publisher
 - Oracle Essbase
 - Oracle Scorecard and Strategy Management
 - Oracle Essbase Analytics Link (EAL)
- OBIEE - Latest major version
 - 11.1.1.6 released in March 2012
- OBIEE - Latest minor release
 - 11.1.1.6.8 patch as of Feb 2013



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The Oracle BI Foundation Suite provides powerful capabilities that offer significant value for BI applications across the enterprise. The Oracle BI Foundation Suite consists of Oracle Business Intelligence Enterprise Edition 11g, Oracle BI Publisher, Oracle Essbase, Oracle Scorecard and Strategy Management, and Oracle Essbase Analytics Link (EAL). Following is an overview of the key components and features of the Foundation Suite.

The Oracle BI Foundation Suite enables access to information through multiple channels such as web-based user interfaces, industry standard portals, mobile devices, and the Microsoft Office Suite of applications. A powerful enterprise information model unifies disparate data systems within an organization and provides a platform for BI tool integration.

Following is an overview of the key components and features of the Foundation Suite.

Server Components

- Common Enterprise Information Model
- Oracle BI Server:
- Oracle Essbase:
- Oracle Essbase Analytics Link:

End-User Delivery Components

- Enterprise Reporting
- Ad hoc Query and Reporting
- Interactive Dashboards
- Scorecard and Strategy Management
- Actionable Intelligence
- Integrated Search
- BI on the go:

Systems Management Components

- Oracle Enterprise Manager Integration

The Oracle BI Foundation Suite enables access to information through multiple channels such as web-based user interfaces, industry standard portals, mobile devices, and the Microsoft Office Suite of applications. A powerful enterprise information model unifies disparate data systems within an organization and provides a platform for BI tool integration.

What is Middleware?

- Middleware is the software that connects software components or enterprise applications.
- Middleware is the software layer that lies between the operating system and the applications on each side of a distributed computer network .
- It supports complex, distributed business software applications
- Middleware includes Web servers, application servers, content management systems, and similar tools that support application development and delivery

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Due to continued growth and use of network-based applications by businesses, middleware technologies are increasingly important. Companies and organizations are now building enterprise wide information systems by integrating previously independent applications with new software developments. The integration process may involve legacy applications which may be used only with, or through a non modifiable interface. In some cases, rewriting the code for a legacy application may be cost-prohibitive.

Increasingly, information systems are composed of a collection of various specialized hardware devices interconnected by a network. Each device performs a function that involves receipt of real time data and remote interaction with other devices of the system. Some examples include computer networks, telecommunication systems, uninterrupted power supply units, and decentralized manufacturing units.

Functions of Middleware

- The function of middleware is to mediate interaction between the parts of an application, or between applications.
- Middleware makes application development easier, by providing common programming abstractions, by masking application heterogeneity and the distribution of the underlying hardware and operating systems, and by hiding low-level programming details.

Applications use intermediate software that resides on top of the operating systems and communication protocols to perform the following functions:

Hide the distributed nature of the application. An application represents a collection of interconnected parts that are operational and running in distributed locations, out of view.

Hide the heterogeneity of the enterprise. This includes the hardware components used, computer operating systems, and communication protocols.

Provide uniform, standard, high-level interfaces to the application developers and integrators, so that applications can be easily composed, reused, ported, and made to interoperate.

Supply a set of common services to perform various general purpose functions to avoid duplicating efforts, and to facilitate collaboration between applications.

Oracle Fusion Middleware Solution

- Oracle Fusion Middleware offers solutions to and support for complex, distributed business software applications.
- It includes Web servers, application servers, content management systems, and similar tools that support application development and delivery.
- Oracle Fusion Middleware is a collection of standards-based software products that includes a range of tools and services: from a Java Enterprise Edition 5 (Java EE) compliant environment, and developer tools, to integration services, business intelligence, collaboration, and content management.
- Oracle Fusion Middleware offers complete support for development, deployment, and management.

Oracle Fusion Middleware - Overview

What is Oracle Fusion Middleware?

"A comprehensive family of Oracle products ranging from application development tools and integration solutions to identity management, collaboration and business intelligence reporting"



Oracle Fusion Middleware Solution

➤ Oracle Fusion Middleware offers the following solutions through its middleware design:

- Development Tools: An integrated, but modular, set of development tools to build complete applications. The design tool includes a single design environment for user interface, business logic, service composition, business process or workflow, business rules, and business intelligence.
- User Interaction: A single, end-user environment that enable access to enterprise applications, business processes, business intelligence and to share information with each other.
- Business Intelligence: A suite of business intelligence tools from extract, transform, and load to integrate data into warehouses; query, analysis, and reporting tools for decision support; scorecards to compare how the business is doing against key performance indicators; and alerting to drive notifications to users about problems in the business software.

Development tool Includes Oracle JDeveloper, Oracle TopLink, Oracle Application Development Framework, and Oracle Eclipse.

Business Intelligence includes Oracle Business Intelligence Discoverer, Oracle Reports

Oracle Fusion Middleware Solution

- Content Management: A repository within which to manage documents, digital assets, scanned images and other forms of content; to integrate this content with a company's enterprise applications, Web sites, and business processes.
- SOA: A means of using existing investments in applications and systems most efficiently to be able to focus more resources and budget on innovation and on delivering new business services
- Application Server: A standards-based Java EE application server to run the enterprise applications and provide the Web services infrastructure for interoperability.
- Integration and Business Process Management (BPM): A standards-based service bus to connect applications with each other and with legacy systems using messaging; a BPM or workflow engine to connect the application into a business process or workflow

Security and Identity Management includes Oracle Internet Directory, Oracle Virtual Directory, Oracle Directory Integration Platform, Oracle Identity Federation.

Oracle Fusion Middleware Solution

- Security and Identity Management: Lower cost of security administration across multiple applications and systems in an enterprise, by centralizing how users are created and provisioned, their identities, and roles and by enabling them to have single sign-on access
- Enterprise Management: Lower cost of operations and administration by running on a grid architecture with grouping, backup, and other high availability technologies, and integrating with Oracle Enterprise Manager for systems management. Includes Fusion Middleware Control, Oracle WebLogic Server Administration Console, Oracle WebLogic Scripting Tool, Oracle Process Manager and Notification Server, Oracle Enterprise Manager 10g Grid Control.

Security and Identity Management includes Oracle Internet Directory, Oracle Virtual Directory, Oracle Directory Integration Platform, Oracle Identity Federation.

Oracle Fusion Middleware Components

- Oracle Weblogic Server
- Oracle SOA Suite
- Oracle webcenter
- Oracle HTTP server
- Oracle web cache
- Oracle Identity Management
- Oracle Internet Directory
- Oracle Virtual Directory
- Oracle web services Manager
- Oracle Platform security
- Oracle Business Intelligence

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OFM Components:

Oracle WebLogic Server: an enterprise-ready Java application server that supports the deployment of mission-critical applications in a robust, secure, highly available, and scalable environment. Oracle WebLogic Server is an ideal foundation for building applications based on service-oriented architecture (SOA).

Oracle SOA Suite: A complete set of service infrastructure components for designing, deploying, and managing composite applications. Oracle SOA Suite enables services to be created, managed, and orchestrated into composite applications and business processes. Composites enable you to easily assemble multiple technology components into one SOA composite application.

Oracle WebCenter: An integrated set of components with which you can create social applications, enterprise portals, collaborative communities, and composite applications, built on a standards-based, service-oriented architecture. Oracle WebCenter combines dynamic user interface technologies with which to develop rich internet applications, the flexibility and power of an integrated, multichannel portal framework, and a set of horizontal Enterprise 2.0 capabilities delivered as services that provide content, collaboration, presence, and social networking capabilities. Based on these components, Oracle WebCenter also provides an out-of-the-box, enterprise-ready customizable application, WebCenter Spaces, with a configurable work environment that enables individuals and groups to work and collaborate more effectively.

Oracle HTTP Server: Provides a Web listener for Java EE applications and the framework for hosting static and dynamic pages and applications over the Web. Based on the proven technology of the Apache HTTP Server, Oracle HTTP Server includes significant enhancements that facilitate load balancing, administration, and configuration.

Oracle Web Cache: A content-aware server accelerator, or reverse proxy, that improves the performance, scalability, and availability of websites that run on OFM.

Oracle Identity Management: Provides a shared infrastructure for all Oracle applications. It also provides services and interfaces that facilitate third-party enterprise application development. These interfaces are useful for application developers who need to incorporate identity management into their applications.

Oracle Internet Directory: A general-purpose directory service that enables fast retrieval and centralized management of information about dispersed users and network resources. It combines Lightweight Directory Access Protocol (LDAP) Version 3 with the high performance, scalability, robustness, and availability of Oracle Database.

Oracle Virtual Directory: An LDAP version 3 enabled service that provides virtualized abstraction of one or more enterprise data sources into a single directory view. Oracle Virtual Directory provides the ability to integrate LDAP-aware applications into diverse directory environments while minimizing or eliminating the need to change either the infrastructure or the applications. It supports a diverse set of clients, such as Web applications and portals, and it can connect to directories, databases, and Web Services.

Oracle Web Services Manager: Provides a way to centrally define and manage policies that govern Web services operations, including access control (authentication and authorization), reliable messaging, Message Transmission Optimization Mechanism (MTOM), WS-Addressing, and Web services management. Policies can be attached to multiple Web services, requiring no modification to the existing Web services.

Oracle Platform Security: Provides enterprise product development teams, systems integrators, and independent software vendors (ISVs) with a standards-based, portable, integrated, enterprise-grade security framework for Java Standard Edition (Java SE) and Java Enterprise Edition (Java EE) applications.

Oracle Portal, a Web-based tool for building and deploying e-business portals. It provides a secure, manageable environment for accessing and interacting with enterprise software services and information resources. A portal page makes data from multiple sources accessible from a single location.

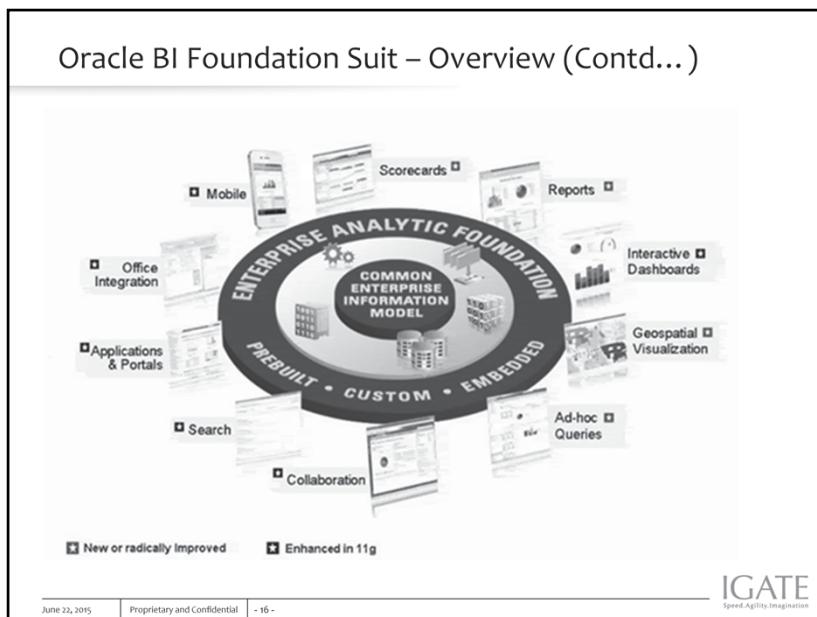
Oracle Business Intelligence: A complete, integrated solution that addresses business intelligence requirements. Oracle Business Intelligence includes Oracle Business Intelligence Reporting and Publishing, Oracle Business Intelligence Discoverer, and Oracle Business Intelligence Publisher.

Oracle Fusion Middleware - Components

What is Oracle Fusion Middleware?

"A comprehensive family of Oracle products ranging from application development tools and integration solutions to identity management, collaboration and business intelligence reporting"





Common Enterprise Information Model: The semantic model of OBIEE. It is accessed via an open API, making it available to any Oracle or non-Oracle delivery channel, thus providing a common version of the truth for all Business Intelligence users and applications.

Oracle BI Server: A highly scalable, highly efficient query and analysis server that integrates data via sophisticated query federation capabilities from multiple relational, unstructured, OLAP, and pre-packaged application sources, whether Oracle or non-Oracle.

Oracle Essbase: The industry-leading multi-dimensional online analytical processing (OLAP) server, providing a rich environment for effectively developing custom analytic and enterprise performance management applications.

Oracle Essbase Analytics Link: Enables the delivery of effective management and financial analytic reporting to a broad user community by facilitating the real-time or on-demand transfer of financial information from Oracle Hyperion Financial Management to Oracle Essbase.

End-User Delivery Components :

Enterprise Reporting: Oracle Business Intelligence (BI) Publisher (formerly XML Publisher) is an enterprise reporting solution for authoring, managing, and delivering highly formatted documents, such as operational reports PDF forms, shipping labels, checks, sales and marketing letters, and much more. Built on open standards, reports can be designed using a feature-rich online layout editor or through familiar desktop products and viewed online or scheduled for delivery to a wide range of destinations. While Oracle BI Publisher is fully integrated with OBIEE 11g, it can also be deployed separately.

Ad hoc Query and Reporting: A powerful ad-hoc query and analysis environment that works against a logical view of information from multiple data sources in a pure Web environment. This single interface is designed to seamlessly handle both relational and OLAP style analysis.

Interactive Dashboards: Rich, interactive pure Web dashboards that display personalized information to help guide users in effective decision making.

Scorecard and Strategy Management: Extends the Oracle BI Enterprise Edition (OBIEE) with capabilities that enable strategic goals to be communicated across the organization and monitoring progress over time. Oracle Scorecard and Strategy Management includes visualizations that graphically communicate strategy & strategic dynamics using Strategy maps, Cause and Effect diagrams, and Custom views. Scorecard metadata objects and visualizations are treated just like any other OBIEE 11g metadata object and can be easily embedded in dashboards, ad-hoc query and analysis views and can be monitored as alerts.

Actionable Intelligence: Consists of an Action Framework that provides the ability to invoke a workflow, web services, web content, additional BI content, java method, and other custom procedures from any delivery channel and an alerting engine that captures and distributes notifications via multiple channels in response to pre-defined business events and/or data exceptions to speed exception based decision making.

Integrated Search: Ability to search existing content based on full indexing of Dashboards, Analyses, Views, Prompts, KPIs, Scorecards, Publisher Reports, Agents, Actions, Catalog, and Folders. Ability to drill into BI with context; Index metadata & prompts. Search results can be secured via SSO integration.

BI on the go: Consists of capabilities to provide Business Intelligence content when the user is not directly connected to the enterprise network. Includes Briefing Books — reports that capture a series of snapshots of an Oracle BI Dashboard or report allowing the information to be viewed offline in presentation style; rich integration with Microsoft Office allowing for interaction with BI content and access to pre-built analysis and mobile from Office products.

Understanding Key Oracle Fusion Middleware Concepts

➤ **Oracle Fusion Middleware provides two types of components**

- A Java component, which is an Oracle Fusion Middleware component that is deployed as one or more Java EE applications and a set of resources. Java components are deployed to an Oracle WebLogic Server domain as part of a domain template. Examples of Java components are the Oracle SOA Suite and Oracle WebCenter components.
- A system component, which is a manageable process that is not deployed as a Java application. Instead, a system component is managed by the Oracle Process Manager and Notification (OPMN).
- A Java component and a system component are peers.

Understanding Key Oracle Fusion Middleware Concepts

- After you install and configure Oracle Fusion Middleware, your Oracle Fusion Middleware environment contains the following:
 - An Oracle WebLogic Server domain, which contains one Administration Server and one or more Managed Servers. The Administration Server contains the Oracle WebLogic Server Administration Console and Oracle Enterprise Manager Fusion Middleware Control. The Managed Servers contain components, such as Oracle WebCenter and Oracle SOA Suite.

Understanding Key Oracle Fusion Middleware Concepts

- After you install and configure Oracle Fusion Middleware, your Oracle Fusion Middleware environment contains the following:
 - An Oracle WebLogic Server domain, which contains one Administration Server and one or more Managed Servers. The Administration Server contains the Oracle WebLogic Server Administration Console and Oracle Enterprise Manager Fusion Middleware Control. The Managed Servers contain components, such as Oracle WebCenter and Oracle SOA Suite.

Oracle WebLogic Server Domain

- An Oracle WebLogic Server administration domain is a logically related group of Java components.
- A domain includes a special WebLogic Server instance called the Administration Server, which is the central point from which you configure and manage all resources in the domain.
- Usually, you configure a domain to include additional WebLogic Server instances called Managed Servers.
- You deploy Java components, such as Web applications, EJBs, and Web services, and other resources to the Managed Servers and use the Administration Server for configuration and management purposes only.

Administration Server

- The Administration Server operates as the central control entity for the configuration of the entire domain.
- It maintains the domain's configuration documents and distributes changes in the configuration documents to Managed Servers.
- The Administration Server serves as a central location from which to monitor all resources in a domain.
- Each domain must have one server instance that acts as the Administration Server. To interact with the Administration Server, you can use the Oracle WebLogic Server Administration Console.

Administration Server

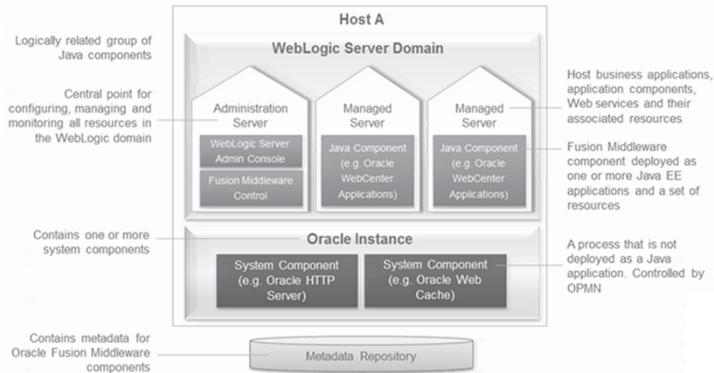
- Oracle WebLogic Server Administration Console and Fusion Middleware Control run in the Administration Server.
- Oracle WebLogic Server Administration Console is the Web-based administration console used to manage the resources in an Oracle WebLogic Server domain, including the Administration Server and Managed Servers.
- Fusion Middleware Control is a Web-based administration console used to manage Oracle Fusion Middleware, including components such as Oracle HTTP Server, Oracle SOA Suite and Oracle WebCenter, Oracle Portal, and Oracle Identity Management.

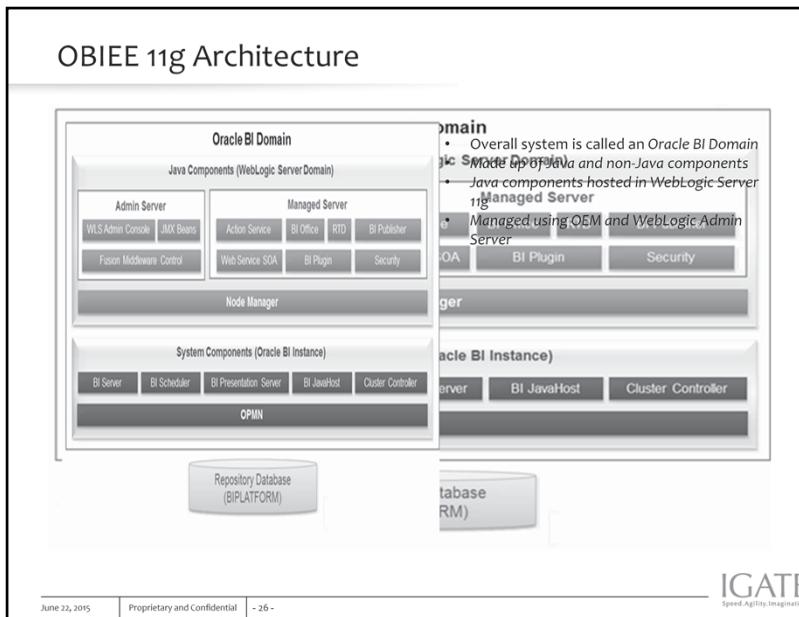
Managed server

- Managed Servers host business applications, application components, Web services, and their associated resources.

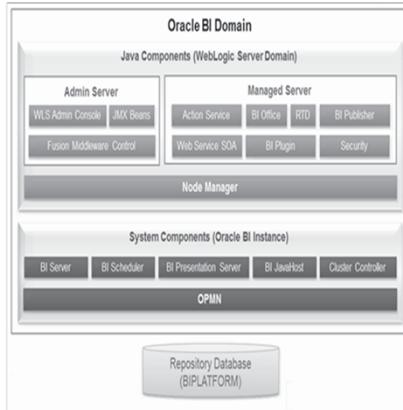
Oracle Fusion Middleware – Overview (Contd...)

General Oracle Fusion Middleware Architecture





OBIEE 11g Architecture



- Overall system is called an *Oracle BI Domain*
- Made up of Java and non-Java components
- Java components hosted in WebLogic Server 11g
- Managed using OEM and WebLogic Admin Server

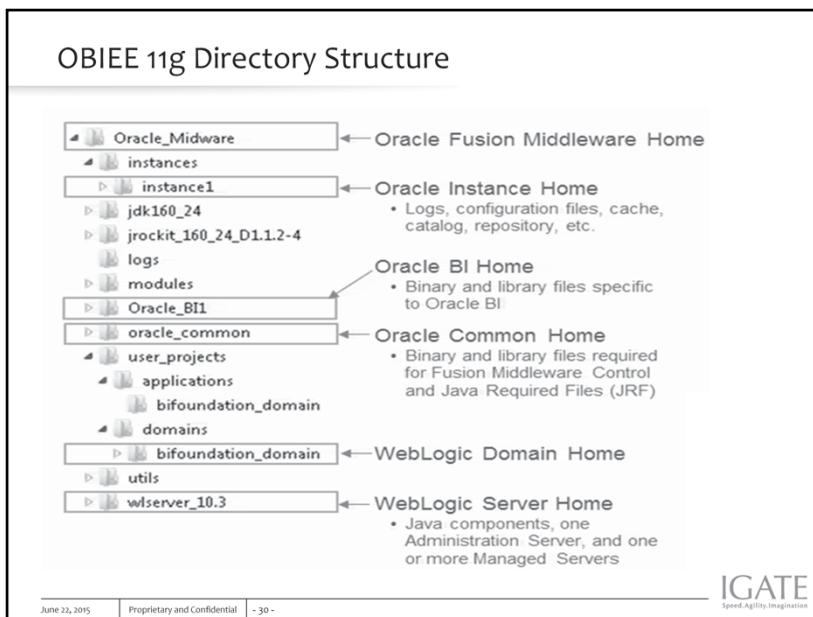
BI Domain

- Overall system is called “Oracle BI Domain”.
- This comprises of Java components deployed into J2EE containers , non java system components and required configuration files, metadata, repositories, and infrastructure. Oracle Enterprise Manager(OEM) acts as “Fusion Middleware Control” which together with Weblogic Admin Console are the basic backbone, the powerhouse and the Admin Activity controller for the entire domain.
- OEM <http://arlbi:7001/em>
- Weblogic Admin console <http://arlbi:7001/console>

OBIEE 11g - leveraging Oracle Fusion Middleware (OFM)

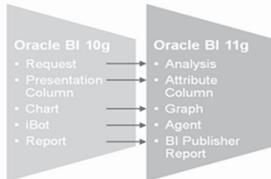
➤ **OBIEE 11g leverages many Fusion Middleware 11g Components, few are:**

- WLS (WebLogic Server)
- OPMN (Oracle Process Manager and Notification Server)
- OPSS (Oracle Platform Security Services)
- JPS (Java Platform Security)
- CSF (Credential Store Framework)
- RCU (Repository Creation Assistant)
- Fusion Middleware Control
- ODL (Oracle Logging)
- UA (Upgrade Assistant)



Key Features of OBIEE 11g

➤ Key Terminology Changes:



- Security terminology and architecture has changed
- Oracle WebLogic Server replaces Oracle Application Server and Oracle Containers for Java (OC4J)
- Major User Interface Improvements
- New Column Type hierarchical column is introduced

Key Features of OBIEE 11g (Cont...)

- Map View - New View Type
- Calculated Items and Groups
- Multiple Subject Areas
- Integrated Full-Text Search Capabilities
- Actions and Conditions
- Oracle Business Intelligence Mobile
- Favorites
- Enhancements to Views – Trellis View and Micro charts Graph type

OBIEE Security - Overview

- Oracle BI repository is password-protected and encrypted
- Users and Groups are stored in WebLogic Server (WLS) LDAP Server, instead of the Oracle BI repository
- These are managed via WLS Administration Console
- The above defined Groups are tied to Application Roles
- All OBIEE Application permissions and privileges are assigned to Application Roles, instead of groups



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Define Groups in WLS

Define users in WLS and assign to Groups

Define Application Roles in RPD

Map Application Roles to Groups in WLS

OBIEE Security – Overview (Cont....)

- Any named user can be granted administrative permissions
- Security Services are delegated by OBI Server to FMW's Oracle Platform Security Services (OPSS)
- OPSS is managed through WLS Administration Console and FMW Control aka Enterprise Manager Console

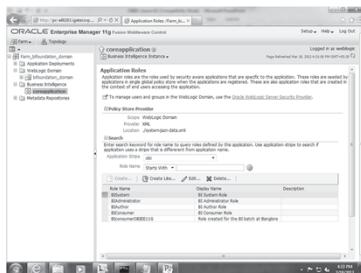
OBIEE Security –

- There are combinations of different stores (Identity Store, Policy Store, Credential Store) which take active role defining OBIEE 11g security including both Authentication and Authorization.
- Identity Store: An embedded LDAP server in WebLogic available to store users and groups known as “Identity Store”.
- It is directory server to perform the authentication. It contains user name, password and groups membership information. When a user name and password combination is entered at log in, the authentication provider searches the identity store to verify the credentials provided.

Identity Store: In 11g, the user and group definitions are moved to a LDAP server embedded with WebLogic server known as the “Identity Store”.

OBIEE Security –

- **Policy Store:** Contains the definition of Application Roles, Application Policies, and the mapping between them. A policy store can be file-based or LDAP-based. Oracle Business Intelligence permissions are granted by mapping users and groups from the identity store to Application Roles and permission grants located in the policy store.



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Policy Store: Application Roles, Policies, association of Policies to application roles and association of users and groups to application roles are managed using Fusion Middleware Enterprise Manager (FMW EM). They reside in the policy store, identified by the system-jazn-data.xml file. The screenshots below show where they are created and managed in FMW EM.

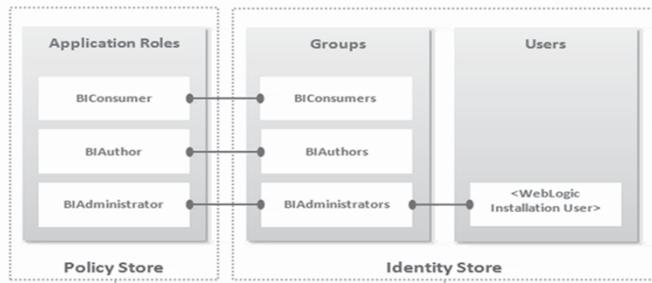
OBIEE Security –

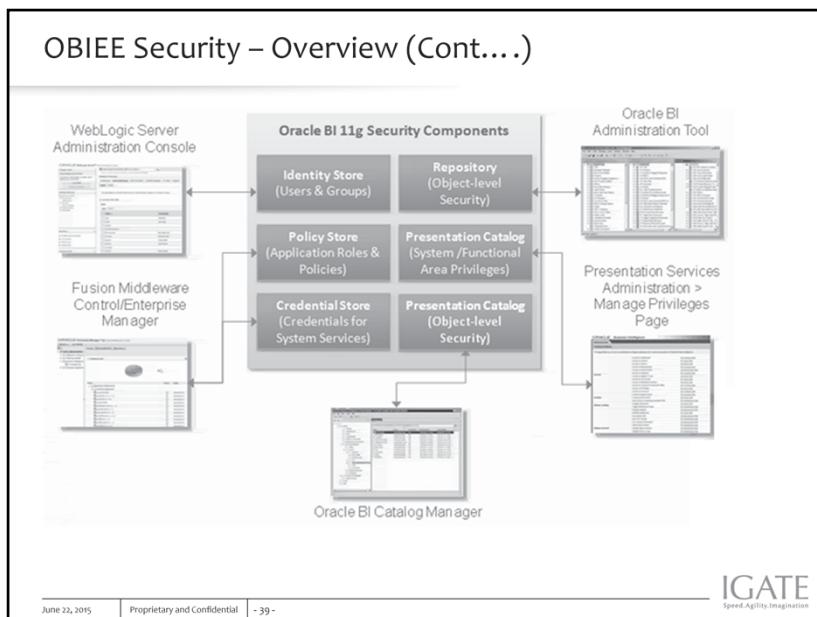
- Credential Store: It is responsible for securely storing and providing access to credentials required by Oracle Business Intelligence Applications components internally. For e.g., SSL Certificates stored here.
- Oracle Weblogic Administrator Console used to manage Embedded directory server (LDAP) to authenticate Users and Groups. Sometimes Oracle Internet Directory is used as authentication provider and OID console is used to manage user and groups.
- After the authentication done, the authorization will be done across Policy store and Credential store where application role and group mapping will be executed.

Credential Store: Credential Store is a single consolidated service provider to store and manage the application credentials securely. The credential store contains credentials that either user supplied or system generated. Credential store in OBIEE 10g is file based and is managed using cryptotools utility. In 11g, Credential store can be managed directly from the FMW Enterprise Manager and is stored in cwallet.sso file. By default, the Credential Store stores password for deployed RPDs, BI Publisher data sources and BISystem user. In addition, Credential store can be LDAP based but only Oracle Internet Directory is supported right now

OBIEE Security – Overview (Cont....)

➤ Default Groups and Application Roles in OBIEE 11g Security





You can explain about -

An **Identity Store**, which by default is set to use the embedded WebLogic Server LDAP server, but can be configured to connect to e.g. MS AD

A **Policy Store**, containing details of application roles, application policies and the permissions that they use, that by default is stored in a file called system-jazn-data.xml but again can be redirected to an LDAP or file-based policy store, and

A **Credential Store**, replacing the external one that OBIEE 10g used, which contains the usernames, passwords and other credentials that system services require, and again which can be externalised, if needed.

Summary

➤ **In this topic you learned:**

- OBIEE11 G Architecture



OBIEE 11g

Oracle BI Analyses (Answers)

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Lesson Objectives

➤ **To understand the following topics:**

- Overview of Analysis
- Analysis Editor
- Creating BI Analysis
- Displaying Results
- Views
- Types of Views
- Types of Charts



Analysis - Overview

- Analyses are queries against an organization's data that provide answers to business questions.
- Analyses allow you to explore and interact with information by visually presenting data in easy-to-understand formats (such as tables, Pivot tables, graphs).
- One can save, organize, and share the results of analyses.
- Analyses are also known as Answers.

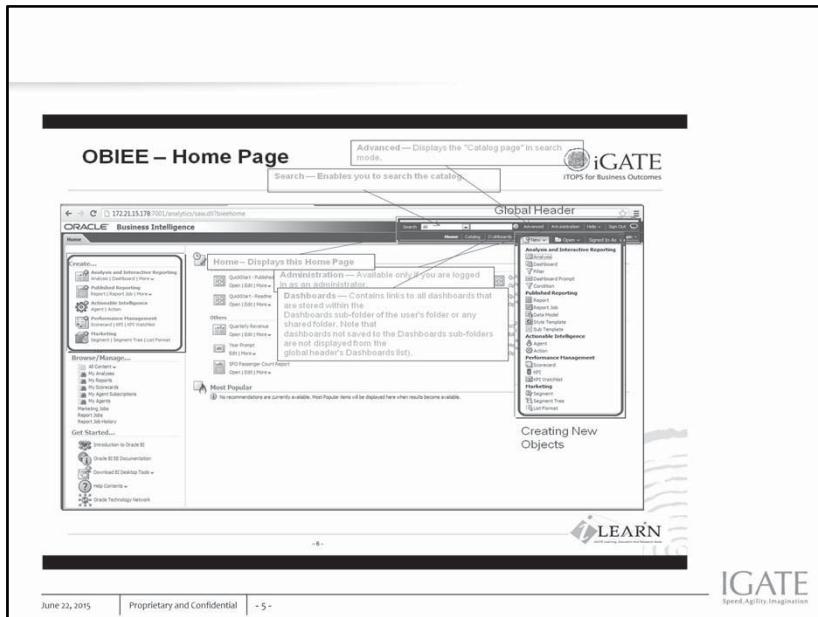
Analyses that you create with Oracle BI Answers can be saved in the Oracle BI Presentation Catalog and integrated into any Oracle BI home page or dashboard. Results can be enhanced through charting, result layout, calculation, and drilldown features.

Signing In to OBIEE

- In the web browser enter the address provided by OBIEE Administrator for your organization. The format usually is:
 - <http://obieeserver:7001/analytics>

The screenshot shows the Oracle Business Intelligence sign-in interface. At the top left, it says "ORACLE® Business Intelligence". Below that is a large gray area containing the sign-in form. The form has a title "Sign In" and a sub-instruction "Enter your user id and password.". It contains two input fields: "User ID" and "Password", both with placeholder text "Enter User ID" and "Enter Password" respectively. Below these is a "Sign In" button. At the bottom of the form is a language selection dropdown labeled "English". To the left of the form, there is some faint background text.

Key in appropriate login / pwd / language



After we login into OBIEE the Home Page is seen with Global Header and various other options.

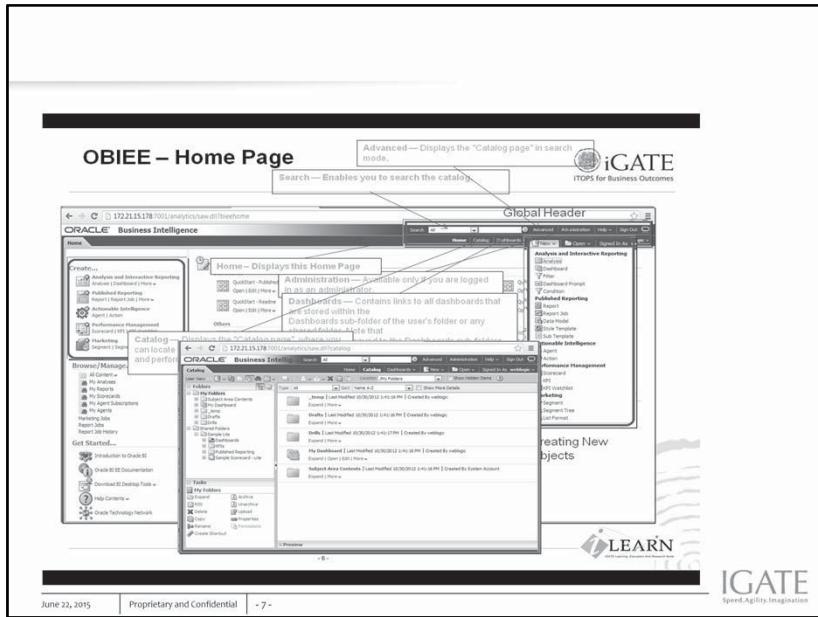
The screenshot shows the Oracle BI Home Page. At the top, there's a search bar with the placeholder "Search— Enables you to search the catalog mode." Below the search bar, the Global Header displays the iGATE logo and the tagline "ITOPS for Business Outcomes". The main content area is titled "OBIEE – Home Page". It includes several sections:

- Home:** Displays this Home Page.
- catalog:** Displays the "catalog page" in search mode.
- Browse/Manage:** Includes links for "All Content", "My Folders", "My Reports", "My Agent Subscriptions", "My Agents", "Reporting", "Scheduling", "Report Library", "Report 100", and "Report History".
- Get Started...**: Includes links for "Introduction to Oracle BI", "Oracle BI Documentation", "Download BI Desktop Tools", "Help Contents", and "Oracle Technology Network".
- Administration:** Available only if you are logged in as an administrator.
- Dashboard:** Contains links to all dashboards that Dashboards sub-folder of the user's folder or any dashboard. Note that this link is equivalent to the Dashboards sub-folders listed in the Dashboards list.
- Offices:**
- Open BIA Home:** Includes links for "Open BIA Home", "Quickstart", "Dashboard", and "Office".
- Most Popular:** A section stating "No items are currently available. Most popular items will be displayed here when results become available."
- Creating New Objects:** A section listing "Analysis and Interactive Reporting", "Dashboards", "Reporting", "Actionable Intelligence", and "Administrative Management".

At the bottom left, it says "June 22, 2015" and "Proprietary and Confidential". At the bottom right, it says "- 6 -".

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OBIEE – Home Page

Search — Enables you to search the catalog.

Global Header

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Home — Displays this Home Page

Administration — Available only if you are logged in as an administrator.

Dashboards — Contains links to all dashboards that are stored within the Catalog or subfolder of the user's folder or any shared folder. Note that:

- Help — Displays the following options:
 - xxx Help (where xxx is the name of the page, editor, or tab) — Dynamically displays the Help topic for the current page, editor, or tab.
 - Help Contents — Displays a cascading menu that provides options that link to the tables of contents for Oracle BI EE, BI Publisher, and Marketing.
 - Documentation — Displays the documentation library for Oracle BI EE.
 - OTH — Displays the Business Intelligence and Data Warehousing Technology.
 - About Oracle BI EE — Displays a dialog identifying the Oracle BI EE version.
 - About Oracle BI EE version — Displays a dialog identifying the Oracle BI EE version and copyright information.

Browsing / Management

Catalogs — Can locate and perform

Get Started...

Introduction to Oracle BI

Oracle BI Documentation

Download BI Desktop Tools

Help Center

Oracle Technology Network

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OBIEE – Home Page

Advanced — Displays the "Catalog page" in search mode.

Search — Enables you to search the catalog.

Global Header

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Home

- Analytics & Interactive Reporting
- Analytics Dashboard Home
- Dashboard Home
- Report 2D Home
- Report 3D Home
- Agent Action
- Performance Management
- Marketing Performance Management
- Catalog
- Marketing Catalog Home
- Browsing Manager
- All Content
- My Analytics
- Open — Displays the "Open dialog", where you can select the object with which you want to work.
- Where Can I Work? — More Information?
- Help — Oracle Business Intelligence Enterprise Edition 1-9
- Get — Recent objects — Displays a list of the objects that you have recently viewed.
- Get — Shared, or updated. You can use this list to select an object with which you want to work.
- Get — Most Popular objects — Displays a list of the objects that are accessed most often by the users that are assigned to the groups to which you belong.
- You can use this list to select an object with which you want to work..

Administration

- Available only if you log in as an administrator.
- Open (BIE) Home
- Open (BIE) Help

Dashboards

- Contains links to all dashboards that are stored within the catalog of the user's catalog or the shared folder. Note that

Help

- Displays the following options:
xxx Help (where xxx is the name of the page, editor, or tab) — Dynamically changes to display the Help topic for the current page.
Or to display the Help topic for the current page.
- Contents — Displays a cascading menu that lists options that link to pages of contents for Oracle BI EE, BI Publisher, and Data Mining.
- Implementation — Displays the documentation library for Oracle BI EE.
- BI Publisher — Displays the Business Intelligence and Data Mining Technology implementation for Oracle BI EE.
- About Oracle BI EE — Displays a dialog identifying the BI EE version.

Record

- Quarterly Revenue
- Quarterly Profitability
- Single Dimension
- Single Dimension - Line
- Dashboard - Overview
- Dashboard - Realtime

Help Contents

- Oracle BI EE
- Style Template
- Sub Style Template

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The screenshot shows the OBIEE 11g Home page. At the top, there is a banner with the text "Creating Analyses". Below the banner, a message says "Click on New on Global Header then Analysis or Click on Create.... Analysis". On the left, there is a sidebar titled "Create..." with various options like "Analysis and Interactive Reporting", "Published Reporting", "Actionable Intelligence", etc. On the right, there is a large vertical menu titled "Analysis and Interactive Reporting" with sub-options such as "Analysis", "Dashboard Prompt", "Condition", "Published Reporting", "Report Job", "Data Model", "Style Template", "Scorecard", "Actionable Intelligence", "Performance Management", "Scorecard", "KPI Watchlist", "Marketing", "Segment", "Segment Tree", and "List Format". The bottom of the page has a footer with the date "June 22, 2015", the text "Proprietary and Confidential", and a page number "- 10 -". To the right of the page, there is a watermark for "iGATE" with the tagline "Speed. Agility. Imagination".

After we login into OBIEE the default dashboard is seen on the screen, we can explicitly set the default dashboard that we wish to see after we login the OBIEE.

The default dashboard is the landing page after we login into OBIEE.

Creating Analyses

Click on New on Global Header then Analysis or Click on Create....

Analyses

The screenshot shows the Oracle BI 11g Home page. In the top right corner, there is a logo for iGATE ITOPS for Business Outcomes. On the left, there is a sidebar with various options like 'Published Reports', 'Actionable Intelligence', 'Performance Scorecard', and 'Marketing Segments'. The main area has a 'Create...' button highlighted. A dropdown menu is open, showing 'Analysis' as the selected option. Other options in the dropdown include 'Report | Interactive Reporting', 'Dashboard Prompt', 'Filter', and 'Condition'. Below this, there is a section titled 'Select Subject Area' with several options listed, such as 'Sample Sales Lite', 'Sample Subject Area for 11g Lite Sample Application (XML)', 'Sample Targets Lite', and 'Sample Subject Area for 11g Lite Sample Application (XML)'. At the bottom of the dropdown, there is a section titled 'Create a new Database Request' with a detailed description and a checkbox for 'Create Analysis from Simple Logical SQL'. The footer of the page includes the date 'June 22, 2015', the text 'Proprietary and Confidential', and a page number '• 11 •'. To the right of the main content area, there are two vertical banners: one for 'LEARN' and another for 'iGATE Speed, Agility, Imagination'.

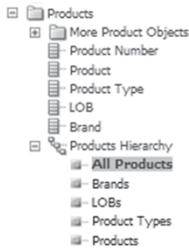
Analyses ... (Cont...)

➤ What Are Subject Areas and Columns?

- A subject area contains -
Folders,
Measure columns,
Attribute columns,
Hierarchical columns
- All the above represent information about the areas of an organization's business or about groups of users with an organization.
- A subject area corresponds to the presentation layer in an Oracle BI metadata repository.
- Columns contain the individual pieces of data that an analysis returns e.g. Accounts, Customer Name etc.

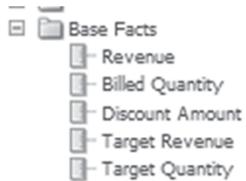
Analyses ... (Cont...)

- **Attribute Column (Presentation Column in 10g)** - Holds a flat list of values. No hierarchical relationship exists between these columns.
- **Hierarchical Column** — Holds data values that are organized using both named levels and parent-child relationships. This column is displayed using a tree-like structure.



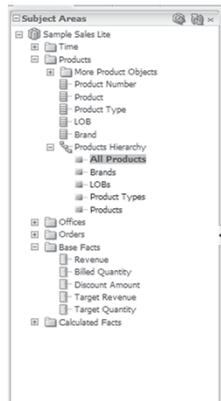
Analyses ... (Cont...)

- **Measure Column** — Holds a simple list of data values. It is a column in an OBIEE repository or RPD usually in a fact table, that can change for each record and can be aggregated (Sum, Count etc.)
e.g. Revenue, Billed Quantity, Sold Units



Analyses ... (Cont...)

➤ Column Types and their Icons

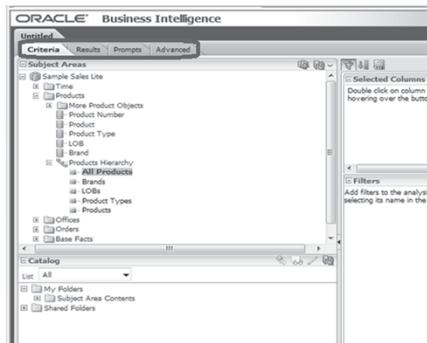


Analyses Editor

- The Analysis editor enables us to explore and interact with information by visually presenting data in tables, graphs, pivot tables etc. by accessing subject areas, folders, columns etc.

- It contains the four tabs

- Criteria tab
- Results tab
- Prompts tab and
- Advanced tab



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Analyses Editor

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Criteria tab - You specify the criteria for an analysis, including columns, and filters. You also specify order of the columns, sorting, formatting, conditional formatting etc. in which the results should be returned.

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Analyses Editor

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Criteria tab - You specify the criteria for an analysis, including columns, and filters. You also specify order of the columns, sorting, formatting, conditional formatting etc. in which the results should be returned.

The Analyses Editor interface is shown with three main panes:

- Subject Area Pane**: Shows Subject Areas like Sample Sales Lite, Products, and More Product Objects.
- Catalog Pane**: Shows Catalog items like Brand, Product Categories, and Shared Folders.
- Criteria Pane**: Shows Selected Columns (Product Number, Product ID, Product Type) and Filter options.

Annotations point to specific areas:

- An arrow points to the "Selected Columns" section in the Criteria pane.
- An arrow points to the "Filters" section in the Criteria pane.
- An arrow points to the Catalog pane.

Bottom navigation bar: June 22, 2015 | Proprietary and Confidential | - 18 -

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Analyses Editor

➤ Results tab - This tab displays the result of the criteria chosen in Criteria tab. You can create different views of the analysis results such as graphs, tickers, and pivot tables.

The screenshot shows the Oracle BI Analysts interface. The top menu bar includes 'Search', 'Advanced', 'Administration', 'Help', and 'Sign Out'. The main window has tabs for 'Criteria', 'Results' (which is selected), 'Prompts', and 'Advanced'. On the left, there's a 'Subject Areas' tree with nodes like 'Sample Sales Lite', 'Time', 'Products', 'Office', 'Orders', 'Base Facts', and 'Calculated Facts'. Below it is a 'Catalog' section with 'My Folders' containing 'Subject Area Contents' and 'Shared Folders'. Under 'Views', there are 'Tide' and 'Table' options. The central area is titled 'Compound Layout' and contains a table with columns 'Product Number' and 'Product Type'. The data is as follows:

Product Number	Product Type
1	Accessories
2	Audio
3	Audio
4	Camera
5	Cell
6	Portable
7	Camera
8	Smart Phones
9	Smart Phones
10	Smart Phones
11	Smart Phones
12	LCD
13	Maintenance
14	Install
15	Fixed
16	Phonebooks

Below the layout is a 'Selection Steps' panel with 'Measures' set to 'Products - Product Number'.

At the bottom left, the date 'June 22, 2015' and 'Proprietary and Confidential' are shown. At the bottom right, the IGATE logo is present.

Analyses Editor

- **Prompts tab — Prompts allow users to select values that dynamically filter all views within the analysis.**

The screenshot shows the Oracle Business Intelligence Analyses Editor interface. The title bar reads "ORACLE Business Intelligence". The main window is titled "Year Prompt" and displays the "Prompts" tab. The "Definition" section contains a table with three rows:

Prompt Label	Type	Prompt For	Description	Required	New Column
Page 1	Page	Per Name Year		<input checked="" type="checkbox"/>	
Year	Column value	Company		<input type="checkbox"/>	

The "Display" section shows a single page labeled "Page 1" with a "Year" prompt field.

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Analyses Editor

- Advanced tab – Displays the XML code and you can examine the logical SQL statement that was generated for the analysis created in criteria tab. You can use the existing SQL statement as the basis for creating a new analysis.

The screenshot shows the Oracle BI Analyses Editor interface. At the top, there's a navigation bar with tabs like Home, Catalog, Dashboards, etc. Below the navigation bar, the title "Analyses Editor" is displayed. Underneath the title, there's a section labeled "Analysis XML" which contains an XML representation of the analysis. Below this, another section labeled "SQL Issued" contains the corresponding SQL code. At the bottom of the editor, there are buttons for "Apply XML", "Partial Update", "Default", and "Bypass Oracle BI Presentation Services Cache".

Analysis XML
The following box contains an XML representation of this analysis. Use extreme care when modifying this XML code.

```
<sav:report xmlns:sav="com.siebel.analytics.web">report/v1.1</sav:report>
<sav:criterias xsi:type="sav:simpleCriteria" subjectArea=""Sample Sales Lite">
  <sav:column xsi:type="sav:regularColumn" columnID="cfcfa951b799f9ea29">
    <sav:columnFormula>
      <sav:expression xsi:type="saxx:sqlExpression">"Products"."Product Number"</saxx:sqlExpression>
    <sav:columnFormula>
      <sav:expression xsi:type="saxx:sqlExpression">"Products"."Product Type"</saxx:sqlExpression>
    <sav:views currentView="0">
      <sav:view xsi:type="sav:compoundView" name="compoundView1">
```

SQL Issued
The following box contains the SQL code that will be sent to the Oracle BI Server when this analysis is executed.

```
SELECT
  0 s_0,
  "Sample Sales Lite"."Products"."Product Number" s_1,
  "Sample Sales Lite"."Products"."Product Type" s_2,
  DECODE(ORDEDP("Sample Sales Lite"."Products"."Product Type") s_3
FROM "Sample Sales Lite"
ORDER BY 1, 2 ASC NULLS LAST, 3 ASC NULLS LAST
```

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Creating New Analysis

- There are following methods to create a new Analysis

- Selecting Subject Area and Columns
- Create Direct Database Request
- Create Analysis from Simple SQL

Select Subject Area

- Sample Sales Lite
Sample Subject Area for 11g Lite Sample Application
(XML files sourced only).
- Sample Targets Lite
Sample Subject Area for 11g Lite Sample Application
(XML files sourced only).
- Create Direct Database Request
Create a new SQL request that will be sent directly to the database. The results of the request, if any, can be displayed and manipulated within Answers, and subsequently incorporated into Interactive Dashboards and Delivers.
- Create Analysis from Simple Logical SQL
Create analysis by entering simple logical SQL to Oracle BI Server.

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Using Subject Area/Columns, Specifying the Criteria for Analyses:

- Working with Direct Database Requests

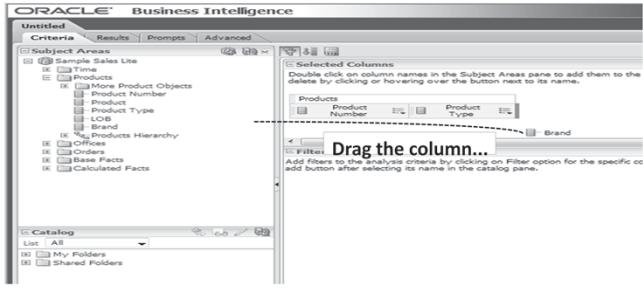
Users with the appropriate privileges can create and issue a direct database request directly to a physical back-end database. The results of the request can be displayed and manipulated within the Analysis editor, and subsequently incorporated into Dashboards.

- Analysis from Simple SQL Statement dialog

This dialog is used to enter simple SQL statements that you can use to easily create an analysis.

Creating New Analysis ... (Cont...)

- **Selecting Subject Area and Column**
- **Specifying Criteria and Adding Columns**
 - From the subject area pane, double click the columns to include in the Analysis Criteria OR Drag the column to Criteria pane
 - Add Attribute columns, Hierarchical columns, measure columns from various folders as required

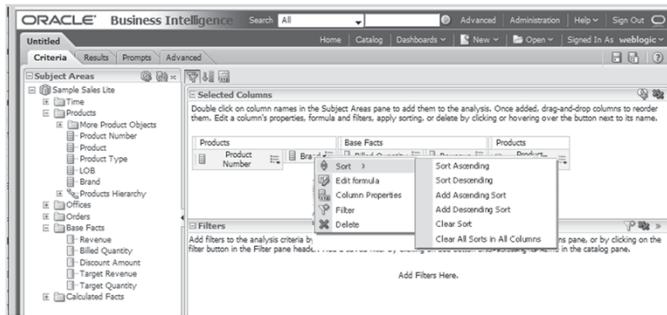


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- Default Order of Columns is the order in which the columns are added from the subject area.
- You can modify the order of the columns by dragging the columns as required.

Creating New Analysis ... (Cont...)

➤ Modifying Default Sorting



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Sorting Options Menu

The options that are available on the Sorting Options menu depend on the type of data view and the location in which you right-clicked and can include the following options:

- Sort Ascending — Sorts the values in the column by ascending order, as a first-level sort
- Sort Descending — Sorts the values in the column by descending order, as a first-level sort.
- Add Ascending Sort — Specifies that an ascending sort for this column is added as another sort for the analysis.
- Add Descending Sort — Specifies that a descending sort for this column is added as another sort for the analysis.
- Clear Sort — Removes the sort specification for the specified column.
- Clear All Sorts in All Columns or Clear All Sorts in View — Removes all sort specifications that you have made

Creating New Analysis ... (Cont...)

➤ Modifying Default Sorting



Editing the properties of Column

➤ Modifying Default Formatting – Column Properties

The screenshot shows the Oracle BI Analysis workspace. On the left, the 'Subject Areas' pane is open, displaying various dimensions and facts. A 'Products' dimension is selected. In the center, the 'Selected Columns' pane shows a single column named 'Product Number'. A context menu is open over this column, with 'Column Properties' highlighted. To the right, the 'Column Properties' dialog box is displayed, containing tabs for Style, Column Format, Data Format, Conditional Format, Interaction, and Write Back. The 'Style' tab is active, showing options for Font, Cell, and Border. The 'Font' section includes dropdowns for Family (Default [System]), Size, Color, Style, and Effects. The 'Cell' section includes dropdowns for Horizontal Alignment (Default [Right]), Vertical Alignment (Default [Top]), and Background Color. The 'Border' section includes dropdowns for Position (Default [System]), Border Style (Default [System]), and Border Color.

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The properties of a column can be modified by changing one or more options of any of the following tabs

- Style
- Column Format
- Data Format
- Conditional format

Editing the properties of Column - Style

The screenshot shows the 'Column Properties' dialog box with the 'Style' tab selected. The dialog is divided into several sections: 'Font' (Family: Default (System), Size: [input field], Color: [color picker], Style: Default (System), Effects: Default (System)), 'Cell' (Horizontal Alignment: Default (Right), Vertical Alignment: Default (Top), Background Color: [color picker], Image: [input field], Wrap Text checked), 'Border' (Position: Default (System), Border Style: Default (System), Border Color: [color picker]), and 'Additional Formatting Options' and 'Custom CSS Style Options (HTML Only)' which are collapsed.

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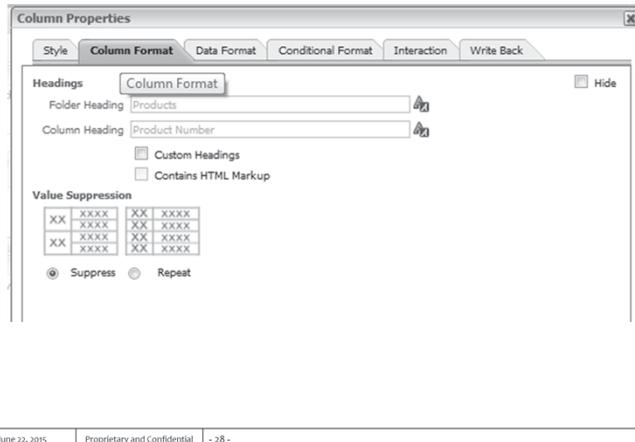
Column Properties dialog: Style tab

Use this dialog to specify properties for displaying values in various locations such as in a column or hierarchy level of data, in a view such as a table, and in a column or section that you are adding to a dashboard page.

In this dialog, a setting of Default (System) indicates that a user has not yet overridden the default values that were provided during installation. Each property has only one default setting at a time.

Editing the properties of Column – Column Format- Folder and Column Heading

- It allows to change folder and column heading and set repeated data



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The value suppression tab allows to set repeated data. The data in one column of a table may be repeated in relation to rows of data in other columns in the table. For example, if one column lists customer names and another column lists the regions those customers are in, the region data could be repeated for each customer row. You can choose to display duplicate data only once, or display it for every row. Displaying repeating or duplicated data only once can make a table somewhat easier to read, and can make distinctions in that data more apparent.

Editing the properties of Column – Data Format

➤ Column Properties – Data Format

Column Properties

Style Column Format **Data Format** Conditional Format Interaction Write Back

Override Default Data Format

Treat Numbers As: **Number**

Negative Format: Number

Decimal Places: 0

Month Name: English (United States)

Month Name (Abbreviated): English (United States)

Day Name: English (United States)

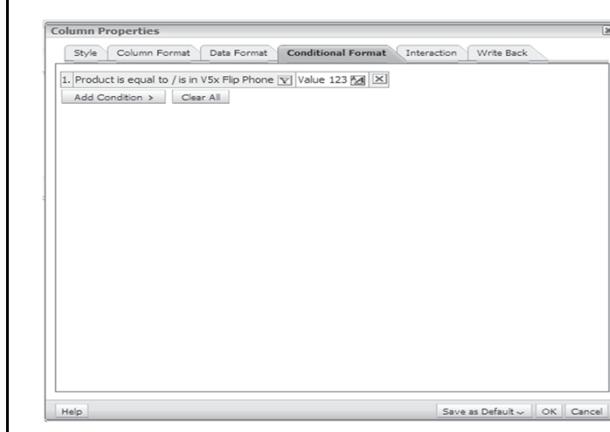
Day Name (Abbreviated): English (United States)

Custom

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Editing the properties of Column – Conditional Format



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Column Properties dialog: Conditional Format tab

Use this tab of the "Column Properties dialog" to add a condition to a column or hierarchy level. You specify a condition to affect the formatting of values based on certain criteria.

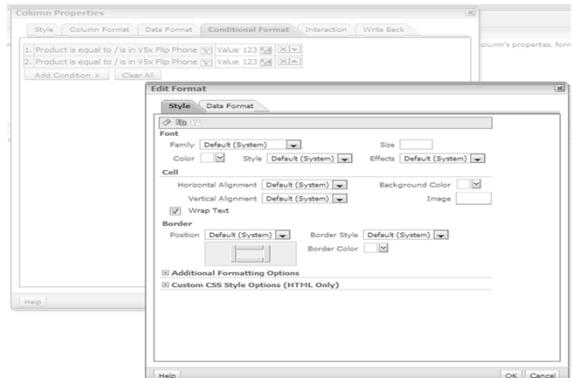
Add Condition : Use this button to begin the process of creating a conditional format by adding a condition to any type of column or to a hierarchy level.

When you access the "New Condition dialog" from the Conditional Format tab, the dialog shows the options that apply to conditional formats. For example, the Operator list contains the operators that are used in conditional formats.,

When you have created a conditional format, you see it listed at the top of this tab. Use the buttons that are displayed with the conditional format to edit the condition, format the values, or delete the format.

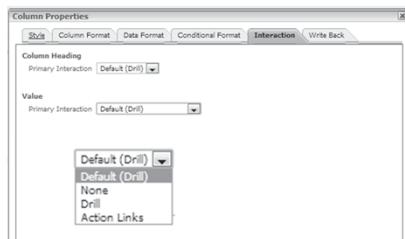
Editing the properties of Column – Conditional Format

➤ Modifying Default Formatting – Conditional Formatting



Editing the properties of Column – Interaction

- To specify what you want to happen when the user clicks a column heading or value. The values that are available depend on the type of column and on column heading versus value.
- Default (type), None, Drill, Action Links, Send Master-Detail Events.



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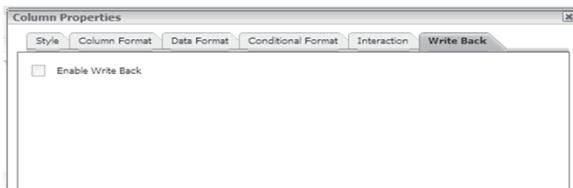
Use this tab of the "Column Properties dialog" to specify what you want to happen when the user clicks a column heading or value (for example, the user can click a column value to drill down into the data that was summed to create the column value).

Editing the properties of Column – Interaction

- **Default:** Default Action depending on the type of the column.
- **None:** No action.
- **Drill:** Specifies that you drill up or down after clicking the column heading or a value for a column. Not available for Hierarchical column headings.
- **Action Links:** For hierarchical column headings, this option is Drill + Action Links. Displays the Action Links area, where you add action links that apply when you click the column heading or a value.

Editing the properties of Column – Write Back

- This option allows users to modify values in the column, if the following are true:
 - If the column has been enabled for write back in the repository.
 - If the column has a data type of measure, text, or date and time.



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One of the interesting attributes that OBIEE provides is the facility of providing the users to add/update the data back to the database. The user could have a column for which the values can be entered in the user interface (UI) part of their platform and it can be updated in database. This could be useful in more than one ways as the end users may want to rank their clients, or rate their regional business based on their performances and use them from time to time. This makes OBIEE a reporting tool and also as a mini application for modifying business data.

Delete a column from Analysis

➤ Deleting a Column

The screenshot shows the 'Selected Columns' pane of the Oracle BI Analysis interface. A context menu is open over the 'Product Number' column, which is highlighted in the list. The menu options include: Sort, Edit formula, Column Properties, Filter, and Delete. The 'Delete' option is currently selected. A tooltip below the menu explains: 'Right click on the column header and select the Delete option for the specific column in the Selected Column pane.' At the bottom left of the pane, there is a 'Delete' button.

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Edit Formula

- Specify custom text for headings for the column's folder / Column.
- Specify the aggregation rule for the column totals for an attribute or measure.
- Edit the formula for an attribute or measure column. A column formula specifies what the column values represent, for example, "Sales Measures"."Revenue".

The screenshot shows a 'Products' folder containing 'Product', 'Product Type', and 'Product Number' columns. A context menu is open over the 'Edit formula' option for the 'Product' column. The menu also includes 'Sort', 'Copy', 'Filter', and 'Delete' options. Below the menu, there is a note: 'Add filters to this pane.' and 'on Filter option for the s'.

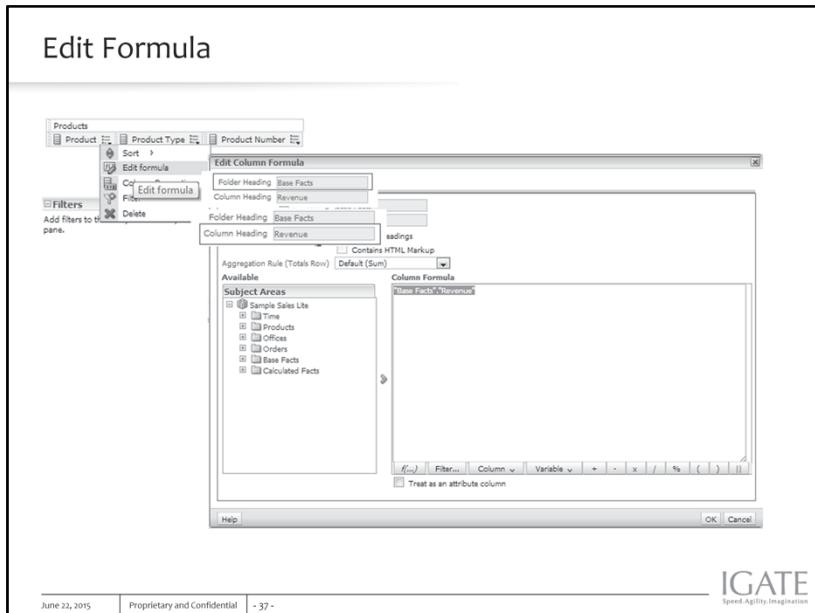
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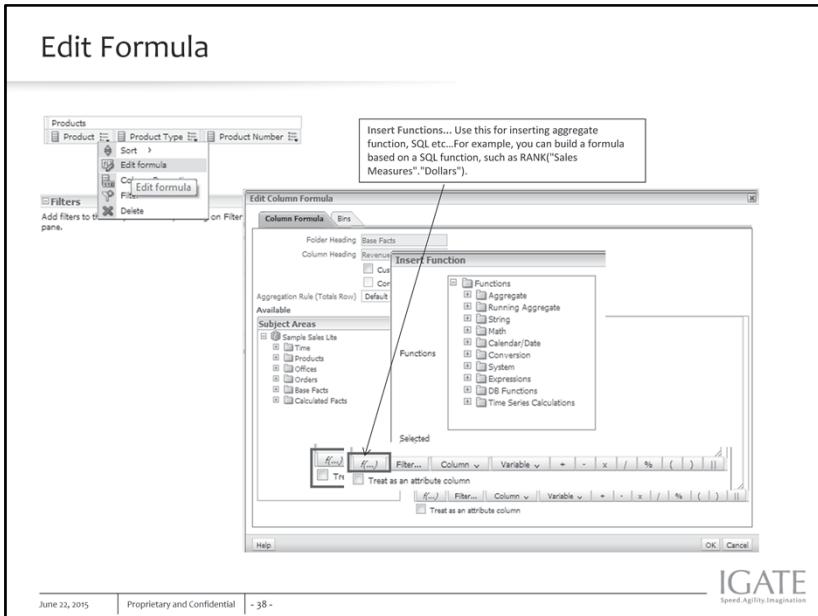
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The "Edit Column Formula dialog" is used to:

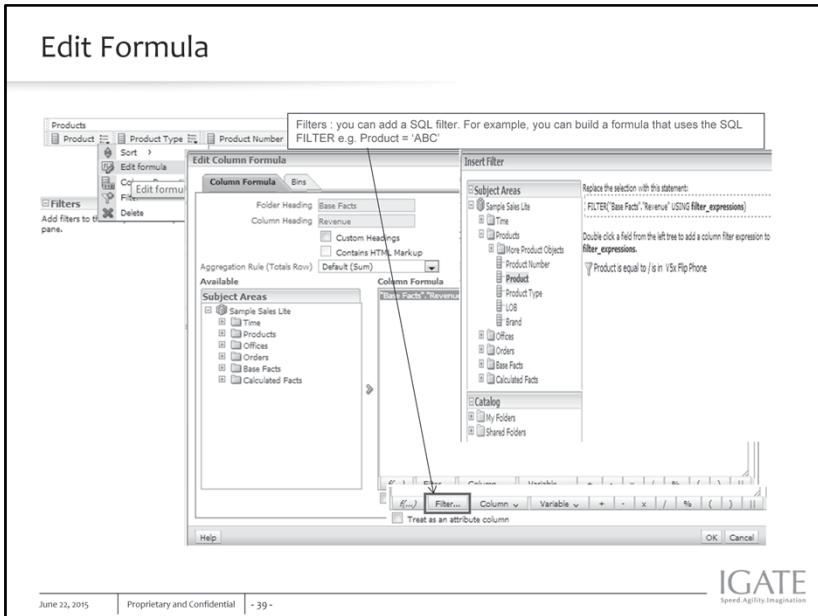
- Specify custom text for headings for the column's folder and for the column.
- Specify the aggregation rule for the column totals for an attribute or measure
- columns
- Edit the formula for an attribute or measure column. A column formula specifies what the column values represent, for example, "Sales Measures"."Dollars".

By editing this formula, you can present analysis results in a variety of ways.

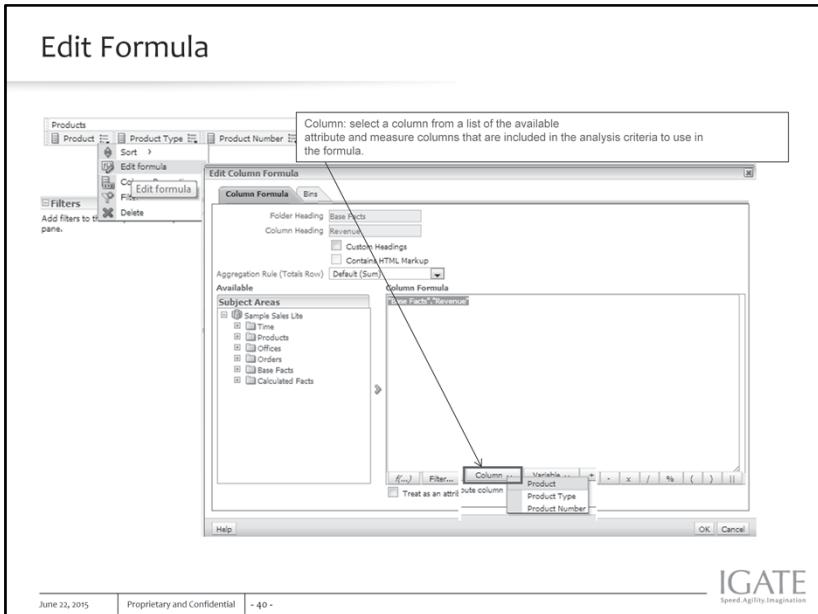
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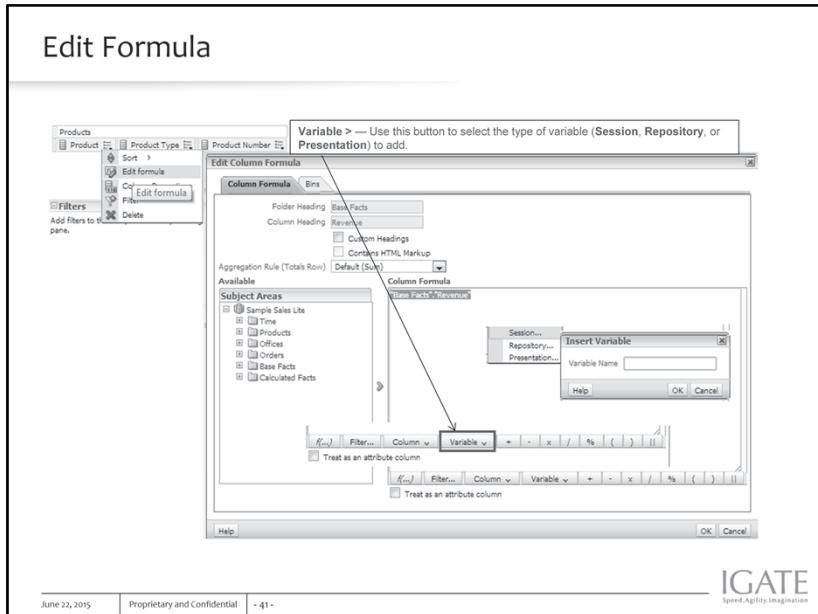
f(...) — This option is used to display the "Insert Function dialog", where you select a function from a tree of function groups. For example, you can build a formula based on a SQL function, such as RANK("Sales Measures"."Dollars").



Filter... — This option is used to display the "Insert Filter dialog", where you can add a SQL filter. For example, you can build a formula that uses the SQL FILTER function to filter the data, such as `FILTER("Sales Measures"."Dollars" USING ("Markets"."Region" = 'EASTERN REGION'))`.



This option is used to select a column from a list of the available attribute and measure columns that are included in the analysis criteria to use in the formula. This is helpful for example, if you have cleared the formula area and want to get back to where you started.

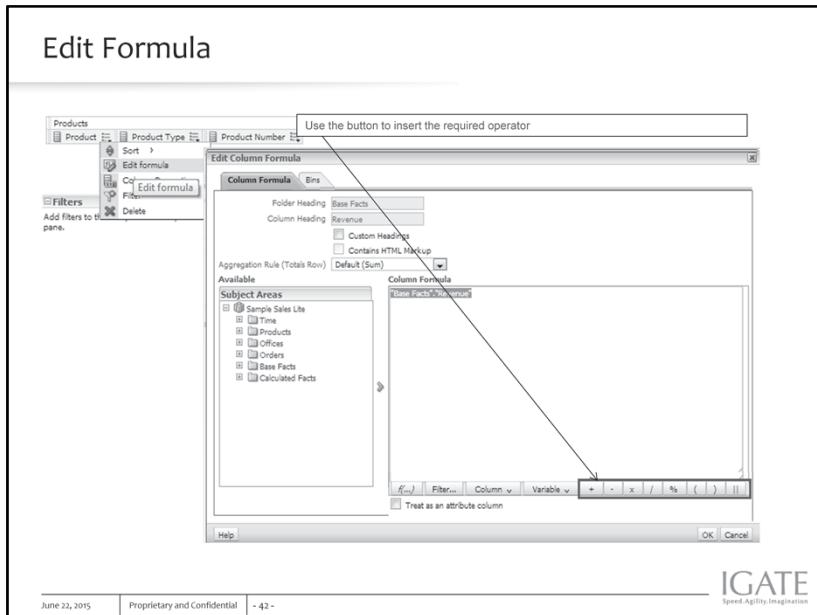
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This option is used to select the type of variable (Session, Repository,

or

Presentation) to add. The "Insert Variable dialog" is displayed, where you specify the name of the variable.

For example, you can build a formula using a presentation variable, such as "Sales Measures".Dollars + {@{PercentIncrease}{1.50}, where PercentIncrease is the name of the presentation variable and 1.50 is its default value.

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Column Filters

Double click on column names in the Subject Areas pane to add them to the analysis. Once added next to its name.

Selected Columns

Double click on column names in the Subject Areas pane to add them to the analysis. Once added next to its name.

Products

Product

Filters

Add filters to this pane.

New Filter

Column: Product
Operator: Is equal to / is in
Value: V5x Flip Phone

- V5x Flip Phone
- ComcCell RX3
- Touch-Screen T5
- KeyMax S-Phone
- SoundX Nano 4Gb
- MicroPod 6Gb
- Bluetooth Adaptor
- MP3 Speakers System

Search... Help OK Cancel

➤ Filters can be applied directly to attribute columns and measure columns.
➤ Filters are applied before the query is aggregated and affect the query and thus the resulting values for measures.

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Filters can be applied directly to attribute columns and measure columns. Filters are applied before the query is aggregated and affect the query and thus the resulting values for measures. For example, suppose that you have a list of members in which the aggregate sums to 100. Over time, more members meet the filter criteria and are filtered in, which increases the aggregate sum to 200.

Creating Column Filters

Use the following procedure to create a named or inline filter.

To create a column filter:

1. To create an inline filter, use the following sub-procedure:
 - a. Either create an analysis or access an existing analysis for which you want to create a filter. Click the Criteria tab.
 - b. Locate the "Filters pane" and from the Filters Pane's toolbar, click the Create a filter for the current subject area button. The analysis' selected columns are displayed in the cascading menu.

c. Select a column name from the menu. Or select the **More Columns** option to access the "Select Column dialog" from which you can select any column from the subject area. After you selected a column, the "New Filter dialog" is displayed.

2. In the **Operator** field, choose an operator for the filter. The operator list from which you can choose is populated based on the type of column that you selected. For more information about each operator, including the **is prompted** and **is based on the results of another analysis** operator options, see "Operators".

3. In the **Value** field, specify one or more values to use when applying the filter or condition. You can:

- Type values, using a semicolon to separate the values.
- Select values from the list or calendar.

To search for specific values, click **Search** in the list box. The "Select Values dialog" is displayed, where you can search for and select values. If your repository is configured for double columns, and you are creating the filter on a display column, then by default, you specify display values. However, if your organization allows the display of code values, then you can specify code values rather than display values, but only if you use one of the following operators:

- **is equal to / is in**
- **is not equal to / is not in**
- **is between**

To specify code values, select the **Select by Code Column** box and then specify the values.

4. If your repository is configured for double columns, and you are creating the filter on a display column and want to filter on display values rather than code values, then deselect the **Filter by Code Column** box.

5. Click the **Add More Options** button to add a SQL expression, Session variable, Repository variable, or Presentation variable to the filter. Note that if you are setting the filter's value with a SQL expression or variable, you should leave the **Value** field blank. For more information on variables, see "Using Variables".

6. Select the **Protect Filter** box to protect the filter's value from being overridden by a matching prompt's value or when the user navigates to another report within the analysis. When you navigate from one report to another report within an analysis, any prompt values that you specified in the first report can be transferred to the second report. To convert the filter to SQL statements, select the **Convert this filter to SQL** box.

The "Advanced SQL Filter dialog" is displayed.

7. To convert the filter to SQL statements, select the **Convert this filter to SQL** box. The "Advanced SQL Filter dialog" is displayed.

8. When you are finished specifying the filter's criteria, click **OK**.

9. Save the filter in one of the following ways:

- From the Analysis Editor, you can select **Save Analysis** to save the filter as an inline filter.
- From the Filter Editor, you can select **Save Filter** to save the filter as a named filter.

Creating New Analysis ... (Cont...)

Named Filters : These are saved filters in the Catalog and can be applied to any analysis

The screenshot shows the Oracle BI Home page with the 'Catalog' tab selected. On the left, there's a 'Subject Areas' pane with various categories like Sample Sales Line, Time, Products, and so on. In the center, there's a 'Saved Filter' dialog box and a 'New Filter' dialog box. The 'New Filter' dialog has fields for 'Column: Product', 'Operator: is equal to', 'Value: Vts Flip Phone', and checkboxes for 'Select by Product Number' and 'Protect Filter'. On the right, there's a sidebar with sections like Analysis and Interactive Reporting, Published Reporting, and Actionable Intelligence. At the bottom, there's a footer with 'June 22, 2015 Proprietary and Confidential' and page numbers '- 40 -' and '- 45 -'.

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1. To create a named filter, use the following sub-procedure:
 - a. From the Oracle Business Intelligence Home page, locate the global header, hover over the New menu, and from the menu select Filter. The Select Subject Area dialog is displayed.
 - b. From the Select Subject Area dialog, choose the subject area for which you want to create a filter. The "Filter editor" is displayed.
 - c. From the "Subject Areas pane", double-click the column for which you want to create the filter. The "New Filter dialog" is displayed.

Add instructions here.

Creating New Analysis ... (Cont...)



Named Filters : These are saved filters in the Catalog and can be applied to any analysis

The screenshot shows the Oracle BI Catalog interface. On the left, there's a sidebar titled 'Subject Areas' with various categories like Sample Sales Lite, Time, Products, etc. In the center, there's a 'Saved Filter' section with a message: 'Create a Filter for the current Subject Area. Click on a column from the Subject Area pane to add it to this filter. Select a saved filter to apply it to the report.' Below this is a 'Save As' dialog box. The 'Folders' dropdown shows paths like 'My Folder/.../Sample Sales Lite'. The main area shows a tree structure under 'Catalog': 'My Folders' -> 'Subject Area Contents' -> 'Sample Sales Lite' -> 'myproduct'. A 'Shared Folders' section also contains 'myproduct'. At the bottom of the dialog, there are fields for 'Name', 'Description', and 'Comments'. The status bar at the bottom of the interface says '- 40 -'.

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Selection Steps

- You can further manipulate the results returned by an analysis using selection steps, to add, remove or keep certain dimension members, add groups or calculated items, or filter results based on conditions
- Selection steps are applied post-aggregation, whilst regular filters are applied pre-aggregation, and they preserve totals even if you add or remove columns from the analysis

Selection steps (Cont...)

- Selection Steps Example
- In a report, we want to display the report for only those products, whose revenue is > 100,000 in the year 2010 along with other attributes and measures.

Product	Product Type	2008		2009		2010	
		Revenue	Billed Quantity	Revenue	Billed Quantity	Revenue	Billed Quantity
1st Hipp Phone	Cell Phones	119,745.0	14728	156,850	14471	176,861.0	15284
Compaq iPAQ	Cell Phones	\$7,256	7558	76,511	7295	84,862	6407
Touch-Screen T5	Smart Phones	10,000	13311	11,000	11296	140,897	117799
Max-Max S-Phone	Smart Phones	76,029	9021	88,383	9896	111,517	10112
SoundX Nano 4Gb	Audio	102,696	13636	107,547	14097	145,967	13500
MicroPod 600Gb	Audio	125,463	13540	143,130	13039	206,157	13454
Bluetooth Adaptor	Accessories	42,077	6176	\$9,886	5377	76,209	5905
MP3 Speakers System	Accessories	40,098	4858	71,456	5469	75,927	5269
MPEG4 Camcorder	Camera	115,434	18481	125,111	15118	82,187	17044
1080p Full HD Digital Camera	Camera	140,000	24707	120,000	12450	80,000	14932
PocketFun ES	Portable	114,272	13667	116,895	11843	82,901	15048
MaxiFun 2000	Portable	66,736	6509	\$1,659	3629	47,445	5448
Game Station	Fixed	99,962	10464	122,525	9926	68,799	9611
HomeCoach 2000	Fixed	44,606	6358	38,033	4322	30,467	6902
Plasma HD Television	Plasma	40,350	5469	37,428	4462	79,688	8331
Universal E Plasma TV	Plasma	73,175	8579	74,944	9204	97,650	9622
LCD 30" Standard	LCD	68,858	6626	69,048	7116	83,611	5831
LCD HD Television	LCD	64,136	6610	54,119	5948	54,170	5354
Install	Install	24,426	2608	25,273	2560	23,498	2939
Maintenance	Maintenance	22,100	2783	35,787	3242	40,900	4374

Filters

Request contains no filters



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Selection steps (Cont...)

➤ Create the basic report

Pivot Table

Product	Product Type	2008		2009		2010	
		Billed Quantity	Revenue	Billed Quantity	Revenue	Billed Quantity	Revenue
ViVo Flip Phone	Cell Phones	14728	112,742	14471	156,850	15284	178,864
CompCell RX3	Cell Phones	7558	57,256	7204	76,511	6407	84,862
TouchScreen T5	Smart Phones	13311	102,482	11296	118,062	11789	140,899
KeyMax S-Phone	Smart Phones	9021	76,029	9896	88,383	10112	110,537
SoundMax 4Gb	Audio	13636	102,650	14097	107,547	13500	143,987
Home 8000 Acoustic	Accessories	15840	120,453	15059	143,241	15424	204,107
Bluetooth Adapter	Accessories	6176	42,077	5377	59,866	5569	78,299
MP3 Speakers System	Accessories	4858	40,098	5469	71,456	5269	75,927
MPEG4 Camcorder	Camera	18481	115,494	15118	125,118	17044	82,187
7 Megapixel Digital Camera	Camera	12070	101,653	12630	102,433	16932	88,923
PocketFun ES	Portable	13687	114,222	11843	116,895	15048	82,901
Mailbox ES	Portable	6509	66,735	3629	51,839	5448	47,745
Game Station	Played	10484	99,452	9968	125,230	9611	86,799
HomeCoach 2000	Fitness	6158	44,606	4212	38,033	6902	30,467
Plasma HD Television	Plasma	5469	48,350	4448	37,428	8331	79,668
Tungsten E Plasma TV	Plasma	8573	71,015	9204	99,654	9622	97,930
LCD 36X Standard	LCD	6626	68,858	7116	69,048	5831	63,611
LCD HD Television	LCD	6610	64,136	5948	54,119	5354	54,170
Install	Install	2608	24,426	2560	25,273	2939	23,498
Maintenance	Maintenance	2783	23,100	3242	35,707	4274	40,900

Filters Request contains no filters



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Selection steps (Cont...)

➤ Apply the selection steps...

The screenshot shows the Oracle BI Selection Steps interface. On the left, the 'Selection Steps' panel lists measures like 'Base Facts - Billed Quantity' and 'Base Facts - Revenue'. A step labeled '2. Then, New' is selected, with a context menu open over it. The menu options are: 'Select Members', 'Add Groups or Calculated Items', and 'Apply a Condition'. The 'Apply a Condition' option is highlighted with a red box. On the right, the 'New Condition Step - Products' dialog is open. It shows a WHERE clause with a condition type 'X>=value'. The action is set to 'Add' for the measure 'Base Facts', 'Revenue'. The column is 'Products', 'Product Type', and the member is '<All>'. The time dimension is 'Time', 'Per Name Year', and the member is '2010'. The operator is 'Greater than' and the value is '100000'. The 'Override with' dropdown is set to 'Prompt'. The IGATE logo is visible in the bottom right corner.

Selection steps (Cont...)

➤ Output

Pivot Table

Product	Product Type	2008		2009		2010	
		Billed Quantity	Revenue	Billed Quantity	Revenue	Billed Quantity	Revenue
V35 Pro Phone	Cell Phones	14778	115,743	14491	116,880	15084	118,564
Touch-Screen T5	Smart Phones	13135	102,482	11296	118,062	11789	145,099
KeyMax S-Phone	Smart Phones	9021	76,029	9896	88,383	10112	110,537
SoundX Nano 4GB	Audio	13636	102,696	14097	107,547	13500	143,987
MicroPod 60Gb	Audio	13540	125,403	13039	143,130	13454	206,197

Filters Request contains no filters

Selection Steps

Products - Product

1. Start with all members

2. Then, Keep only members of "Products". "Product" where "Sample Sales Lite". "Base Facts". "Revenue" is greater than 100000

Product	Product Type	Billed Quantity	Revenue	Billed Quantity	Revenue	Billed Quantity	Revenue
V35 Pro Phone	Cell Phones	13135	102,482	14778	115,743	14491	116,880
Touch-Screen T5	Smart Phones	13243	102,759	11296	116,511	11789	145,462
KeyMax S-Phone	Smart Phones	9021	76,029	9896	88,383	10112	110,537
SoundX Nano 4GB	Audio	13636	102,696	14097	107,547	13500	143,987
MicroPod 60Gb	Audio	13540	125,403	143,130	206,197	13454	13500
Bluetooth Adaptor	Accessories	42,077	6176	5377	59,886	5377	78,209

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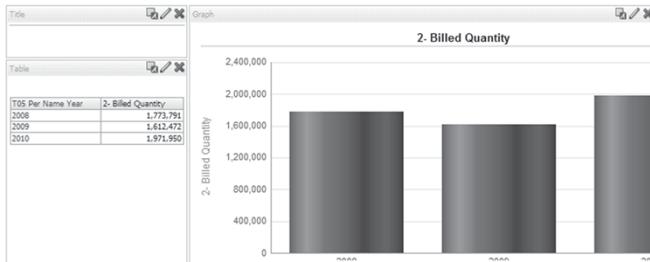
Calculated Item

- A calculated item is a computation between columns, which is represented as a single member that cannot be drilled.
- When you create a calculated item, you add a new column in which you have selected how to aggregate the item, such as Sum or Average or a custom formula.
- The calculation is performed at the aggregated level, not at the lowest detail level.

- A calculated item is a computation between members, which is represented as a single member that cannot be drilled. When you create a calculated item, you add a new member in which you have selected how to aggregate the item, such as Sum or Average or a custom formula. The calculation is performed at the aggregated level, not at the lowest detail level.

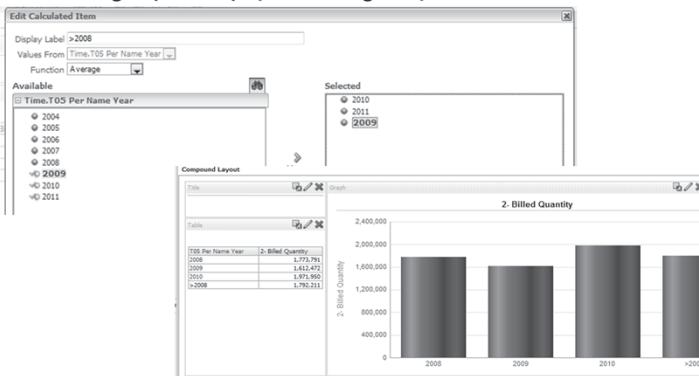
Calculated Item (Cont...)

- **Calculated Item Example:**
- **Billed Qty is displayed for years 2008, 2009 and 2010**



Calculated Item (Cont...)

- Calculated Item Example:
- You can group and display sum/average for year > 2008 etc.



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Groups

- A group is a static list of members that you select or a static or dynamic list that is generated by selection steps.
- A group is represented as a member.
- You can drill in a group that was created for a hierarchical column but not in one that was created for an attribute column.

Executing Analysis / Displaying Results

- Results tab - Use this tab of the "Analysis editor" to create different views of the analysis results such as graphs, tickers, and pivot tables.
- Views Pane

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Use the "Views pane" to create and modify views to work with analyses.

Compound Layout

Use the "Compound Layout" to assemble different views for display on a dashboard and to create additional layouts.

Toolbar

This toolbar contains the following buttons:

- Print this analysis — Use this button to specify whether to print the views for the analysis as HTML or PDF.
- Export this analysis — Use this button to select an option for exporting the views for the analysis. For information, see "Export Menu Options for Views and Results".
- Schedule — Use this button to save the analysis and then display the "Agent editor", where you can create an agent from the analysis. For more information, see "Creating Agents from Analyses".
- Show how results will look on a Dashboard — Use this button to preview how the edited view is displayed on a dashboard.

- **Print Options** — Use this button to display the "Print Options dialog", where you specify settings for printing.
- **Refresh the results of the current analysis** — Use this button to refresh the results of the current analysis. Clicking this button does not bypass the Oracle BI EE server cache.
- **New View** — Use this button to display a list of views from which you can select the view to create. The view is added to the current compound layout.
- **New Group** — Use this button to display the "New Group dialog", where you create a new group.
- **New Calculated Item** — Use this button to display the "New Calculated Item dialog", where you build calculated items.
- **Edit Analysis Properties** — Use this button to display the "Analysis Properties dialog", where you specify properties for the entire analysis.
- **Import formatting from another analysis** — Use this button to display the "Open dialog", where you select an analysis from which to import formatting for columns and views. For more information, see "Using a Saved Analysis to Modify the Cosmetic Appearance of Other Analyses".
- **Create Compound Layout** — Use this button to create an instance of the compound layout. A new compound layout is displayed in a tab in the "Compound Layout" and contains only a title.
- **Copy Compound Layout** — Use this button to create a copy of the current compound layout. The copy is displayed in a tab in the Compound Layout and contains the same views as the compound layout that you copied. When you copy, you do not actually create additional copies of the analysis or its views. The analysis and views exist only once. Any changes that you make to the analysis or its views are reflected in the multiple instances of the compound layout.
- **Delete Compound Layout** — Use this button to delete the current compound layout. The views on the layout are not deleted from the analysis. This button is not available if you attempt to delete the last compound layout in the analysis.
- **Rename Compound Layout** — Use this button to display the "Rename View dialog", where you provide a new name for the compound layout.
- **Show/Hide Selection Steps Pane** — Use this button to show or hide the display of the "Selection Steps pane" in the Results tab.

Executing Analysis / Displaying Results ... (Cont...)

- Results tab - Use this tab of the "Analysis editor" to create different views of the analysis results such as graphs, tickers, and pivot tables.

➤ Tool Bar

The screenshot shows the Oracle BI Analysis Editor interface. The top menu bar includes 'Untitled...', 'Criteria', 'Results' (which is selected), 'Prompts', and 'Advanced'. The 'Results' tab has several buttons in its toolbar: Print this analysis, Print and Email, Print Options, Export this analysis, Refresh the results of the current analysis, and Show how results will look on a Dashboard. Below the toolbar is a subject area tree under 'Subject Areas' with nodes like Sample Sales Lite, Products, Services, Orders, and Base Facts. A catalog pane on the left lists 'My Folders' and 'Subject Area Contents' with 'Sample Sales Lite' selected. The main area displays a pivot table with columns for Product Type, Product Number, and Revenue. The data includes items like CompCell RX0, Cell Phones, 8, 218,456; iTouch 4G, Cell Phones, 17, 218,630; KeyMax S-Phone, Smart phones, 5, 124,951; SoundX Nano 4GB, Audio, 2, 354,140; Microsoft Office, Applications, 3, 229,129; Bluetooth Adaptor, Accessories, 20, 160,172; MP3 Speakers System, Accessories, 1, 167,480; Microsoft Office 2010, Software, 4, 229,140; 7 Megapixel Digital Camera, Camera, 7, 293,012; PocketFun ES, Portable, 6, 314,018; Maxell DVD, Portable, 15, 129,129; Game Station, Fixed, 5, 291,265; HomeCoch 2000, Fixed, 15, 113,106; PassPort HD Television, Plasma, 11, 446,466; Tungsten E Plasma TV, Plasma, 18, 268,799; LCD TV Standard, LCD, 19, 221,517; LCD TV HD Television, LCD, 12, 174,425; Instal Maintenance, Install, 14, 73,007; myselectionstep1, Maintenance, 13, 70,70; myselectionstep2, Cell Phones, 8, 448,456; myselectionstep3, Smart Phones, 17, 218,630; myselectionstep4, Smart Phones, 9, 361,443. The bottom right corner of the interface features the IGATE logo with the tagline 'Speed. Agility. Imagination'.

Executing Analysis / Displaying Results ... (Cont...)

- Results tab - Use this tab of the "Analysis editor" to create different views of the analysis results such as graphs, tickers, and pivot tables.

➤ Tool Bar

The screenshot shows the Oracle BI Analysis Editor interface. The top menu bar includes 'Untitled...', 'Criteria', 'Results' (which is selected), 'Prompts', and 'Advanced'. Below the menu is a toolbar with various icons. On the left, there's a 'Subject Areas' tree view containing 'Sample Sales Lite', 'Products', 'Offices', 'Orders', 'Base Facts', and 'Calculated Facts'. A 'Catalog' sidebar lists 'All' items, including 'My Folders', 'Subject Areas Contents', 'Sample Sales Lite' (with a step icon), and 'Shared Folders'. The main workspace displays a 'Compound Layout' with a 'Table' component. The table has columns: Product, Product Type, Product Number, and Revenue. The data is as follows:

Product	Product Type	Product Number	Revenue
V3x Flip Phone	Cell Phones	6	446,456
Compact MP3	Cell Phones	7	216,630
Touch-Screen TS	Smart Phones	9	361,443
Kodak EasyShare	Smart Phones	10	216,630
SoundX Nano 4Gb	Audio	2	354,140
MicroPod 60Gb	Audio	3	474,729
Buzzster Speaker	Accessories	20	14,729
MP3 Speakers System	Accessories	1	167,480
HD Video Camera	Cameras	7	293,012
7 Megapixel Digital Camera	Cameras	7	293,012
PocketFun ES	Portable	6	314,018
Maxell Portable	Portable	10	107,039
Game Station	Fixed	5	291,265
HomeCoach 2000	Fixed	15	113,106
GameStation	Fixed	11	144,464
Tungsten E Plasma TV	Plasma	16	268,799
LCD HD Television	LCD	19	241,117
LCD HD Television	LCD	12	172,425
Install Maintenance	Install	14	73,007
myselectionstep1	Maintenance	13	23,727
	Cell Phones	6	446,456
	Smart Phones	9	361,443

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Executing Analysis / Displaying Results ... (Cont...)

- **Views:** Views use the presentation capabilities of OBIEE to look at results of a analysis in meaningful, intuitive ways. There are following types of views available in OBIEE 11g:

- Title
- Table
- Pivot Table
- Funnel
- Gauge
- Map View
- Filters
- Column Selector
- View Selector
- Legend
- Narrative
- Ticker
- Static Text
- Logical SQL



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Title: Displays a title, a subtitle, a logo, a link to a custom online help page, and timestamps to the results.

Table: Displays results in a visual representation of data organized by rows and columns. A table provides a summary view of data and allows users to see different views of data by dragging and dropping rows and columns.

Pivot Table: Displays results in a pivot table, which provides a summary view of data in cross-tab format and allows users to see different views of data by dragging and dropping rows and columns.

Graph: Displays numeric information visually, which makes it easier to understand large quantities of data. Graphs often reveal patterns and trends that text-based displays cannot.

Funnel : Displays results as a three-dimensional graph that represents target and actual values using volume, level, and color. Typically, funnel graphs are used to graphically represent data that changes over different periods or stages. For example, funnel graphs are often used to represent the volume of sales over a quarter.

Executing Analysis / Displaying Results ... (Cont....)

- Views (cont...)

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Gauge: Shows a single data value. Due to its compact size, a gauge is often more effective than a graph for displaying a single data value. Gauges identify problems in data. A gauge usually plots one data point with an indication of whether that point falls in an acceptable or unacceptable range. Thus, gauges are useful for showing performance against goals.

Map View: Displays results overlain on a map. Depending on the data, the results can be overlaid on top of a map as formats such as images, color fill areas, bar and pie graphs, and variably sized markers.

Filters: Displays the filters in effect for an analysis. Filters allow you to constrain an analysis to obtain results that answer a particular question.

Column Selector: Adds a column selector in the results. A column selector is a set of drop-down lists that contain pre-selected columns. Users can dynamically select columns and change the data that is displayed in the views of the analysis.

View Selector: Adds a view selector in the results. A view selector is a drop-down list from which users can select a specific view of the results from among the saved views.

Executing Analysis / Displaying Results ... (Cont...)

➤ Views (cont...)

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Legend: Adds a legend to the results, which enables you to document the meaning of special formatting used in results, such as the meaning of custom colors applied to gauges.

Narrative: Displays the results as one or more paragraphs of text. You can type in a sentence with placeholders for each column in the results, and specify how rows should be separated.

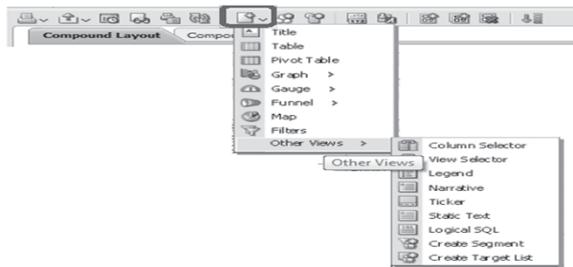
Ticker: Displays the results as a ticker or marquee, similar in style to the stock tickers that run across many financial and news sites on the Internet. You can control what information is presented and how it scrolls across the page.

Static Text: Adds static text in the results. You can use HTML to add banners, tickers, ActiveX objects, Java applets, links, instructions, descriptions, graphics, and so on, in the results.

Logical SQL : Displays the SQL statement that is generated for an analysis. This view is useful for trainers and administrators, and is usually not included in results for typical users.

Compound View

- The default view is the Compound Layout view, which includes Title and Table views (or Pivot Table in case of Hierarchical column)
- To add a new view to the compound view, click add new view toolbar button and then the type of the view type



Compound View (Cont...)

Compound Layout

Title: My_Report

Table:

Product	Product Type	Product Number	Revenue
V5x Flip Phone	Cell Phones	8	448,456
CompCell RX3	Cell Phones	17	218,630
SoundX Nano 4Gb	Audio	2	354,140
MicroPod 60Gb	Audio	3	474,729
MPEG4 Camcorder	Camera	4	322,740
7 Megapixel Digital Camera	Camera	7	293,012
myselectionstep1	Cell Phones	8	448,456
		17	218,630

Filters: Product Type is equal to **Audio, Camera, Cell Phones**

Narrative: Products ---->V5x Flip Phone|Products ---->CompCell RX3

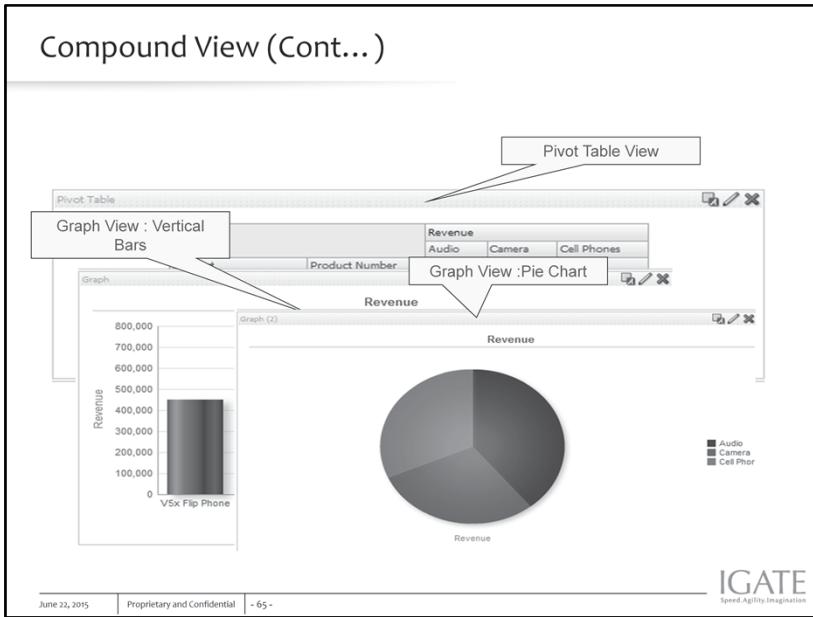
Ticker: V5x Flip Phone, Cell Phones, 8, 448,456 CompCell RX3, Cell Phones, 17, 218,630 St

Associated views:

- Title View
- Table View
- Filter View
- Narrative View
- Ticker View

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Editing Table View

Product	Product Type	Product Number	Revenue
VSx Flip Phone	Cell Phones	8	448,456
CompuCell RX3	Cell Phones	17	218,630
SoundX Nano 4Gb	Audio	2	354,140
MicroPod 60Gb	Audio	3	474,729
MPEG4 Camcorder	Camera	4	322,740
7 Megapixel Digital Camera	Camera	7	293,012
myselectionstep1	Cell Phones	8	448,456
		17	218,630

Adding Prompt

Adding Section

Adding Totals

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Layout
Drag/drop measures, columns and hierarchies to determine their layout.

Table Prompts

Drop Here for Pages

Sections

Drop Here for a Sectioned Report

Table

Columns and Measures

Products

Base Facts

Product

Product Type

Product Number

Revenue

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Editing Table View

The screenshot shows the Oracle BI Table View editor interface. At the top, there is a dropdown menu labeled "Per Name Year 2008". Below it is a section titled "BiTech" containing a table with the following data:

Product	Product Type	Product Number	Revenue
Vxv Flip Phone	Cell Phones	8	112,742
CompuTel 103	Cell Phones	17	57,256
SoundN' Haze 40B	Audio	2	100,465
MicroPod 6003	Audio	3	125,403
myselectionstep1	Cell Phones	8	112,742
		17	57,256
Grand Total			398,006

Below the table is a "Layout" section with the instruction "Drag/drop measures, columns and hierarchies to determine table layout".

The main configuration area contains several sections:

- Table Prompts**: Contains a "Time" section with a dropdown menu labeled "Per Name Year". A callout box labeled "Adding Prompt" points to this dropdown.
- Sections**: Contains "Products" and "Brand" sections. A callout box labeled "Adding Section" points to the "Products" section.
- Table**: Contains a "Columns and Measures" section with a "Base Facts" button. A callout box labeled "Adding Totals" points to the "Base Facts" button.
- Products**: Contains checkboxes for Product, Product Type, Product Number, and Revenue. A callout box labeled "Adding Columns" points to the "Product" checkbox.

At the bottom left, there is a footer with the text "June 22, 2015 Proprietary and Confidential - 67 -". On the right side, there is a logo for IGATE with the tagline "Speed. Agility. Imagination".

Editing Pivot Table View

Product Product Number Revenue
Vivo Flip Phone 8 Audio 448,405
CompCam RX3 17 Camera 218,630
SoundFit Nano 4Gb 2 Cell Phones 354,140
MicroPod 600S 3
Logitech G403 4 322,740
7 Megapixel Digital Camera 7 293,012

Pivot Table Rows

Pivot table Columns

Measures (Revenue here)

Exclude columns which you don't want to display in Pivot table

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Editing Pivot Table View

The screenshot shows the Oracle BI Analysis workspace interface. At the top, there's a toolbar with various icons. Below it is a Pivot Table view displaying revenue data for different products. The table has columns for Product, Product Number, Revenue (with sub-columns for Audio, Camera, and Cell Phones), and Revenue Total. A context menu is open over the 'Revenue Total' cell in the bottom right corner, with the option 'Adding Measure Totals' highlighted. The menu also includes other options like 'None', 'Totals After', 'At the Beginning', 'At the End', 'Format Labels...', and 'Format Values...'. On the left side, there are sections for Layout, Pivot Table Prompts, Sections, and Pivot Table, each with their own configuration panels. The bottom of the screen shows the date 'June 22, 2015', a 'Proprietary and Confidential' notice, and page number '- 69 -'. The IGATE logo is visible in the bottom right corner.

Product	Product Number	Revenue			Revenue Total
		Audio	Camera	Cell Phones	
VSi Flip Phone	6	448,456	218,630	448,456	
CompuCam RX3	17	354,140	34,140	218,630	
Sound Nano 4Gb	2	474,729	474,729	322,740	
MicroPod 4Gb	3	322,740	322,740	322,740	
MPE64 Camcorder	4				

Layout
Drag/drop measures, columns and hierarchies to determine pivot table layout.

Pivot Table Prompts

Drop Here for Pages

Sections

Drop Here for a Sectioned Report

Pivot Table

Rows

Products

Excluded

Time

Base Facts

Per Name Year

Billed Quantity

Adding Measure Totals

None

Totals After

At the Beginning

At the End

Format Labels...

Format Values...

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Editing Pivot Table View

Per Name Year - 2008

Product	Product Number	Revenue			Revenue Total
		Audio	Camera	Cell Phones	
V8x Flip Phone	8			112,742	112,742
CompPal X3	17			97,256	97,256
Sanya Nano 4Gb	2	102,406			102,406
MicroPod 60Gb	3	125,403			125,403

Layout
Adding Prompt
Pivot Table Prompts
Time
Per Name Year
Sections
Drop Here for a Sectioned Report
Pivot Table
Rows
Products
Excluded
Base Facts
Billed Quantity
Columns
Measure Labels
Products
Measures
Base Facts
Revenue

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Editing Pivot Table View

The screenshot shows the Oracle BI Analysis workspace. At the top, there's a toolbar with various icons. Below the toolbar is a Pivot Table report titled "Editing Pivot Table View". The report has a header row "Per Name Year 2008" and a section "BioTech". The data is organized by Product Number and Product Type (Audio, Camera, Cell Phones). The "Revenue Total" column shows totals for each product type and overall. In the bottom right corner of the report area, there's a callout with the text "Adding Section". Below the report, there's a "Layout" section with buttons for "Rows", "Columns", and "Measures". Under "Rows", there's a "Products" section with "Product" and "Product Number". Under "Columns", there's a "Measure Labels" section with "Products" and "Product Type". Under "Measures", there's a "Base Facts" section with "Revenue". At the bottom of the workspace, there's a footer with the text "June 22, 2015 Proprietary and Confidential - 71 -" and the IGATE logo.

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Editing Pivot Table View

BiaTech

Product	Product Number	Revenue			Revenue Total		Billed Quantity			Billed Quantity Total	
		Audio	Camera	Cell Phones			Audio	Camera	Cell Phones		
V5x Flip Phone	8			112,742					14728		14728
Compact RCD	17			57,256					7558		7558
Smart Watch 4G	2			102,606					13636		13636
MicroPad 6000	3			125,403					17540		17540
myselections(Dept1)	8			112,742					14728		14728
	17			57,256					7558		7558

FunPad

Product	Product Number	Revenue			Revenue Total		Billed Quantity			Billed Quantity Total	
		Audio	Camera	Cell Phones			Audio	Camera	Cell Phones		
MPSA Camcorder	4			115,434					19481		18481
7 Megapixel Digital Camera	7			101,653					12070		12070

Layout

Sections [X] [B]

- Products
- Brand [B]

Pivot Table [B]

Rows [X] [B]

- Products
 - Product [B] [X] [B] Product Number [B]
 - Product [B] [X] [B] Product Number [B]
 - Product [B] [X] [B] Product Number [B]

Measures

Adding Another Measure

Measure [B] Products [B] Product Type [B]

Base Facts [B] Revenue [B] Billed Quantity [B] Lit Revenue [B]

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Editing Column Selector View

- A column selector is a set of drop-down lists that contain pre-selected columns. You can dynamically select columns and change the data that is displayed in the views of the analysis.

Adding Columns to Column Selector View

The screenshot shows the Oracle BI Column Selector View interface. On the left, there's a tree view under 'Subject Areas' for 'Sample Sales Lite'. Nodes like 'Time', 'Products', and 'More Product Objects' are expanded, with 'Product Type Objects' further expanded to show 'Product Type Key', 'Lob', 'Brand Key', and 'Product Sequence'. On the right, a grid defines five columns: Column 1 (Label: Per Name Year), Column 2 (Label: Brand), Column 3 (Label: Per Name Month), Column 4 (Label: Per Name Month), and Column 5 (Label: Product Type). Under 'Column 5', 'Product Type Key/Seq' is selected. Below the grid, a 'Choices' section contains a dropdown menu with options: 'Product Type', 'Product Type Key', 'Product Sequence', and 'Clear Choices'. A tooltip 'Adding Columns to Column Selector View' points to the grid area.

My_Report

Criteria Results Prompts Advanced

Column Selector

Subject Areas

Sample Sales Lite

Time

Products

More Product Objects

Product Type Objects

- Product Type Key
- Lob
- Brand Key
- Product Sequence

Product Number

Product

Product Type

Lob

Catalog

Column 1 Column 2 Column 3 Column 4 Column 5

Label Position Left

Automatically refresh when a new column is selected

Column 1 Column 2 Column 3 Column 4 Column 5

Include Selector

Per Name Year

Brand

Per Name Month

Per Name Month

Label (optional)

Choices

Product Type/Key/Seq Product Type

Product Type

Product Type Key

Product Sequence

Clear Choices

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Editing Column Selector View

- A column selector is a set of drop-down lists that contain pre-selected columns. You can dynamically select columns and change the data that is displayed in the views of the analysis.

The screenshot illustrates the Oracle BI environment. On the left, a report titled "My_Report" is displayed with a "Column Selector" section. A dropdown menu under "Product Type/Key/Seq" is open, showing options: Product Type, Product Type Key, Product Sequence, and Product Type. An annotation with the text "Selecting one of the columns from View" points to this dropdown. On the right, a separate window titled "Column Selector" shows a list of columns: Product Type/Key/Seq, Product Type Key, Product Type, Product Type Key, and Product Sequence. Below this is a table titled "BizTech" with data for various products. A specific row, "myselectionstep1", is highlighted with a red oval. The table includes columns for Product, Product Type, Product Number, and Revenue. The "Revenue" column for "myselectionstep1" is circled in red. The total revenue for all rows is listed as "398,006".

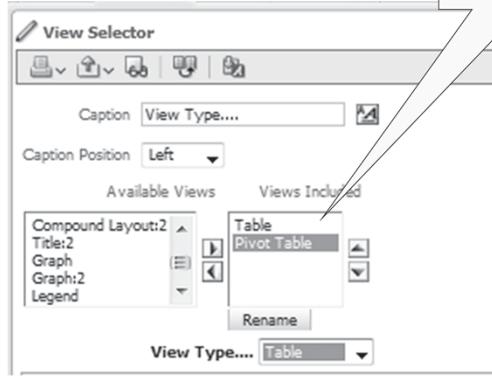
Product	Product Type	Product Number	Revenue
V5x Flip Phone	Cell Phones	8	112,742
CompCell RX3	Cell Phones	17	57,256
SoundX Nano 4Gb		103	2
MicroPod 60Gb		103	3
myselectionstep1		101	8
		Grand Total	112,742 + 57,256 = 398,006

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Editing View Selector View

- A view selector is a drop-down list from which you can select a specific view of the results from among the saved views.

Add View Types to View Selector



Editing View Selector View

View Type... Table Pivot Table

Product	Product Type	Product Number	Revenue
VSx Flip Phone	Cell Phones	8	112.0
CompCell RX3	Cell Phones	17	57.0
SoundX Nano 4Gb	Audio	2	102.6
MicroPod 60Gb	Audio	3	125.4
myselectionstep1	Cell Phones	8	112.0
Grand Total		17	57.0

View Type... Pivot Table

Revenue	Audio	Camera	Cell Phones
Product	Product Number		
VSx Flip Phone	8		448,456
CompCell RX3	17		216,630
SoundX Nano 4Gb	2	354,140	
MicroPod 60Gb	3	474,729	
MPEG4 Camcorder	4		322,740
7 Megapixel Digital Camera	7		293,012
myselectionstep1	8		448,456
Grand Total	17		216,630

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No Results Setting (No Data View in OBIEE 10g)

- When the results of an analysis return no data, the following default message is displayed to users:

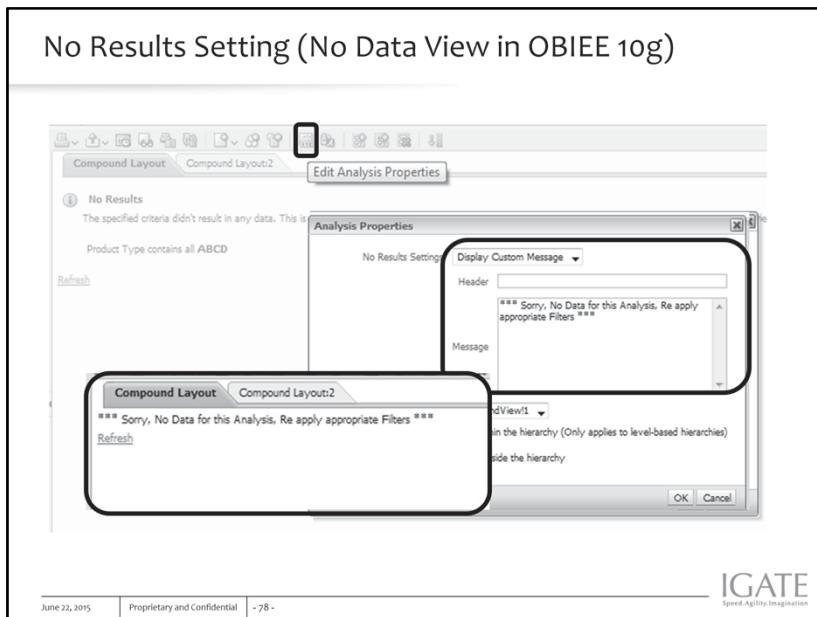
No Results

The specified criteria didn't result in any data. This is often caused by applying filters and/or selections that are too restrictive or that contain incorrect values. Please check your Analysis Filters and try again. The filters currently being applied are shown below.

Product Type contains all ABCD

Results

- Rather than displaying the default message, you can create a customized message with your own text.
- To Achieve the same, click on Analysis Properties button on Results Pane.
- In the No Results Settings box, select Display Custom Message, and type the text you want to display.

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Ticker View

- A ticker displays the results of a request as a marquee (moving results that scroll across the page).
- You can customize the size of the scroll area, the speed and direction in which the results scroll, and other display settings

Narrative view

- The narrative view to add one or more paragraphs of text to appear with the results.
- Narrative text is useful for providing information such as context, explanatory text, or extended descriptions with placeholders for each column in the results, and specify how rows should be separated.

Graph View

- You can use graphs of various types for analyzing and displaying data
- They are useful for observing relationships and trends in large data sets
- They are useful for observing changes in cumulative value or percentage over time; for example, by comparing groups on certain measurements such as outcome, and displaying group trends

You can select the chart graph, such as a line chart or a bar chart; the chart subtype, such as two-dimensional; and the style for columns, such as the shape and fill pattern

Graph Types

- **Bar**
 - Subtypes available
 - Vertical
 - Horizontal
 - Stacked Vertical
 - Stacked Horizontal
- **Line**
- **Area**
- **Pie**
- **Line Bar**
 - Subtypes available
 - Standard
 - Stacked
- **Time Series Line**

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Bar: Shows quantities associated with categories. Bar graphs show quantities as bar lengths and categories as bars or groups of bars. Bar graphs are useful for comparing differences among like items; for example, competing product sales, same product sales over different time periods, or same product sales over different markets.

Can be used to compare measure columns by showing bars in a horizontal or vertical direction.

Line: Shows quantities over time or by category.

Line graphs are useful for showing trends over time.

Can be used to plot multiple measure columns

Area: Shows the trend of the contribution of each value over time or by category. It is a line graph for which the regions between lines are filled in. Regions stack, adding up to the total value for each time period or category.

Pie: Shows data sets as percentages of a whole. Pie graphs are useful for comparing parts of a whole, such as sales by region or by district.

Time Series Line : Plots time series data. It scales the horizontal axis based on the time that has elapsed between data points.

Graph Types (Cont...)

- Pareto
- Scatter
- Bubble
- Radar

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Pareto : Is a form of bar graph and line graph that displays criteria in descending order. In this graph type, the line shows a cumulative total of the percentages.

Pareto graphs are useful for identifying significant elements, such as best and worst or most and least.

Scatter: Displays x-y values as discrete points, scattered within an x-y grid. It plots data points based on two independent variables. This enables you to plot large numbers of data points and observe the clustering of data points.

Scatter graphs are useful for observing relationships and trends in large data sets.

Bubble: Is a variation of a scatter graph that displays data elements as circles (bubbles). It shows three variables in two dimensions. One value is represented by the location of the circle on the horizontal axis. Another value is represented by the location of the circle on the vertical axis. The third value is represented by the radius of the circle.

Bubble graphs are useful for plotting data with three variables, and for displaying financial data over a period of time.

Radar: Plots the same information as a bar graph, but instead displays data radiating from the center of the graph. Each data element has its own value axis.

Radar graphs are useful for examining overlap and distribution

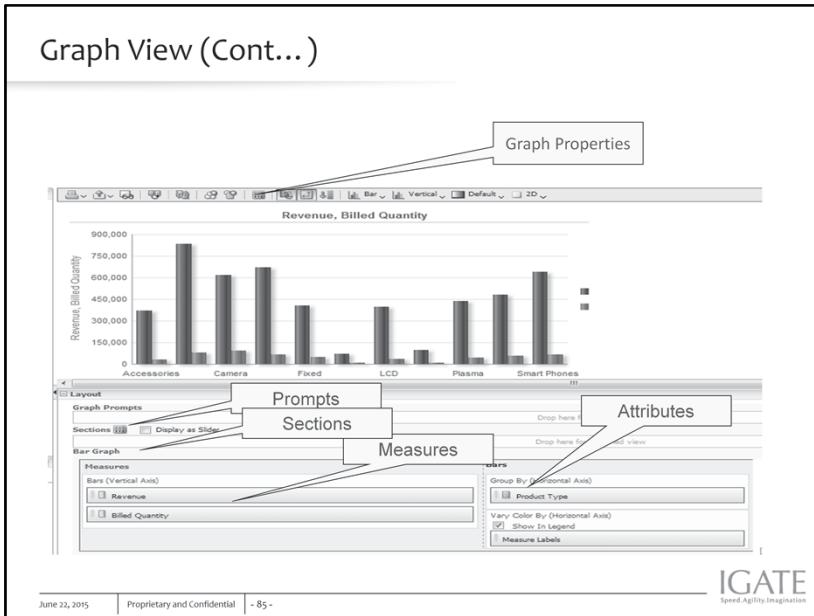
Graph View (Cont...)

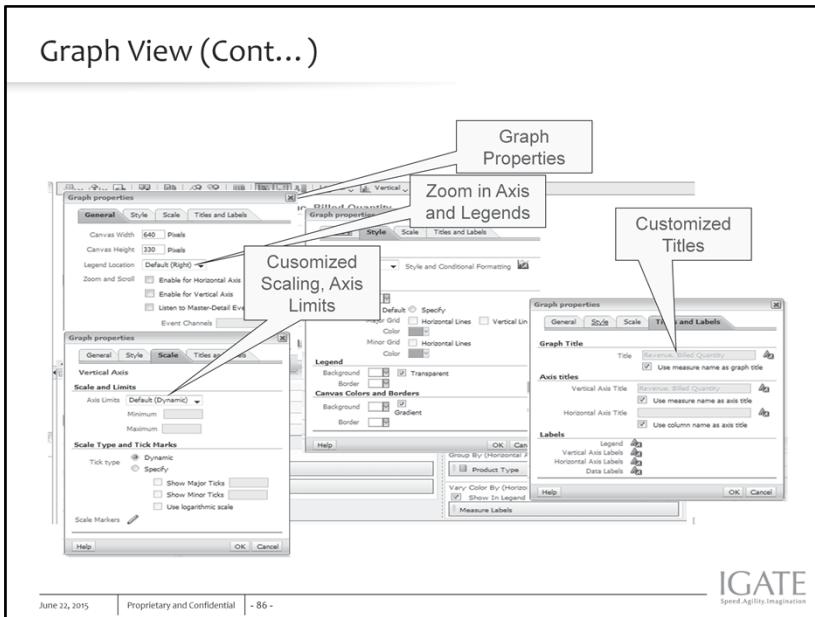
The screenshot shows the Oracle BI Analysis interface. On the left, there's a navigation pane with 'Compound Layout' and 'Compound' buttons, followed by sections for 'Title (3)', 'My_Report', and 'Table (3)'. Below these are two tables: one for 'Per Name Year' and another for '2008 / 02'. A context menu is open over the second table, specifically over the 'Graph' option in the 'Other Views' submenu. This menu lists various chart types: Bar, Line, Area, Pie, Line-Bar, Time Series Line, Column, Pareto, Scatter, Key/Value, Micro, Radar, and myS. The 'Vertical' option under the Bar category is highlighted with a red box. To the right of the menu is a table titled 'layout3' with columns 'Revenue' and 'Billed Quantity'. The data in the table is as follows:

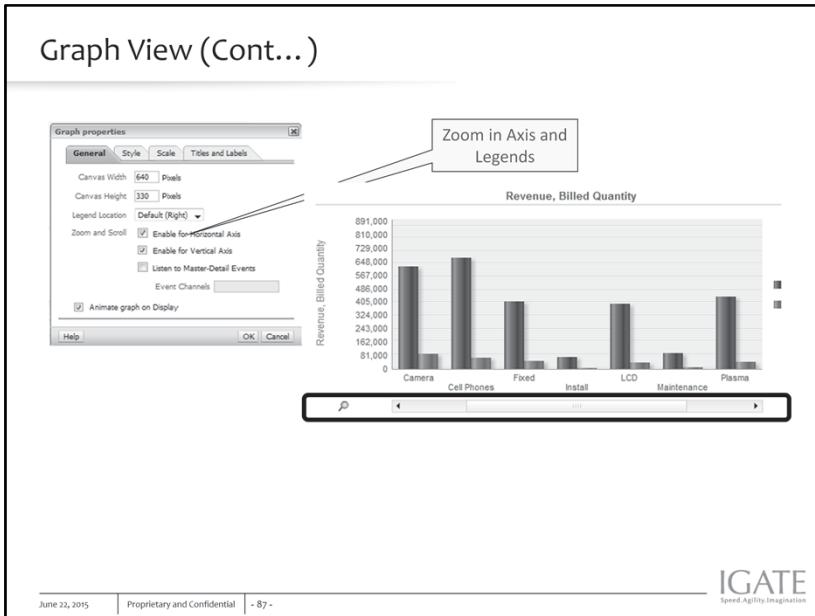
	Revenue	Billed Quantity		
nes	8	3.151		
nes	17	3.718		
ones	9	2.167		
ones	10	2.041		
nes	3	8.447		
nes	8	3.151		
nes	17	3.718		
Smart Phones	9	2.167		
V5x Flip Phone	Cell Phones	8	4.133	308
CompCell RX3	Cell Phones	17	3.886	440
Touch-Screen TS	Smart Phones	9	12.113	1245
KeyMax S-Phone	Smart Phones	10	3.204	666
SoundX Nano 4Gb	Audio	2	8.129	985

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The Type and the style change depending on the Graph selected.







Working with Hierarchical Column

- **Hierarchical Column — Holds data values that are organized using both named levels and parent-child relationships. This column is displayed using a tree-like structure**
 - Hierarchy objects can now be defined in presentation layer
 - Enables users to include hierarchy based analysis



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Working with Hierarchical Column

➤ **There are two types of Hierarchies:**

- **Level-based hierarchy** — Consists of an ordered set of two or more levels. E.g., a Time hierarchy might have three levels for Year, Quarter, and Month. Level-based hierarchies can also contain parent-child relationships.
- **Parent-child hierarchy** — Consists of values that define the hierarchy in a parent-child relationship and does not contain named levels.

e.g. an Employee hierarchy might have no levels, but instead have names of employees who are managed by other employees. Employees can have titles, such as Vice President. Vice Presidents might report to other Vice Presidents and different Vice Presidents can be at different depths in the hierarchy.

➤ **Additionally hierarchical columns can be one of the following:**

- Ragged - A hierarchy in which all the lowest-level members do not have the same depth. E.g., a Time hierarchy might have data for the current month at the day level, the previous month's data at the month level, and the previous 5 years' data at the quarter level.
- Skip-level - A hierarchy in which certain members do not have values for certain higher levels. E.g., in the United States, the city of Washington in the District of Columbia does not belong to a state.

Working with Hierarchical Column

- Encapsulates the presentation of a dimensional hierarchy within a single column in the Analysis
- Much better user control or experience

The screenshot shows the Oracle BI Analysis interface. On the left, the 'Sample Sales Lite' schema is displayed with various dimensions and facts. A specific dimension, 'Products Hierarchy', is highlighted with a black rectangle. Below it, a 'Pivot Table' is shown with a title 'Revenue by Product Hierarchy'. The table has three columns: 'Product Hierarchy', 'Per Name Year', 'Revenue', and 'Billed Quantity'. A row for 'All Products' is selected, highlighted with a black rectangle. To the right, a detailed view of the 'Products Hierarchy' dimension is shown in a separate window titled 'Pivot Table - Products Hierarchy'. This view lists products grouped by category: 'All Products', 'BizTech', 'Communication', 'Electronics', 'FunPad', and 'HomeView'. For each product, 'Year', 'Revenue', and 'Billed Quantity' are listed. The 'Electronics' category is also highlighted with a black rectangle.

Product Hierarchy	Per Name Year	Revenue	Billed Quantity
All Products	2008	1,500,000	183090
	2009	1,700,000	170835
	2010	1,800,000	188756

Product Hierarchy	Year	Revenue	Billed Quantity
All Products	2008	1,500,000	183090
	2009	1,700,000	170835
	2010	1,800,000	188756
BizTech	2008	658,492	82828
	2009	821,426	80849
	2010	1,019,443	81320
Communication	2008	348,569	41618
	2009	439,807	42867
	2010	515,163	43592
Electronics	2008	318,183	31210
	2009	382,019	37962
	2010	504,320	37728
FunPad	2008	542,613	67593
	2009	556,666	64480
	2010	400,721	70965
HomeView	2008	298,695	32669
	2009	321,508	32518
	2010	379,797	36451

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Adding Prompts to an Analysis

- A Prompt allows users to select values to filter an analysis
- Prompts allow users to select values that dynamically filter all views within the analysis
- Prompts created at an Analysis level is called an inline prompt, is embedded in the analysis and is not stored in the catalog, hence not available for other analyses
- Prompts created for a dashboard are called dashboard prompts and are stored in the catalog
- Type of Inline prompt -
 - Column prompt
 - Variable prompt
 - Image prompt
 - Currency prompt

Adding Prompts to an Analysis (Cont...)

➤ Column Prompt:

- A column prompt enables you to build very specific value prompts to an analysis (or standalone on a dashboard)
- Column prompts can be created for hierarchical, measure, or attribute columns at the analysis or dashboard level

➤ Variable Prompt:

- A variable prompt enables the user to select a value that is specified in the variable prompt to display on the dashboard
- A variable prompt is not dependent upon a column, but can still use a column

➤ Image Prompt:

- An image prompt provides an image that users click to select values for an analysis or dashboard

➤ Currency Prompt:

- A currency prompt enables the user to change the currency type that is displayed in the currency columns on an analysis or dashboard



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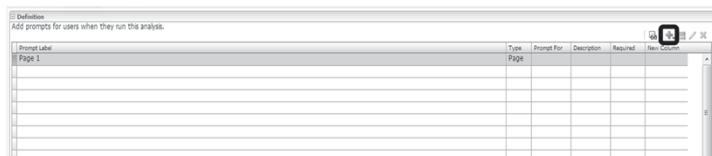
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- **Currency Prompt** — A currency prompt enables the user to change the currency type that is displayed in the currency columns on an analysis or dashboard. For example, suppose that an analysis contains the sales totals for a certain region of Canada in Canadian dollars. However, because the users viewing the analysis reside in the United States, they can use the currency prompt to change the sales totals from Canadian dollars to US dollars. The prompt's currency selection list is populated with the currency preferences from the user's "My Account dialog: Preferences tab". Note that the Currency Prompt option is available only if the administrator has configured the userpref_currencies.xml file as described in "Configuring Currency Options" in Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition. For more information about creating a currency prompt, see "Creating a Currency Prompt".
- **Image Prompt** — An image prompt provides an image that users click to select values for an analysis or dashboard. For example, in a sales organization, users can click their territories from an image of a map to see sales information, or click a product image to see sales information about that product. If you know how to use the HTML <map> tag, then you can create an image map definition. For more information about creating an image prompt, see "Creating an Image Prompt".
- **Variable Prompt** — A variable prompt enables the user to select a value that is specified in the variable prompt to display on the dashboard. A variable prompt is not dependent upon a column, but can still use a column. For example, you can use variable prompts to allow the user to specify existing data to perform sales projections. For example, you can create a variable prompt called Sales Projections and specify the variable prompt values as 10, 20, and 30 percent. Then you create an analysis that contains the Region and Dollars columns. Within the Dollars column formula, you select the multiply operator and insert the Sales Projection variable. When users run this analysis, they can select a percentage by which to recalculate the Dollars column. For more information about creating a variable prompt, see "Creating a Variable Prompt".

Adding Prompts to an Analysis (Cont...)

➤ Creating Column Prompt

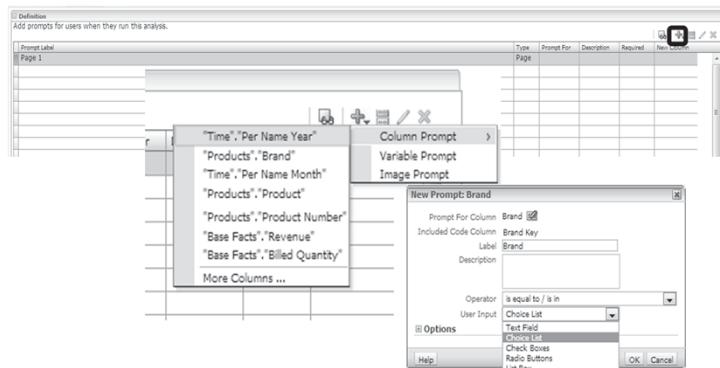


The screenshot shows the 'Definition' tab of the Oracle BI Prompt Definition dialog box. The title bar says 'Prompt Definition' and 'Add prompts for users when they run this analysis.' The main area is a table with columns: Prompt Label, Type, Prompt For, Description, Required, and Next Column. There is one row visible with the label 'Page 1' and type 'Page'. The right side of the dialog has scroll bars and a toolbar with icons for Save, Undo, Redo, and Close.

Prompt Label	Type	Prompt For	Description	Required	Next Column
Page 1	Page				

Adding Prompts to an Analysis (Cont...)

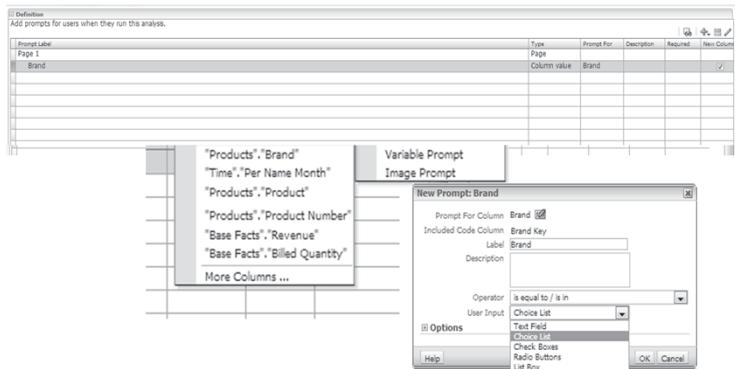
➤ Creating Column Prompt



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Adding Prompts to an Analysis (Cont...)

➤ Creating Column Prompt...



Adding Prompts to an Analysis (Cont...)

➤ Execute the Analysis with prompt...

The screenshot shows the Oracle Business Intelligence Catalog interface. On the left, there's a sidebar with 'Folders' (My Folders, Shared Folders), 'Tasks' (My Folders, RSS, Delete, Copy, Rename, Create Shortcut), and 'Actions' (Archive, Unarchive, Upload, Properties, Permissions). The main area displays a list of items:

- _temp | Last Modified 10/30/2012 1:41:16 PM | Created By weblogic
- Drafts | Last Modified 10/30/2012 1:41:16 PM | Created By weblogic
- Drills | Last Modified 10/30/2012 1:41:17 PM | Created By weblogic
- My Dashboards | Last Modified 10/30/2012 1:41:16 PM | Created By weblogic
- Subject Area Contents | Last Modified 10/30/2012 1:41:16 PM | Created By System Account
- My_Report | Last Modified 2/27/2013 11:34:48 AM | Created By weblogic
- myreport with prompt | Last Modified 2/27/2013 12:13:43 PM | Created By weblogic

The 'myreport with prompt' item has a red box around the 'Open' button in the Actions column.

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Adding Prompts to an Analysis (Cont...)

- Execute the Analysis with prompt...

The screenshot shows the Oracle Business Intelligence interface. In the top navigation bar, 'Catalog' is selected. Below it, a folder named 'myreport with pro...' is expanded, showing three items: 'myreport', 'SoundPod', and 'BizTech'. A dropdown menu for 'Brand' is open, with 'BizTech' selected. The main content area displays a table titled 'myreport with prompt' with the following data:

Product	Product Type	Brand	Product Type	Billed Quantity	Revenue
V5x Flip Phone	Cell Phones	BizTech	Cell Phones	44483	446,456
CompCell RX3	Cell Phones	BizTech	Cell Phones	21169	216,630
Touch-Screen T5	Smart Phones	BizTech	Smart Phones	36396	361,443
KeyMax S-Phone	Smart Phones	BizTech	Smart Phones	29029	274,950
SoundX Nano 4Gb	Audio	BizTech	Audio	41233	354,140
MicroPod 60Gb	Audio	BizTech	Audio	40033	474,729
Bluetooth Adaptor	Accessories	BizTech	Accessories	17058	160,172
MP3 Speakers System	Accessories	BizTech	Accessories	15596	187,480

At the bottom of the report, there are links: Edit, Refresh, Print, Export, Add to Briefing Book, and Copy. A note 'Brand is equal to BizTech' is displayed above the table.

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Logical SQL for an Analysis

- You can examine the XML code and logical SQL statement that is generated for an analysis on the "Analysis editor: Advanced tab".
- Optionally, you can create a new analysis based on that SQL statement.
- Creating Analysis using Logical SQL procedure is only for advanced users and developers who have the appropriate responsibilities to access the Advanced tab.
- You have thorough knowledge of advanced SQL statements, have expertise working with the Oracle BI Server metadata and understand the content and structure of the underlying data sources.
- Advanced tab provides the Advanced SQL Clauses area, which enables you to add clauses to the SQL statements and other similarly advanced features. These features, except for the ability to specify a prefix, are disabled for analyses that contain hierarchical columns, member selections, or groups.

Logical SQL for an Analysis

Referencing the Results
These links will execute the saved analysis. If the analysis is updated in the future, these links will reflect the changes.

test
Click this link to return a page at a time with links to refresh, modify, and view a printable version of the results. Suitable for use as a Bookmark or Favorite and within Web pages and portals.

test
Click this link to generate and download a Web Query (.iqy) file (after first prompting for your user ID and password) and retrieving the formatted results into Microsoft Excel.

Analysis XML
The following box contains XML representation of this analysis. Use extreme care when modifying this XML code.

```
<sav:report xmlns:sav="com.siebel.analytics.web/report/v1.1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="sav:simpleCriteria" subjectArea="&quot;A - Sample Sales&quot;">  
<sav:column xsi:type="sav:regularColumn" columnID="cd5f12336f429cced">  
<sav:columnFormula>  
<savx:expr xsi:type="savx:sqlExpression">Time."T05 Per Name Year</savx:expr>  
<sav:column xsi:type="sav:regularColumn" columnID="c1f4645809e8edfd12e">  
<sav:columnFormula>  
<savx:expr xsi:type="savx:sqlExpression">Products."P1 Product"</savx:expr>  
<sav:column xsi:type="sav:regularColumn" columnID="c9344d46a79a8d93b">  
<sav:columnFormula>
```

Bypass Oracle BI Presentation Services Cache
Partial Update Default Apply XML

SQL Issued
The following box contains the SQL code that will be sent to the Oracle BI Server when this analysis is executed.

```
SELECT
```

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Logical SQL for an Analysis

The screenshot shows the Oracle BI Analysis interface with the title 'test'. The 'Advanced' tab is selected. In the 'SQL Issued' section, there is a large block of logical SQL code. A callout box highlights the first few lines of the SQL:

```
SELECT
  0 s_0,
  "A - Sample Sales"."Products"."P0" Product Number" s_1,
```

Below the SQL code, a note states: 'Important: If you create a new analysis using this SQL, any hierarchical columns, member selection, groups or formatting will be stripped.' There is also a 'New Analysis' button.

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Logical SQL for an Analysis

- You can enter your own logical SQL statements (many features of Oracle BI EE such as hierarchical columns, selection steps, groups, and formatting are not available), but enables you to use functions such as SET operations.
- You can create a new analysis using the SQL statements from an existing analysis as your starting point.

FRONT "A - Sample Sales"
ORDER BY 1, 6 ASC NULLS LAST, 3 ASC NULLS LAST, 5 ASC NULLS LAST, 2 ASC NULLS LAST

Important: If you create a new analysis using this SQL, any hierarchical columns, member selection, groups or formatting will be stripped.

New Analysis

Advanced SQL Clauses

User may follow fields to include additional clauses in the SQL code for this analysis and to change the Subject Area or FROM clause. To add items to the projection list, use the Criteria tab.

Important: You cannot use the fields in this section, except for the Prefix field, if the analysis includes hierarchical columns, member selections, or groups.

DISTINCT Issue an explicit DISTINCT

FROM Enter the name of the Subject Area

"A - Sample Sales"

or Enter a complex from clause for these criteria.

GROUP BY Enter a comma-separated list of columns to Group By.

Prefix

Postfix

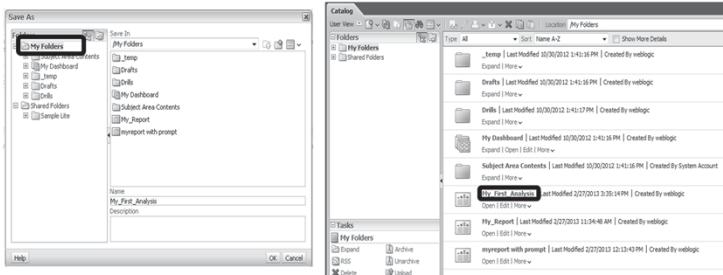
Apply SQL

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Saving Analysis

➤ You can save an analysis to a:

- Personal folder, from which only you can access it
- Your top-level personal folder is called My Folders.
- Every user with a unique user name has a folder called My Folders. This is designed to hold the analyses that you run most often, and other content that you access frequently.



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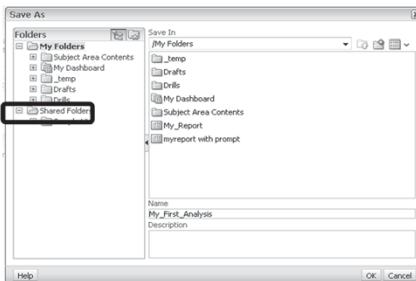
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Saving Analysis

➤ You can save an analysis to a:

- You Can also save Analysis in a Shared folder from which other users with permission to access that folder can access it.



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Editing Analysis - Catalog

- In the global header, click Catalog to display the “Catalog page”.
- Navigate to the analysis to edit and click the Edit link. The analysis is displayed in the “Analysis editor”.
- Make the desired changes.
- Save the analysis.

The screenshot shows the Oracle BI Catalog page. The left sidebar has sections for Folders (My Folders, Shared Folders), Tasks (My Folders, RSS, Delete), and Utilities (Archive, Unarchive, Upload). The main area lists analyses with details like name, last modified date, and creator. One analysis, 'My_First_Analysis', is highlighted with a red box around its thumbnail icon and entry in the list.

Name	Last Modified	Created By
_temp	10/30/2012 1:41:16 PM	Created By weblogic
Drafts	10/30/2012 1:41:16 PM	Created By weblogic
Drills	10/30/2012 1:41:17 PM	Created By weblogic
My Dashboard	10/30/2012 1:41:16 PM	Created By weblogic
Subject Area Contents	10/30/2012 1:41:16 PM	Created By System Account
My_First_Analysis	2/27/2013 3:35:14 PM	Created By weblogic
My_Report	2/27/2013 11:34:48 AM	Created By weblogic
myreport with prompt	2/27/2013 12:13:43 PM	Created By weblogic

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Conditions

- Conditions are objects that return a single Boolean value based on the evaluation of an Analysis.
- For an analysis, it evaluates the row count of the analysis. If the analysis returns at least one row, then the condition evaluates to true.
- Conditions are used to determine whether:
 - Agents deliver their content and execute their actions
 - Actions links (which when clicked run actions) are displayed in dashboard pages
 - Sections and their content are displayed in dashboard pages

e.g. A sales manager wants to deliver a Monthly Sales Report to his direct reports only when sales drop below \$2 million. You can create a condition that is based on an analysis that shows sales that are below \$2 million and add it to an agent whose delivery content is the Monthly Sales Report. When the condition evaluates to true (that is, the analysis contains rows where sales are below \$2 million), the agent is triggered to deliver the Monthly Sales Report



Presentation Variables:

A presentation variable is a variable that you can create as part of the process of creating one of the following types of dashboard prompts:

- Column prompt — A presentation variable created as part of a column prompt is associated with a column, and the values that it can take come from the column values. To create a presentation variable as part of a column prompt, in the "New Prompt dialog" (or Edit Prompt dialog), you have to select Presentation Variable in the set a variable field and then enter a name for the variable in the Variable Name field.

Variable prompt — A presentation variable created as part of a variable prompt is not associated with any column, and you define the values that it can take. To create a presentation variable as part of a variable prompt, in the "New Prompt dialog" (or Edit Prompt dialog), you have to select **Presentation Variable** in the **Prompt for** field and then enter a name for the variable in the **Variable Name** field. For information on working with variable prompts, see "Creating a Variable Prompt". The value of a presentation variable is populated by the column or variable prompt with which it was created. That is, each time a user selects a value in the column or variable prompt, the value of the presentation variable is set to the value that the user selects.

What Are Request Variables?

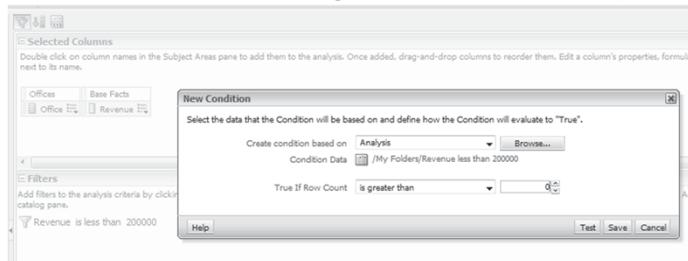
A request variable lets you override the value of a session variable but only for the duration of a database request initiated from a column prompt. You can create a request variable as part of the process of creating a column prompt. A request variable that is created as part of a column prompt is associated with a column, and the values that it can take come from the column values. To create a request variable as part of a column prompt, in the "New Prompt dialog"

(or Edit Prompt dialog), you have to select **Request Variable** in the **Set a variable** field and then enter the name of the session variable to override in the **Variable Name** field. For information on working with column prompts, see "Creating a Column Prompt". The value of a request variable is populated by the column prompt with which it was created. That is, each time a user selects a value in the column prompt, the value of the request variable is set to the value that the user selects. The value, however, is in effect only from the time the user presses the **Go** button for the prompt until the analysis results are returned to the dashboard.

Conditions

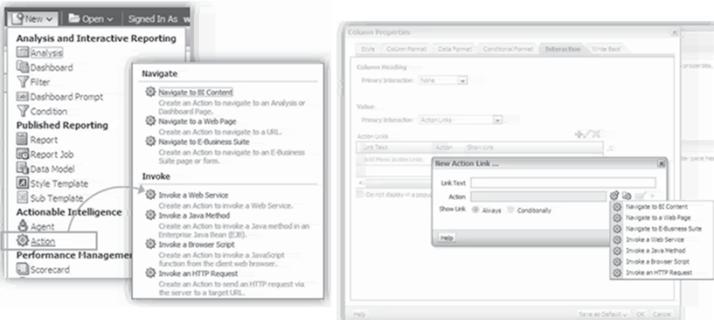
➤ Elements of a Condition?

- An analysis
- The criteria to use when evaluating the condition, a row count and an operator



Action Framework

- **Actions:** Facilitates creation of Actions in the Presentation Catalog that can trigger additional reports, guide down a specific analysis path, redirect to web pages or invoke operations, functions or processes within external systems



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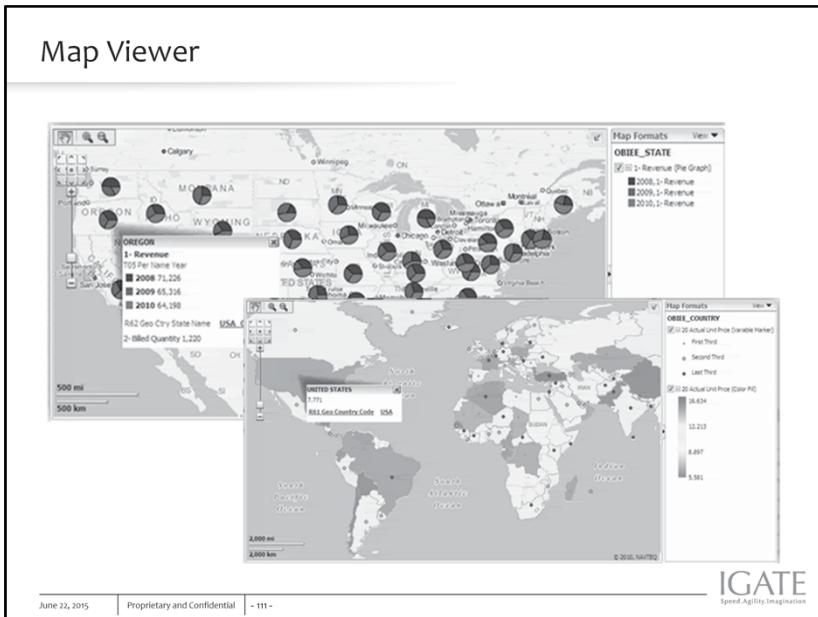
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Action Framework

- **Action Links:** An action link is a link to an action that you have embedded in an analysis, dashboard page, that, when clicked, runs an associated action.
- **Action Link Menus:** An action link menu lets users select, from a list of action links, the appropriate action to be executed based on the business insight that they gained from the data. On a dashboard page, you can add action links as standalone links or you can group multiple action links together on action link menus.
- Action links that you add to analyses are displayed to users in the following views:
 - Tables
 - Pivot tables
 - Graphs
 - Funnel graphs
 - Gauges
 - Map views

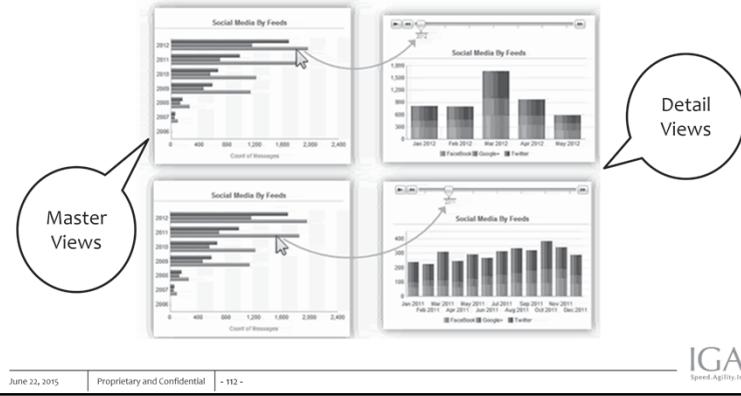
Map Viewer

- In OBIEE 11g, now we can embed colorful and interactive maps in Dashboards
- Support for creation of native map viewer maps and overlaying OBIEE 11g reporting components on the top of them
- Oracle Map Viewer is installed as part of the standard OBIEE 11g installation
- Types of Layers: Color fill, Bar graph, Pie graph, Bubble, Variable Shape, Image
- It is possible to interact with the maps like any other graph view



Master Detail Events

- Allows to establish a relationship between two or more views
- One view is referred to as the **Master** view that drives the changes in one or more views referred to as **Detail** view



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Master Detail Events

The screenshot displays two views: 'Master View' and 'Detail View'.
Master View: A horizontal bar chart titled 'Social Media By Feeds' showing the count of messages from January 2012 to May 2012. The legend indicates three channels: Facebook, Google+, and Twitter.
Detail View: A stacked bar chart titled 'Social Media By Feeds' showing the count of messages by month. The legend indicates three channels: Facebook, Google+, and Twitter.
Column Properties Dialog: Shows 'Primary Interaction' set to 'Default (H)' and 'Send Master-Detail Events' checked.
Graph Properties Dialog: Shows 'General' tab settings: Canvas Width 400_Pixels, Canvas Height 200_Pixels, Legend Location Bottom, Zoom and scroll Enabled for Horizontal Axis, and 'Listen to Master-Detail Events' checked.

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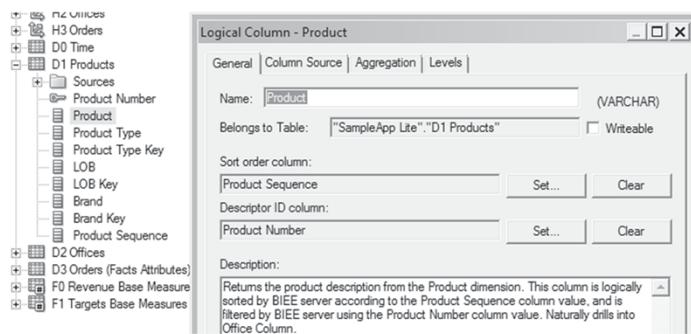
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Double Column Feature

- OBIEE 11g provides a feature called double columns.
- When a repository is configured for the double column feature, column data includes a display column that has a code column mapped to it (that is, it has double columns).
- A display column contains the display values for the column data, e.g. Excellent, Good, and Poor.
- A code column contains code values that uniquely identify display values and are consistent across users or locales, e.g. the code values 1 (uniquely identifying Excellent), 2 (uniquely identifying Good), and 3 (uniquely identifying Poor).
- Facilitates:
 - Definition of Language independent filters
 - Performance improvement due to the usage of code column rather than description column in query filters

Double Column Feature

➤ Example...



Logical Column - Product

General | Column Source | Aggregation | Levels |

Name: **Product** (VARCHAR)

Belongs to Table: **"SampleApp Lite"."D1 Products"** Writeable

Sort order column: **Product Sequence**

Descriptor ID column: **Product Number**

Description:
Returns the product description from the Product dimension. This column is logically sorted by BI EE server according to the Product Sequence column value, and is filtered by BI EE server using the Product Number column value. Naturally drills into Office Column.

Full Text Catalog Search

- Allows users to search for Catalog objects using attributes such as name and description
- Two modes are supported
- Basic Search:
 - The basic search, enables users with the proper privilege to search for objects from the global header, home page, or the Catalog page. You find only those objects for which you have the appropriate permissions.
 - When the desired object is located, you can click it to display it for viewing or editing as per permissions



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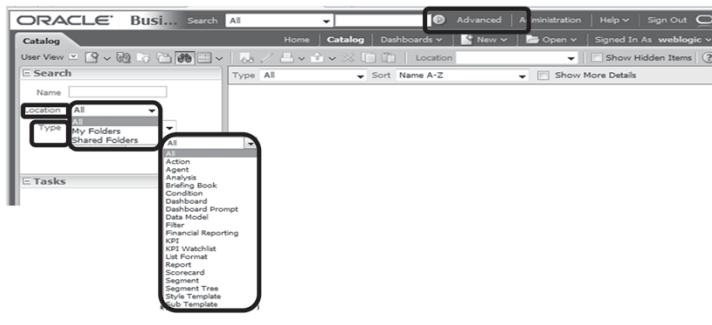
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Full Text Catalog Search

➤ Advanced Search / Full-text Search:

- This search option must be configured by your administrator. This search type allows you to search for an object by exact name, description, location, object type, object attribute, data column name, and data column values.



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Using Variables in Analyses

- You can use variables in analyses, dashboards, actions, agents, and conditions
- There are four types of variables:
 - Session (System and Non-System)
 - Repository (Static and Dynamic)
 - Presentation (created while creating dashboard prompts)
 - Request

Using Variables in Analyses

➤ **Variables can be used in the following Areas:**

To Name few...

- Title views
- Narrative views
- Static text views
- Filters
- Column formulas
- Table and column headings in analyses
- Direct database requests
- Dashboard prompts and inline prompts
- Text objects in a dashboard
- Graphs to specify conditional formatting
- Etc...

Using Variables in Analyses... Syntax

Type of Variable	Syntax	Example
Session	<pre>@[biServer.variables['NQ_SESSION.variablename']]</pre> <p>where <i>variablename</i> is the name of the session variable, for example DISPLAYNAME.</p> <p>For a list of system session variables that you can use, see "About System Session Variables" in <i>Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition</i>.</p>	<pre>@[biServer.variables['NQ_SESSION.USER']]</pre>
Repository	<pre>@[biServer.variables.variablename]</pre> <p>or</p> <pre>@[biServer.variables['variablename']]</pre> <p>where <i>variablename</i> is the name of the repository variable, for example, prime_begin.</p>	<pre>@[biServer.variables.prime_begin]</pre> <p>or</p> <pre>@[biServer.variables['prime_begin']]</pre>
Presentation or request	<pre>@[variables.variablename][format][defaultvalue]</pre> <p>or</p> <pre>@[scope.variables['variablename']]</pre> <p>where:</p> <ul style="list-style-type: none"> ▪ <i>variablename</i> is the name of the presentation or request variable, for example, MyFavoriteRegion. ▪ (optional) <i>format</i> is a format mask dependent on the data type of the variable, for example #,##, MM/DD/YY hh:mm:ss. (Note that the format is not applied to the default value.) ▪ (optional) <i>defaultvalue</i> is a constant or variable reference indicating a value to be used if the variable referenced by <i>variablename</i> is not populated. ▪ <i>scope</i> identifies the qualifiers for the variable. You must specify the scope when a variable is used at multiple levels (analyses, dashboard pages, and dashboards) and you want to access a specific value. (If you do not specify the scope, then the order of precedence is analyses, dashboard pages, and dashboards.) 	<pre>@[variables.MyFavoriteRegion][EASTERN REGION]</pre> <p>or</p> <pre>@[dashboard.variables['MyFavoriteRegion']]</pre>

Using Variables in Analyses... Guidelines

Type of Variable	Guidelines	Example
Session	<ul style="list-style-type: none"> Include the session variable as an argument of the VALUEOF function. Enclose the variable name in double quotes. Precede the session variable by NQ_. Enclose both the NQ_SESSION portion and the session variable name in parentheses. 	*Market*, "Region"=VALUEOF(NQ_SESSION."SalesRegion")
Repository	<ul style="list-style-type: none"> Include the repository variable as an argument of the VALUEOF function. Enclose the variable name in double quotes. Refer to a static repository variable by name. Refer to a dynamic repository variable by its name and value. <p>If you are using a dynamic repository initialization block and the repository variable must be enclosed in double quotes, preceded by NQ_, and contained within parentheses. For example, the following shows a dynamic repository variable named REGION contained in a initialization block named "prime_begin" and "prime_end":</p> <pre>CASE WHEN "Hour" >= VALUEOF("prime_begin") AND "Hour" < VALUEOF("prime_end") THEN 'Prime Time' WHEN ... ELSE...END</pre> <p>For more information, see "About Dynamic Repository Initialization" in the <i>Middle-tier Metadata Repository Builder's Guide for Oracle Business Intelligence</i>.</p>	
Presentation	<ul style="list-style-type: none"> Use this syntax: <code>@variableName defaultValue</code> where variableName is the name of the variable to be used, and default value (optional) is a constant or variable reference indicating a value to be used if the variable reference or parameter is not populated. Precede that is, convert the variable to a string, enclose the entire syntax in single quotes, for example: <code>'@user.displayName'</code> <p>Note: If the @ sign is not followed by a , then it is treated as an @ sign.</p>	*Market*, "Region"=@[MyFavoriteRegion] {SASTHRN} REGION

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Using Variables in Analyses... Guidelines

Type of Variable	Guidelines	Example
Session	<ul style="list-style-type: none"> Include the session variable as an argument of the VALUEOF function. Enclose the variable name in double quotes. Precede the session variable by NQ_. Enclose both the NQ_SESSION portion and the session variable name in double quotes. 	*Market*, "Region"=VALUEOF(NQ_SESSION."SalesRegion")
Repository	<ul style="list-style-type: none"> Include the repository variable as an argument of the VALUEOF function. Enclose the variable name in double quotes. Refer to a static repository variable by its fully qualified name. Refer to a dynamic repository variable by its fully qualified name. <p>If you are using a dynamic repository variable in an initialization block and the repository variable name contains double quotes ("), separated by a period, and contained within parentheses, use the syntax of a dynamic repository variable named REGION Security. To reference a block named Region Security, use this syntax:</p> <p>VALUEOF("Region Security"."REGION")</p> <p>For more information, see the <i>Oracle Fusion Middleware Variable Reference Guide for Oracle Fusion Middleware Metadata Repository Builder's Enterprise Edition and Oracle Business Intelligence Enterprise Edition</i>.</p>	CASE WHEN "Hour" >= VALUEOF("prime_begin") AND "Hour" < VALUEOF("prime_end") THEN 'Prime Time' WHEN ... ELSE...END
Presentation	<ul style="list-style-type: none"> Use this syntax: @variableName [defaultValue] variableName is the name of the presentation variable and defaultvalue (optional) is a constant or variable reference. The @ sign can be used if the variable referenced by variableName is not a constant. To type-cast (that is, convert) the variable to a string, enclose the entire syntax in single quotes and use the type: "@user.displayName". <p>Note: If the @ sign is not followed by a <code>,</code>, then it is treated as an @ sign.</p>	*Market*, "Region"=@(MyFavoriteRegion) {RASTSON REGION}

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Using Variables in Analyses... Example

- In the Title View, displaying current user (predefined session variable)

User : @{biServer.variables['NQ_SESSION.USER']}

Title
User : @{biServer.variables['NQ_SESSION.USER']}
Display Saved Name
Logo
Optional - URL of a title image. Note: When rui "map".
Subtitle
Started Time Do not display
Help URL
Optional - URL for a document providing help using a relative path prefixed with "fmap".
User : weblogic
My_First_Analysis

Title
User : weblogic
My_First_Analysis

Product	Product Type
V5x Flip Phone	Cell Phones
CompCell RX3	Cell Phones
Touch-Screen T5	Smart Phones
KeyMax S-Phone	Smart Phones
SoundX Nano 4Gb	Audio
MicroDroid Finch	Audio

Summary

➤ **In this topic you learned:**

- Analysis Editor
- Creating BI Analysis
- Displaying Results
- Types of Views
- Types of Charts



OBIEE 11g

Oracle BI Interactive Dashboards

June 22, 2015

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Lesson Objectives

➤ **To understand the following topics:**

- Creating an Interactive Dashboard
- Dashboard Objects
- Add Analysis dashboard



Dashboard - Overview

- An Oracle BI Interactive Dashboard is a page in an Analytics application that is used to display the results of Oracle BI requests and other kinds of content.
- A user can view preconfigured dashboards, and create or modify dashboards depending on the permissions he/she has.
- Oracle BI Interactive Dashboards provide personalized views of corporate and external information.
- A dashboard consists of one or more pages, which appear as tabs across the top of the dashboard.
- Pages can display anything that you can access or open with your Web browser, such as saved Oracle BI Analysis, Alerts, images, Graphs, tables, text, and links to Web sites and documents.

Analyses that you create with Oracle BI Answers can be saved in the Oracle BI Presentation Catalog and integrated into any Oracle BI home page or dashboard. Results can be enhanced through charting, result layout, calculation, and drilldown features.

Dashboard - Overview

ORACLE Business Intelligence

Quickstart | Readme | Overview | Details | Published Reporting | Standard |

Search All Advanced Administration Help v Sign Out

Home Catalog Dashboards New Open Signed In As weblogic

History Overview Time on 23/03/2012 5:58:32 PM

Year: 2008, 2009, 2010 Grand Total: 5,000,000

Company: All Products, BiTech, Communications, Electronics, FunPod, HomeView

Products Hierarchy: Apply Reset

Filter currently applied: Per Name Year is equal to 2008, 2009, 2010 and Day Of Year is between 1 and 365

Help on this Page Customizable Menu

Top Offices Time on 23/03/2012 5:58:44 PM

Target Completion Ratio

BiTech Revenue FunPod Revenue HomeView Revenue

Monthly Trending Time on 23/03/2012 5:58:55 PM

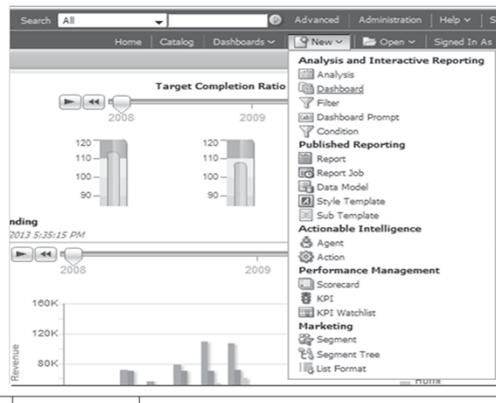
Revenue: BiTech Rev, FunPod Rev, HomeView Rev

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Analyses that you create with Oracle BI Answers can be saved in the Oracle BI Presentation Catalog and integrated into any Oracle BI home page or dashboard. Results can be enhanced through charting, result layout, calculation, and drilldown features.

Dashboard Builder

- The Dashboard builder lets you add dashboard pages to a dashboard and edit the pages in a dashboard.
- You can add objects to and control the layout of dashboard pages.



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Dashboard Builder

- The Dashboard builder lets you add dashboard pages to a dashboard and edit the pages in a dashboard.
- You can add objects to and control the layout of dashboard pages.

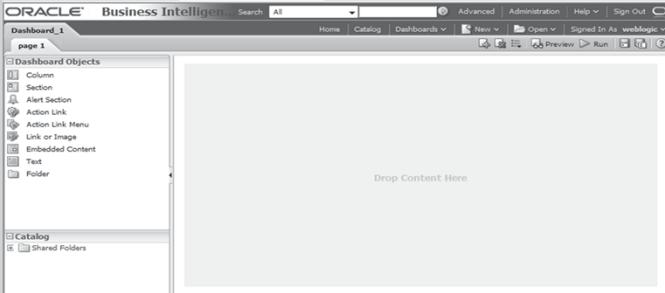
The screenshot shows the Oracle BI Dashboard Builder interface. On the left, there's a dashboard page with three charts: a bar chart for 'Target Completion Ratio' comparing 2008 and 2009, a horizontal bar chart for 'Ending' dates, and a bar chart for 'Revenue'. A context menu is open at the top right, with 'New' highlighted. A modal dialog box titled 'New Dashboard' is displayed, asking for a name ('Dashboard_1'), description ('Sample Dashboard-1'), and location ('/Shared Folders/Sample Lib/Dashboards'). The 'OK' button is visible at the bottom of the dialog. The footer of the interface includes the date 'June 22, 2015', a 'Proprietary and Confidential' notice, and a page number '7'.

Analyses that you create with Oracle BI Answers can be saved in the Oracle BI Presentation Catalog and integrated into any Oracle BI home page or dashboard. Results can be enhanced through charting, result layout, calculation, and drilldown features.

Dashboard Builder

➤ **Dashboard builder lets you -**

- Add and edit dashboard pages
- Add objects to a dashboard
- Control the layout of dashboard pages



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What Is the Dashboard Builder?

The Dashboard builder lets you add dashboard pages to a dashboard and edit the pages in a dashboard. You can add objects to and control the layout of dashboard pages.

Pages contain the columns and sections that hold the content of a dashboard. Every dashboard has at least one page, which can be empty. Dashboard pages are identified by tabs across the top of the dashboard. Multiple pages are used to organize content.

For example, you might have one page to store results from analyses that you refer to every day, another that contains links to the Web sites of your suppliers, and one that links to your corporate intranet.

The objects that you can add to a dashboard page include:

- Dashboard objects — Items that are used only in a dashboard. Examples of dashboard objects are sections to hold content, action links, and embedded content that is displayed in a frame in a dashboard. See Table E-2, "List of Dashboard Objects".

- Catalog objects — Objects that you or someone else has saved to the Oracle BI Presentation Catalog (for example, analyses, prompts, and so on) and for which you have the appropriate permissions. In a dashboard, the results of an analysis can be shown in various views, such as a table, graph, and gauge. (The results of an analysis are the output that is returned from the Oracle BI Server that matches the analysis criteria.) Users can examine and analyze results, save or print them, or export them to a spreadsheet.

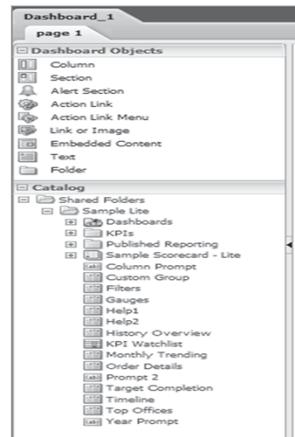
What Controls the Look of a Dashboard?

The look of a dashboard, such as background colors and the size of text, is controlled by:

- Skins — Skins control the way the Oracle BI EE interface is displayed, such as background colors, corporate logos, and the style sheets to use. Skins can be automatically assigned to users when they log on. Administrators can customize the default skin and create new skins.
- Styles — Styles control how dashboards and results are formatted for display, such as the color of text and links, the font and size of text, the borders in tables, the colors and attributes of graphs, and so on. Styles are organized into folders that contain Cascading Style Sheets (files with a .css extension), images, and graph templates. Administrators can customize some style sheets and create new style sheets. Users can override some elements in style sheets, such as table borders and text size, when formatting results in the Results tab.
- Cosmetic formatting — Cosmetic formatting affects the visual appearance of results and dashboards. You can apply it to results, columns, and sections.

Dashboard Builder

- Dashboard builder lets you -
 - Add and edit dashboard pages
 - Add objects to a dashboard
 - Control the layout of dashboard pages
- Pages contain the columns and sections that hold the content of a dashboard. Every dashboard has at least one page, which can be empty
- Dashboard pages are identified by tabs across the top of the dashboard
- The objects that you can add to a dashboard page include:
 - Dashboard objects
 - Catalog objects



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Analyses that you create with Oracle BI Answers can be saved in the Oracle BI Presentation Catalog and integrated into any Oracle BI home page or dashboard. Results can be enhanced through charting, result layout, calculation, and drilldown features.

Dashboard Builder / List of Dashboard Objects

Dashboard Object	Description
Column	Used to align content on a dashboard. (Sections within columns hold the actual content.) You can create as many columns on a dashboard page as you need, and you can place columns on a dashboard horizontally or vertically. Note that the columns used in the Dashboard builder are not related to the columns used in the Analysis editor.
Section	Used within columns to hold the content, such as action links, analyses, and so on. You can drag and drop as many sections as you require for a column.
Alert Section	Used to add a section in which to display Alerts from agents, if any. On users' My Dashboard, an Alert section is added automatically to the first page, if you do not manually place one there. You cannot disable the appearance of an Alert section on the first page of users' My Dashboard. You can add an Alert section to an additional dashboard page so that section is then displayed on both dashboard pages.
Action Link	Used to add an action link. An action link is a link that you embed in an analysis, dashboard page, or KPI that, when clicked, runs an associated action. For more information, see Chapter 10, "Working with Actions."
Action Link Menu	Used to add an action link menu. An action link menu let users choose, from a list of action links, the right action to be executed. For more information, see Chapter 10, "Working with Actions." Tip: If you add an action link to an action link menu and later decide that you do not want the link to be displayed in the menu, you can simply drag and drop it elsewhere on the page.

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Analyses that you create with Oracle BI Answers can be saved in the Oracle BI Presentation Catalog and integrated into any Oracle BI home page or dashboard. Results can be enhanced through charting, result layout, calculation, and drilldown features.

Dashboard Builder / List of Dashboard Objects

➤ List of Dashboard Objects

Dashboard Object	Description
Link or Image	Used to add text links and image links and specify what should happen when clicked. You can also add an image or text only, without any links. You can also add an image or text only, without any links.
Embedded Content	Used to add embedded content. Embedded content is any content that is displayed within a window (called a frame) inside the dashboard, as opposed to content that is accessed by clicking a link. Content that you might want to embed includes analyses, Excel charts, documents, Web sites, tickers from Web sites, and so on. When you embed content into a dashboard, the required HTML is automatically added to the page. This provides access to current results. Analyses are embedded by default. Embedding an analysis in a dashboard causes it to execute automatically and to display the results within the dashboard. This provides access to current results. <small>Note: Some third-party Web sites, because of the way they have been created, cannot be embedded within another Web page. If you see unexpected results when viewing an embedded Web site, then you might need to click the browser's Back button until an Oracle Business Intelligence screen reappears, or close and then reopen the browser. Then, remove the embedded Web site from the dashboard.</small>
Text	Used to add plain text or, if allowed at your organization, HTML. See the administrator to find out if adding HTML is allowed at your organization. To add embedded content, which is content that is displayed in a window within the browser, then use the Embedded Content object instead. Then, using the Embedded Content feature, specify the name and location of the target, and the required HTML is wrapped around the target for you.
Folder	Used to add a view of a Catalog folder and its contents. For example, you might add a folder that contains a collection of saved analyses that you run frequently. Then from the dashboard, you can open the folder, navigate to a saved request, and click it to run it.

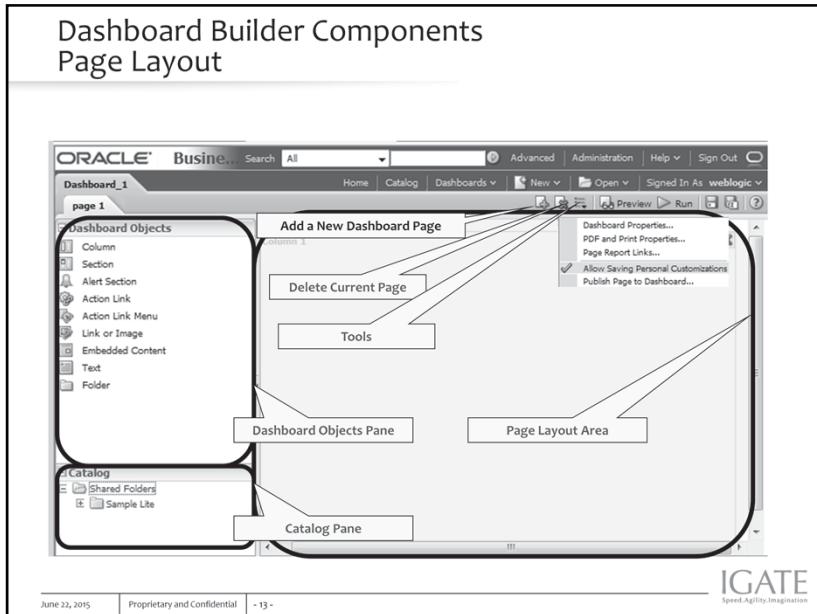
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Analyses that you create with Oracle BI Answers can be saved in the Oracle BI Presentation Catalog and integrated into any Oracle BI home page or dashboard. Results can be enhanced through charting, result layout, calculation, and drilldown features.



Components

Page Tabs

Use the tabs across the top of the editor to select the dashboard page to edit.

Dashboard Objects

Use the "Dashboard Objects pane" to select the objects to include on a dashboard page and drag and drop them to the Page Layout area.

Catalog

Use the "Catalog pane" to select objects from the Oracle BI Presentation Catalog to include on a dashboard page and drag and drop them to the Page Layout area. This adds a shortcut to the content as saved in the catalog. If the content changes, then the change is reflected on the dashboard page.

To locate the content, you can browse by either the catalog folder it is stored in, or by

the dashboard on which it is located.

Page Layout

Use "Page Layout area" to layout and place the content (that is, objects from the Dashboard Objects pane and the Catalog pane) to include on a dashboard.

Toolbar

The toolbar contains the following buttons:

- Add Dashboard Page — Use this button to display the "Add Dashboard Page dialog", where you create a new page in this dashboard. The page is displayed in a new tab in the Dashboard builder.

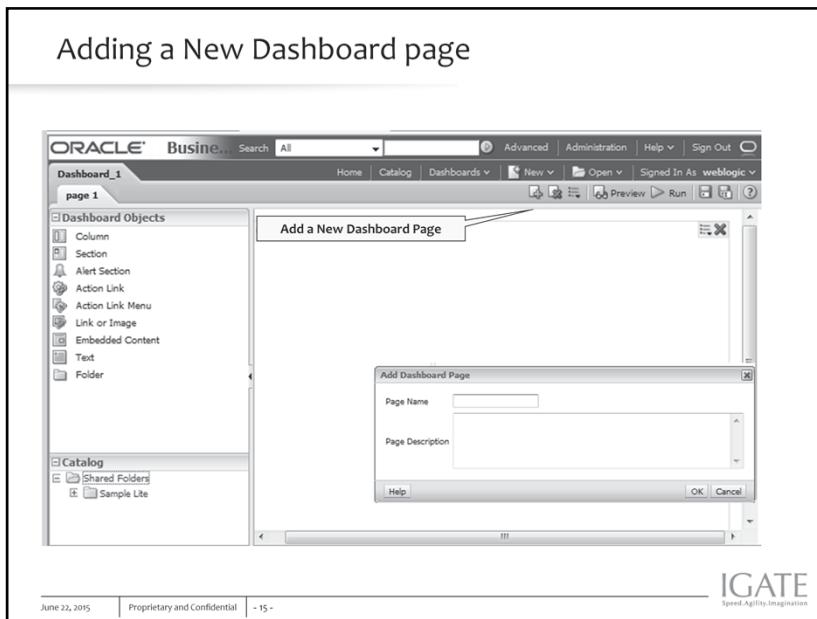
- Delete Current Page — Use this button to delete the current dashboard page.

- Tools — Use this button to display a menu with the following options.

- Dashboard Properties — Use this option to display the "Dashboard Properties dialog", where you specify properties of the dashboard and of dashboard pages.

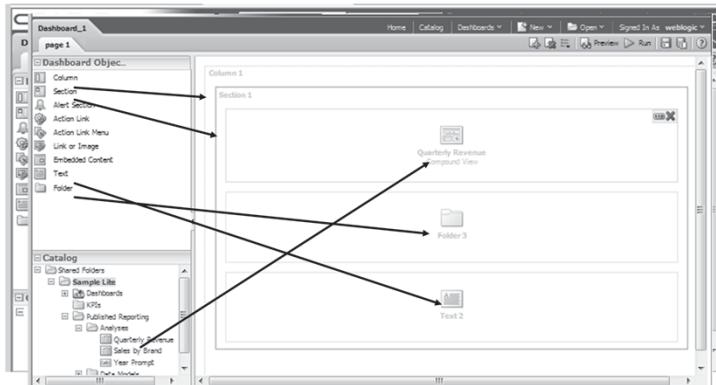
- Print and PDF Properties — Use this option to display the "Print Options dialog", where you specify page settings and header and footer content for the PDF output.

- **Page Report Links** — Use this option to display the "Report Links dialog", where you specify the links to apply to all analyses in the dashboard page, unless customized settings have been specified for particular analyses.
- **Prompts Buttons on Current Page** — Use this option to specify whether to include or exclude the prompt's **Apply** and **Reset** buttons on the dashboard page at runtime. This setting applies to the dashboard page and overrides the **Apply** and **Reset** button settings for the prompt definition and dashboard properties unless the **Prompts Apply Button** and **Prompts Reset Button** fields on the "Dashboard Properties dialog" are set to Use Page Settings.
Note the following options, which are available for **Apply** buttons and **Reset** buttons:
 - * **Use Prompt Setting** — Choose this option to use the buttons as defined in the prompt definition. These settings were specified in the "Prompt editor".
 - * **Show All Buttons** — Choose this option to show the buttons for the prompts. This setting overrides the prompt definition button settings or dashboard properties button settings unless the **Prompts Apply Button** and **Prompts Reset Button** fields on the "Dashboard Properties dialog" are set to Use Page Settings.
 - * **Hide All Buttons** — Choose this option to hide the buttons for the prompts. This setting override the prompt definition button settings or dashboard properties button settings unless the **Prompts Apply Button** and **Prompts Reset Button** fields on the "Dashboard Properties dialog" are set to Use Page Settings.
- **Allow Saving Personal Customizations** — Use this option to specify whether users can save personal customizations. For more information on allowing the saving of personal customizations, see "Controlling Access to Saved Customization Options in Dashboards" in *Oracle Fusion Middleware Security Guide for Oracle Business Intelligence Enterprise Edition*.
- **Publish Page to Dashboard** — Use this option to display the "Publish Page to Dashboard dialog", where you specify the dashboard to which you want to publish the current dashboard page. See "Publishing Dashboard Pages".
 - **Preview** — Use this button to view how a dashboard page is displayed to an end user. This is helpful to see what the page looks like before you save the content.
 - **Run** — Use this button to exit the Dashboard builder and return to the dashboard in untimed.
 - **Save** — Use this button to save your changes to the dashboard.
 - **Save Dashboard As** — Use this button to save the dashboard by another name.



Adding a Dashboard Objects

- To Add the objects to include on the page. To add an object, select it from the "Dashboard Objects pane" or the "Catalog pane", and then drag and drop the object to the "Page Layout area".



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View Results in DashboardInsert screenshot

The screenshot shows the Oracle BI Interactive Dashboards interface. On the left, there's a sidebar with a tree view of 'Dashboard Objects' and a 'Catalog'. The 'Dashboard Objects' tree includes 'Section', 'Text', and 'Folder'. The 'Catalog' tree includes 'Shared Folders' with 'Sample List' and 'Published Reporting' sections, which further contain items like 'Quarterly Revenue', 'Sets by Brand', and 'Year Prompt'. In the main workspace, there's a 'Section 1' panel containing a 'Quarterly Revenue Compound View' icon, a 'Folder 3' icon, and a 'Text 2' icon. A red box highlights the 'Run' button in the top right corner of the main window. Arrows from the sidebar trees point to their respective icons in the workspace.

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Dashboard Prompts

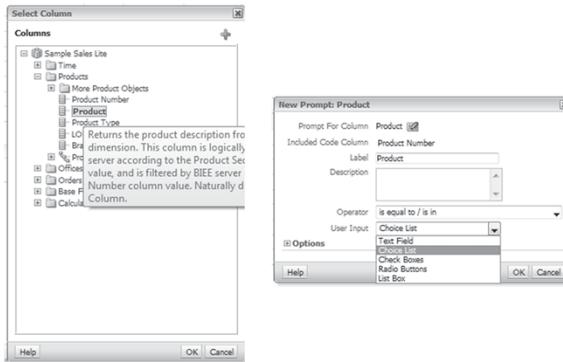
- A dashboard prompt is a special kind of filter that filters analysis embedded in a dashboard.
- A dashboard prompt filters embedded analysis that contain the same columns as the filter.
- It can filter all embedded Analysis in a dashboard, or embedded Analysis on the same dashboard page.

Creating a Dashboard Prompt

➤ On the global header, click on New, dashboard prompt

The screenshot shows the Oracle BI Interactive Dashboards interface. At the top, there's a global header with a search bar, user information, and navigation links like 'Home', 'Catalog', 'Dashboards', and 'New'. A dropdown menu is open over the 'New' button, showing options under 'Analysis and Interactive Reporting': 'Analysis', 'Dashboard', 'Filter', and 'Dashboard Prompt'. The 'Dashboard Prompt' option is highlighted with a red box. Below this, another dropdown menu is open over a 'Report' link, showing 'Report Job', 'Data Model', and 'Style Template'. The main workspace shows a 'Dashboard' page with a title 'Dashboard' and a 'Header' section containing 'Header' and 'Footer'. To the right, a 'Select Columns' dialog box is open, listing various columns from a source like 'Sales Order Line'. The bottom of the screen displays a footer with the date 'June 22, 2015', the text 'Proprietary and Confidential', and a page number '- 19 -'. The IGATE logo is visible in the bottom right corner.

Creating a Dashboard Prompt



Embedding prompt on dashboard page

The screenshot shows a dashboard page titled "Dashboard_1" with "page 1". The left sidebar lists "Dashboard Objects" such as Column, Section, Alert Section, Action Link, Action Link Menu, Link, Image, Embedded Content, Text, and Folder. Under "Catalog", there are "Shared Folders". The main area shows a "Section 1" with a "Column 1". Inside the column, there is a "Dashboard Prompt" object and an "Analysis" object. Arrows indicate connections from the "Dashboard Prompt" to the "Analysis" object, and from the "Analysis" object to a "Text" object labeled "Text 1". There is also a "Folder 1" object in the section.

Configuring Analysis for dashboard prompt

The screenshot shows the Oracle BI Interactive Dashboard interface. At the top, there are three tabs: 'Products', 'Base Facts', and 'Time'. Under 'Products', columns 'Product' and 'Product Type' are selected. Under 'Base Facts', columns 'Billed Quantity' and 'Revenue' are selected. Under 'Time', column 'Per Name Year' is selected.

In the 'Filters' section, a note says: "Add filters to the analysis choice by clicking on Filter option for the specific column in the Selected Columns pane". A specific filter configuration is highlighted with a black box:

Product is prompted

An 'Edit Filter' dialog box is open, showing the configuration for this filter:

Column	Product
Operator	is prompted

Creating a Dashboard Prompt

The screenshot shows a dashboard titled "Dashboard_1" with a page number "page 1". At the top, there is a search bar labeled "Product" with a dropdown menu showing "Vx6 Flip Phone" selected. Below the search bar is a "Dashboard Prompt" button. The main area displays a table of products from 2009 to 2010. The table has columns for Product, 2009 Billed Quantity, 2009 Revenue, 2010 Billed Quantity, and 2010 Revenue. The table lists various mobile phones and accessories.

Product	2009 Billed Quantity	2009 Revenue	2010 Billed Quantity	2010 Revenue
Vx6 Flip Phone	112,742	14471	156,850	15284
CompCell RX3	57,256	7,204	76,511	6,407
Cell	102,482	11296	118,062	11789
Touch-Screen T5	76,029	9,896	88,383	10,112
KeyMax S-Phone	120,406	14,097	137,347	14,587
Ken-Mate S-Phone	125,403	13,039	143,130	13,454
SoundPod 4GB	42,077	5,377	59,886	5,505
MicroPod 60GB	40,098	5,469	71,456	5,269
Bluetooth Adapter	115,434	15,118	125,118	17,044
MP3 Speakers System	14728	1,011	12,830	102,436
MP3 Camera	7550	7550	11,222	16,932
MP3 Camera	13311	102,482	11,722	86,523
Portable Media Player	104,122	11,244	11,599	8,401
MP3 Player 2000	6509	6,676	7,269	5,165
Portable	10488	99,962	99,926	122,524
Game Station	6358	44,606	43,322	38,033
Homecoach 2000	5469	48,350	44,448	37,428
Plasma HD Television	8771	71,015	92,044	99,854
Tungsten E Plasma TV	6524	68,658	71,169	80,949
LCD 10X Standard	6610	64,136	9949	54,119
LCD HD Television	2608	24,236	2360	25,273
Install	2783	22,100	3242	35,787
Maintenance				4374

At the bottom left, there is a footer with the text "June 22, 2015 Proprietary and Confidential - 23 -". At the bottom right, there is a logo for "IGATE Speed.Agency.Imagination".

Creating a Dashboard Prompt

Select a product using dashboard prompt

The screenshot shows a dashboard interface. At the top, there is a dropdown menu labeled "Product: V5x Flip Phone" with a list of products including "V5x Flip Phone" (selected), "CompTel RX7", "Touch-Screen T1", "KeyMax S-Phone", "SoundX Nano 4C", "MicroPod 600Gb", and "Bluetooth Adapter". Below the dropdown is a table with columns "Quantity" and "Revenue". The table has three rows: 14728, 112,742; 14471, 156,850; and 3311, 102,482. A callout box points to the dropdown with the text "Select a product using dashboard prompt".

for_dashboard

Product: V5x Flip Phone Apply Reset

Product is equal to V5x Flip Phone

	2008	2009	2010		
Product	Product Type	Billed Quantity	Revenue	Billed Quantity	Revenue
V5x Flip Phone	Cell Phones	14728	112,742	14471	156,850
				15284	178,864

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Save Current Customization...

- This allows users to save and view dashboard pages in their current state with their most frequently used selectinos/choices for attributes such as filters, prompts, column sorts, drills in analyses, and section expansion and collapse.
- By saving customizations, users need not make these choices manually each time that they access the dashboard page.

The screenshot shows the Oracle Business Intelligence interface. A dashboard page titled "Dashboard_1" is displayed. The page contains a table analysis for the product "V5x Flip Phone" across the years 2008, 2009, and 2010. The table has columns for Product, Product Type, Billed Quantity, and Revenue. A context menu is open on the right side of the page, with the "Save Current Customization..." option highlighted. Other options in the menu include "Edit Dashboard", "Print", "Refresh", "Add To Briefing Book", "Create Bookmark Link", "Create Prompted Link", "Apply Saved Customization >", "Edit Saved Customizations...", and "Clear My Customization".

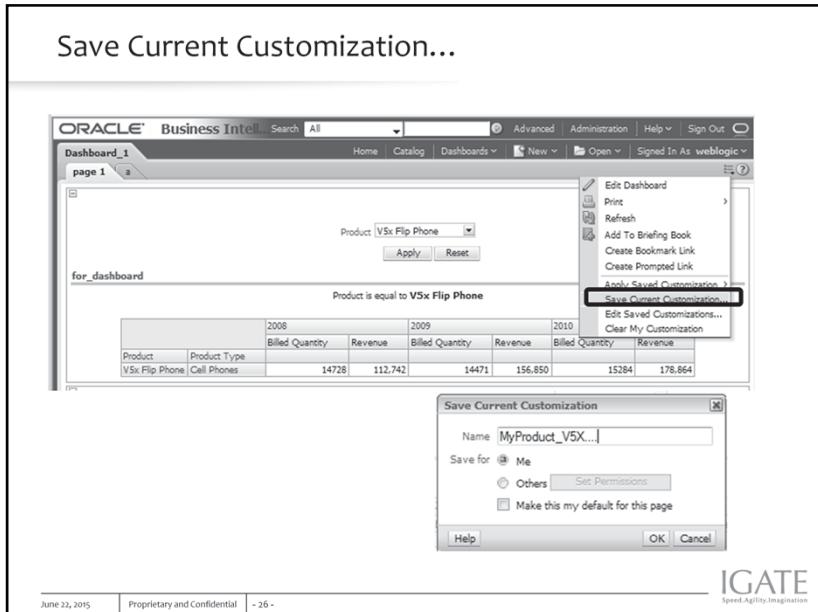
Product	Product Type	2008 Billed Quantity	2009 Billed Quantity	2010 Billed Quantity	2008 Revenue	2009 Revenue	2010 Revenue
V5x Flip Phone	Cell Phones	14728	112,742	14471	156,850	15284	178,864

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OBIEE11g – Save Current Customization

Save Current customizations allow users to save and view dashboard pages in their current state with their most frequently used choices for items such as filters, prompts, column sorts, drills in analyses, and section expansion and collapse. By saving customizations, users need not make these choices manually each time that they access the dashboard page.

There are two levels at which Save Current Customization can be created.

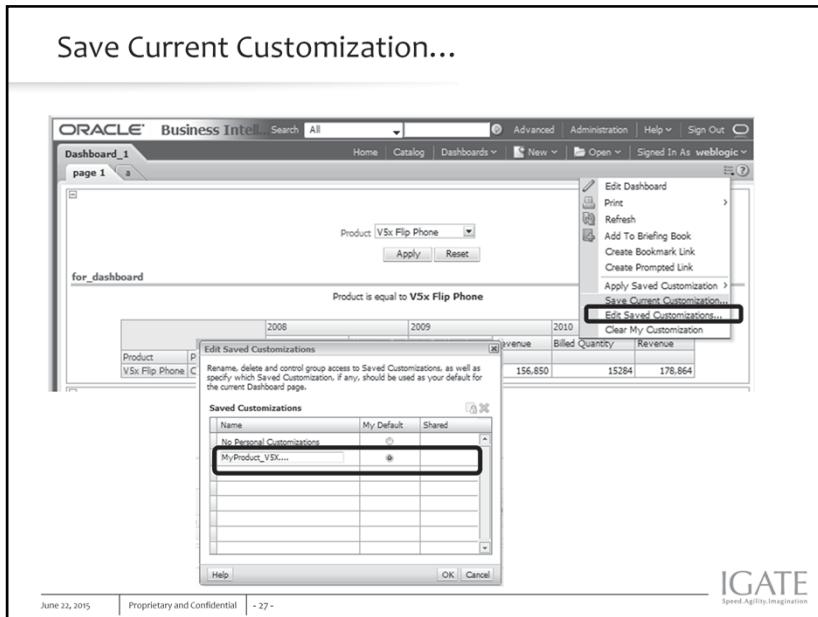
1. Create Save Current Customization for Individual.
 2. Create Save Current Customization for Group of Users
- Create Save Current Customization for Individual.

Check on “Me – Use this option to save the customization for your own personal use and If you would like to make this dashboard page as default with this customization, check on “Make this my default for this page”

Click OK.

Create Save Current Customization for Group of Users

Click on Page Options – Save Current Customization.

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Using Presentation Variables

- While creating a column prompt or variable prompt, you can create a presentation variable.
- It is associated with a specific column and takes on that column's value.
- It is part of a variable prompt, you define the values that the prompt can have as it is not associated with any specific column.

Using Presentation Variables

➤ Creating a Variable Prompt

The screenshot shows the Oracle BI Interactive Dashboards interface. At the top, there are buttons for 'New', 'Open', and 'Signed In As'. Below that is a navigation bar with categories: Analysis and Interactive Reporting (Analysis, Dashboard, Filter), Published Reporting (Report, Report Job, Data Model, Style Template, Sub Template), and a 'Dashboard Prompt' item which is highlighted with a red box and has a hand cursor over it. To the right, a 'Definition' dialog box is open with the title 'Add prompts for users when they run this analysis.' It contains a table with columns: Prompt Label, Type, Prompt For, Description, Column Prompt..., and Variable Prompt... (which is currently selected). There are also buttons for adding (+) and deleting (-) rows.

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Using Presentation Variables

➤ Creating a Variable Prompt

The image displays two overlapping dialog boxes titled "New Prompt".

Left Dialog (Foreground):

- Prompt for: **Presentation Variable** (dropdown menu)
- Label: **Product Type:**
- Description: **(empty)**
- User Input: **Text Field** (dropdown menu)
- Options** button
- Help** button

Right Dialog (Background):

- Prompt for: **Presentation Variable** (dropdown menu) set to **PV_ProductType**
- Label: **Product Type:**
- Description: **(empty)**
- User Input: **Choice List** (dropdown menu)
- Choice List Values: **All Column Values** (dropdown menu)
- Column: **(empty)** with **Select Column** button
- Options** button
- Help** button
- OK** and **Cancel** buttons

At the bottom of the main window:

- June 22, 2015
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Using Presentation Variables

➤ Creating a Variable Prompt

The screenshot shows the Oracle BI Interactive Dashboards interface. In the center, there are two overlapping dialog boxes titled "New Prompt". Both dialogs have the following fields:

- Prompt for: Presentation Variable ▾ PV_ProductType
- Label: Product Type:
- Description: (empty text area)
- User Input: Choice List ▾
- Choice List Values: All Column Values ▾
- Column: Product Type ▾ Select Column

Below these dialogs is an "Edit Column Formula" dialog with the following sections:

- Available Subject Areas:
 - Sample Sales Lite
 - Time
 - Products
 - Product Objects
 - Product Number
 - Product
 - Product Type
 - LOB
 - Brand
 - Offices
 - Orders
 - Base Facts
 - Calculated Facts
- Column Formula: ProductType
- Add Column

At the bottom left of the interface, there is a footer with the date "June 22, 2015" and the text "Proprietary and Confidential - 31 -". On the right side, there is a watermark for "IGATE Speed.Agency.Imagination".

Using Presentation Variables

The screenshot shows the Oracle BI Interactive Dashboards interface. At the top, there's a 'Save As' dialog box with a list of shared folders and a new item named 'Presentation_variable_prompt'. Below it is the main workspace titled 'Presentation_variable_prompt'.

Presentation_variable_prompt

Definition
Add prompts for users when they run this analysis.

Prompt Label	Type	Prompt For	Description	Required	New Column
Page 1	Page	Variable value	"Products", "Product Type"		

At the bottom of the workspace, there are navigation links: Home, Catalog, Dashboards, New, Open, Signed In As: weblogic, and a help icon. The footer contains the IGATE logo and the text: June 22, 2015 | Proprietary and Confidential | - 32 -

Using Presentation Variables

➤ Create an analysis

The screenshot shows the Oracle BI Interactive Dashboards interface. On the left, there's a sidebar with a 'Selected Columns' section containing 'Products' and 'Base Facts' (Revenue and Billed Quantity). Below this is a 'Create an analysis' section with a title 'Presentation_variable_analysis'. To the right, there's a 'Static Text' editor with a preview pane showing the report output. The preview pane contains a table with data and a static text message: 'This report is for Product Type = \$P{ProductType}'. The IGATE logo is visible in the bottom right corner.

Add static text to it

Compound Layout

Title: Presentation_variable_analysis

Static Text

Table

Product	Product Type	Revenue	Billed Quantity
V5x Flip Phone	Cell Phones	448,456	44483
CompCell RX3	Cell Phones	218,630	21169
Touch-Screen T5	Smart Phones	361,443	36396
KeyMax S-Phone	Smart Phones	274,950	29029
SoundX Nano 4Gb	Audio	354,140	41233

This report is for Product Type = \$P{ProductType}

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Using Presentation Variables

➤ Add a filter to Analysis for presentation variable PV_producttype

The screenshot shows the Oracle BI Interactive Dashboards interface. In the top right corner, there is a watermark for 'IGATE Speed.Agency.Imagination'. The main area displays two windows: a 'Selected Columns' pane and a 'New Filter' dialog.

Selected Columns: This pane lists columns from the 'Products' fact table: Product, Product Type, Revenue, and Total Quantity. A 'Filters' section is present but empty.

New Filter Dialog: This dialog is open for the 'Product Type' column. The 'Operator' dropdown is set to 'is equal to / is in'. The 'Value' dropdown is also set to 'PV_ProductType'. The 'Variable End' dropdown shows '(default)'. The 'Presentation Variable' dropdown is highlighted, showing options like 'SQL Expression', 'Session Variable', and 'Repository Variable'. The 'OK' button is visible at the bottom right of the dialog.

At the bottom of the interface, there is a footer bar with the text 'June 22, 2015 | Proprietary and Confidential | - 34 -'.

Using Presentation Variables

- Analysis looks like this -

The screenshot shows the Oracle BI Interactive Dashboard interface. At the top, there's a header bar with various icons. Below it, the main workspace is divided into two main sections: "Selected Columns" and "Filters".

Selected Columns: This section contains two groups of columns: "Products" and "Base Facts". Under "Products", there are "Product" and "Product Type". Under "Base Facts", there are "Revenue" and "Billed Quantity". Each column has a small icon and a dropdown arrow to its right.

Filters: This section shows a single filter entry: "Product Type is equal to / is in @{PV_ProductType}".

Below the workspace, there's a footer bar with the text "June 22, 2015 | Proprietary and Confidential | - 35 -".

Using Presentation Variables

- Add the prompt and analysis to the dashboard page

The screenshot shows a dashboard with two tabs: 'page 1' and 'Page 2'. The 'Page 2' tab is selected. On the left, there is a section titled 'Presentation_variable_analysis'. At the top right, there is a prompt for 'Product Type' with a dropdown menu set to 'Accessories', and buttons for 'Apply' and 'Reset'. Below the prompt, a message says 'This report is for Product Type = 103'. To the right of the message is a table with the following data:

Product	Product Type	Revenue	Billed Quantity
Bluetooth Adaptor	Accessories	180,172	17058
MP3 Speakers System	Accessories	187,480	15596

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OBIEE

Lesson 4: Introduction to Oracle BI Repository

June 22, 2015

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- 1 -

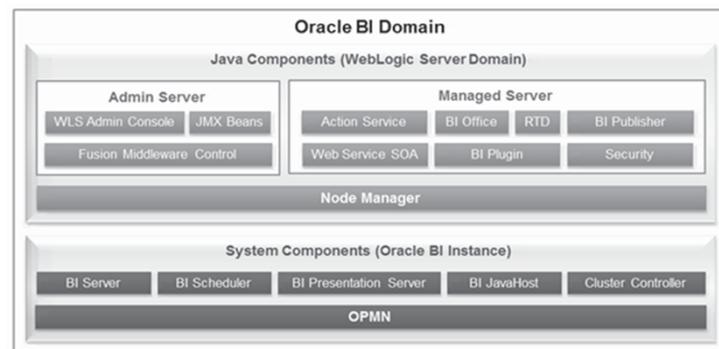


Overview

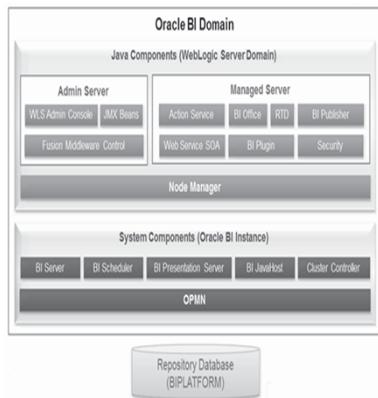
- **On completion of this lesson on you will be able to understand:**

- OBIEE repository features
- Physical Layer
- Business Model and Mapping Layer
- Presentation Layer

OBIEE 11g Architecture (Refer Introduction Presentation)



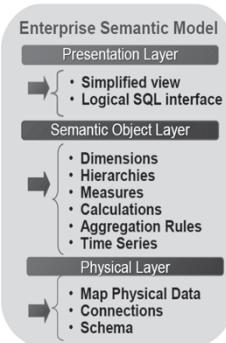
OBIEE 11g Architecture (Refer Introduction Presentation)



- Overall system is called an **Oracle BI Domain**
- Made up of Java and non-Java components
- Java components hosted in **WebLogic Server 11g**
- Managed using **OEM and WebLogic Admin Server**

Introduction to OBIEE Repository

- An OBIEE repository (RPD) is the file that contains all metadata of the BI Server and is managed through the administration tool.
- The main window of the Administration Tool is a graphical representation of the following three parts of a repository:
 - Physical Layer
 - Logical Layer
 - Presentation Layer



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The repository is the file that contains all metadata of the BI Server and is managed through the administration tool.

The main window of the Administration Tool is a graphical representation of the following three parts of a repository:

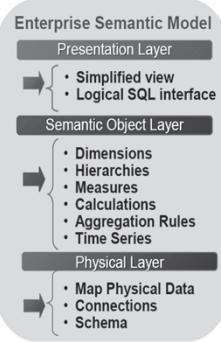
Physical layer: Represents the physical structure of the data sources to which the Oracle BI Server submits queries. This layer is displayed in the right pane of the Administration Tool.

Business Model and Mapping layer: Represents the logical structure of the information in the repository. The business models contain logical columns arranged in logical tables, logical joins, and dimensional hierarchy definitions. This layer also contains the mappings from the logical columns to the source data in the Physical layer. It is displayed in the middle pane of the Administration Tool.

Presentation layer: Represents the presentation structure of the repository. This layer allows you to present a view different from the Business Model and Mapping layer to users. It is displayed in the left pane of the Administration Tool.

Layers in the Oracle BI Repository

- **Physical Layer contains connections, physical tables**
 - Connections start as ODBC, switch to native (OCI etc)
 - Primary keys and foreign keys
- **Logical layer is where the data is integrated**
 - Logical fact tables, logical dimension tables
 - Dimensions
 - Calculations
 - Complex joins to define relationships
- **Presentation layer is where data is presented**
 - Can be a simple copy of the logical layer
 - Or can be made more personalized
 - Report centric

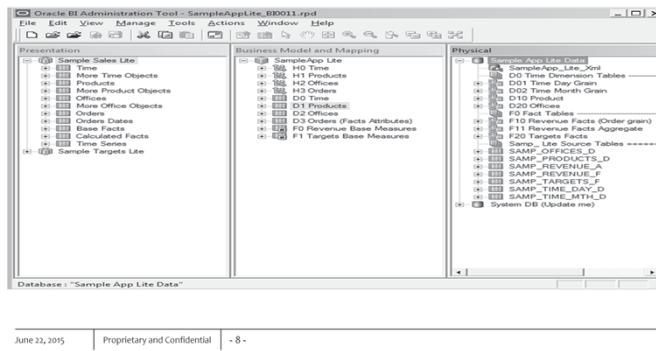


Query Traversing the Layers in an Oracle BI Repository

- OBIEE dashboard uses the presentation layer to create their analyses/dashboards
- Presentation objects are mapped to Logical columns in RPD
- Logical columns are mapped to physical columns in RPD
- Presentation layer communicates with Oracle BI server through RPD to generate the logical as well as physical query
- Query is generated based on the logical joins, aggregation and physical joins defined in the rpd
- Physical query output is returned to Presentation service to render the output on client browser

Oracle BI Administration Tool

- Exposes the Oracle BI Repository into three separate panes, called layers
 - Physical layer
 - Business Model and Mapping layer
 - Presentation layer



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Oracle BI Administration Tool Menus

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The File menu provides options to work with repositories, like Open and Save, as well as several server-related options like Check Out All that are only active when a repository is open in online mode. The File menu also provides a list of recently opened repositories.

Overview

- **File Menu Options:**
 - New Repository
 - Open
 - Close
 - Save
 - Save as
 - Change Password
 - Import Metadata
 - Check Global Consistency
 - Check Out All
 - Check In Changes

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- New Repository: Opens the Create New Repository Wizard and closes the currently open repository, if any.
- Open: Provides options for opening a repository in either offline or online mode.
- Close: Closes the currently open repository. If you have unsaved changes, you are prompted to save them.
- Save: Saves your latest changes
- Save as: Opens the Save As dialog so that you can save the repository to a different file. The new file remains open in the Administration Tool.
- Change Password: Lets you change the repository password for the currently open repository
- Check Global Consistency: Checks the repository for consistency and opens the Consistency Check Manager
- Check Out All: Checks out all repository objects. This option is only available in online mode
- Check In Changes: Checks in all repository objects. This option is only available in online mode

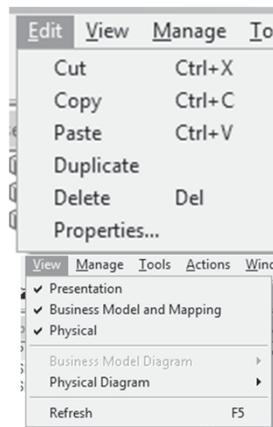
Oracle BI Administration Tool Menus

Edit Menu:

The Edit menu provides access to basic editing functions for repository objects: **Cut**, **Copy**, **Paste**, **Duplicate**, and **Delete**.

View Menu

- The View menu options let you hide or display the panes that show the three layers of the repository (Presentation, Business Model and Mapping, and Physical).
- You can also display the Business Model Diagram and Physical Diagram.

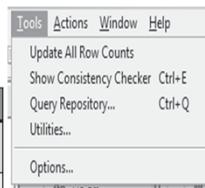


Oracle BI Administration Tool Menus

Tools Menu

The Tools menu options enable you to access the following functions:

Menu Option	Description
Update All Row Counts	Updates row counts in the Physical layer.
Show Consistency Checker	Opens the Consistency Check Manager.
Query Repository	Opens the Query Repository dialog.
Utilities	Opens the Utilities dialog, which lets you select from a list of Administration Tool utilities.
Options	Opens the Options dialog, which lets you customize Administration Tool display preferences and other options.



Open a Repository

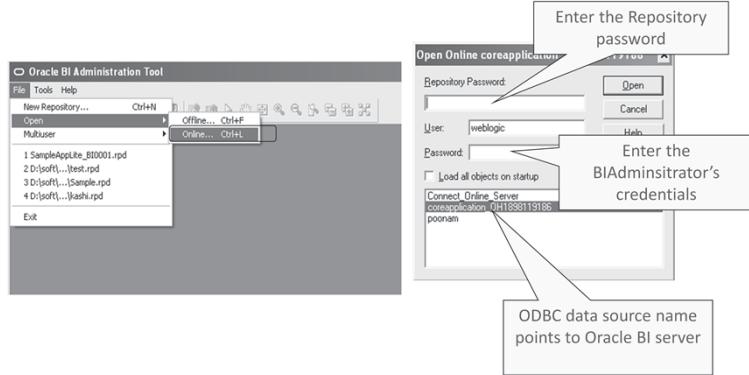
- **Select Start > Programs > Oracle Business Intelligence > Oracle BI Administration to open the Oracle BI Administration Tool**
- **Use the File > Open option to open the repository from BI Administration tool**
- **Do not double click the repository to open it**
- **Repository files now have a password**
 - Secures RPD file when there is no access to WebLogic Server
- **RPD files are now encrypted, and compressed**
- **RPD Password is all that is required to edit RPD offline;**
- **BIAdministrator application role required in addition to edit online**

Repository Modes

- **Rpd file can be opened in Offline mode**
 - Oracle BI Server is not started - repository is not loaded into server memory
- **Rpd file can be opened in Online mode**
 - Oracle BI Server is started - repository is loaded in server memory

Online Mode

- From the Administration Tool, select File > Open > Online

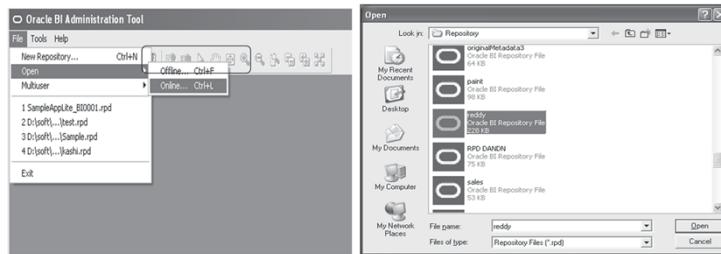


Online Mode (Contd...)

- **Online administration means:**
 - Server is started—repository is in server memory
 - Repository objects are checked-out and edited
 - Object changes are checked in and applied to the server
 - Changes are saved to the repository file
- **Users can still access the repository while changes are made**

Offline Mode

- From the Administration Tool, select File > Open > Offline
- Select the repository file and click Open



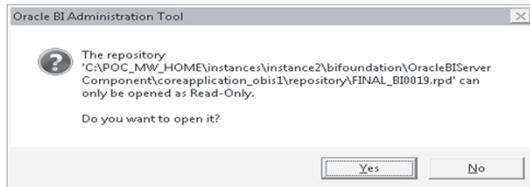
Offline Mode (Contd...)

➤ **Offline administration is used for most development**

- Oracle BI Server is not started - repository is not in server memory
- Repository is edited and saved
- Edited repository is loaded at next server startup

Offline Mode Caution

- If the repository is loaded into the Oracle BI Server memory and opened using the Offline menu option, the repository will open as Read-Only



Naming requirements of Objects

➤ Physical Layer

- Create a alias for each database object in physical layer
- Dimension table can be prefixed with Dim_TABLE_NAME
- Fact table can be prefixed with Fact_TABLE_NAME

➤ BMM Layer

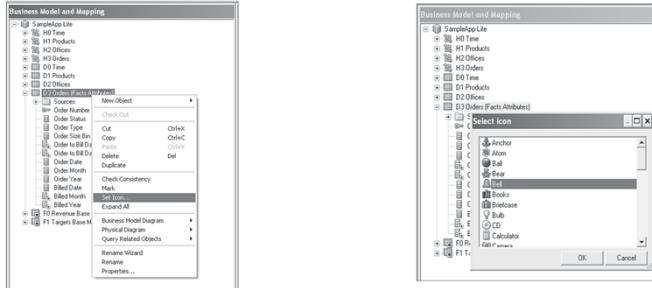
- Logical tables and Logical Column should have the logical names
- Try to avoid special characters like _ in logical column

➤ Presentation Layer

- Presentation Table and presentation column names should have a business meaning

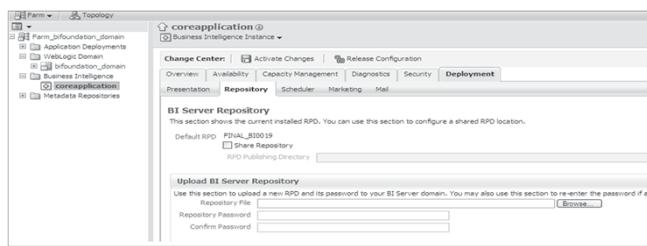
Changing Icons for Objects

- RPD developers can set the icons for the objects
- Pre-defined symbols are available
- It is useful in categorizing objects by using different symbols



NQSConfig.ini

- Is the Oracle BI configuration file
- Is read by the Oracle BI Server to determine the rpd to load into memory
- There can be multiple repositories, but only one is loaded for access to a particular Oracle BI Web Server instance
- File is edited using Enterprise manager
- Do not edit file manually



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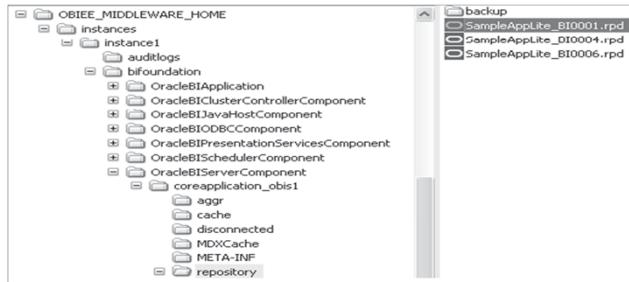
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Directory Structure

- Repository files reside in the ...\\OBIEE_MIDDLEWARE_HOME\\instances\\instance1\\bifoundation\\OracleBIServerComponent\\coreapplication_obis1\\repository directory, in which the Oracle BI software is installed



Creating a New Oracle BI Repository

- Create a Blank RPD
- Select Data sources
- Select Metadata types
- Select Metadata Objects
- Define physical keys and join conditions if they were not imported

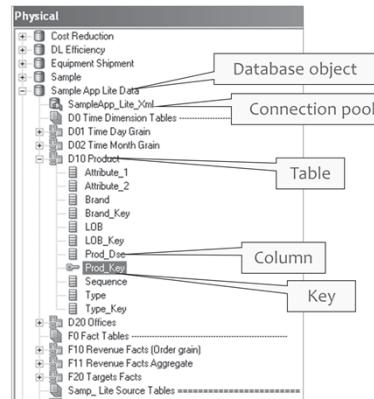
Physical Layer

- Is the metadata that describes the source of the analytical data
- Defines what the data is, how the data relates, and how to access the data
- Is used by the Oracle BI Server to generate SQL to access the business data to provide answers to business questions
- Contains objects representing the physical data sources to which the Oracle BI Server submits queries
- There can be multiple data sources



Physical Layer Objects

- **Expand a database object to display the objects it contains, such as:**
 - Connection Pool object—specifies the connection between the Oracle BI Server and a data source
 - Schema folder—contains the physical schemas of the tables and columns of a data source
- **Each object has a set of properties associated with it**



Data Sources Types

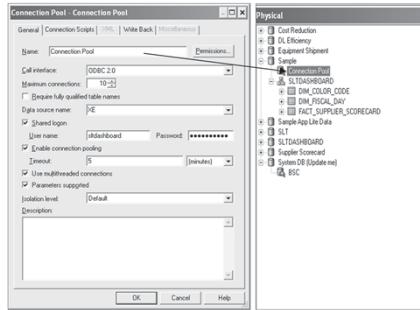
➤ **Oracle BI Server can access data stored in:**

- Normalized schema databases
- Star or snowflake schema databases
- Flat files
- Spreadsheets
- XML
 - And so on

Data Sources Types

- **Connectivity is established to the data source via:**

- An ODBC Data Source (generic) driver
- Native drivers for Oracle and DB2



- In the above case the database is Oracle, the name of the Data source is XE. The name of the Connection pool can be changed.

Connection pool properties

The connection pool is an object in the Physical layer that describes access to the data source.

It contains information about the connection between the Oracle BI Server and that data source.

For each data source, there is at least one corresponding connection pool.

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The Physical layer in the Administration Tool contains at least one connection pool for each database. When you create the physical layer by importing a schema for a data source, the connection pool is created automatically.

The connection pool contains data source name (DSN) information used to connect to a data source, the number of connections allowed, timeout information, and other connectivity-related administrative details.

Physical Table Types

Physical layer can contain any of the following objects

- **Physical table** – Specifies that the physical table object represents a data source table. This table type is used for both relational physical tables and multidimensional cube tables. Can directly be imported from database.
- **Stored Proc** – Specifies that the physical table object is a stored procedure. Requests for this table will call the stored procedure. Can directly be imported from database.
- **Select Statement** – Specifies that the physical table object is a SELECT statement. When you select this option, you type the SELECT statement in the text field, and you also need to manually create the table columns.

Aliases

- An alias table (alias) is a physical table that references a different physical table as its source (called the original table).
- Alias tables can be an important part of designing a Physical layer because they enable you to reuse an existing table more than once, without having to import it several times.
- Why Aliases ?
 - To set up multiple tables, each with different keys, names, or joins, when a single data source table needs to serve in different semantic roles. Setting up alias tables in this case is a way to avoid triangular or circular joins.
 - To include best practice naming conventions for physical table names.

An alias table (alias) is a physical table that references a different physical table as its source (called the original table). Alias tables can be an important part of designing a Physical layer because they enable you to reuse an existing table more than once, without having to import it several times.

There are two main reasons to create an alias table:

- To set up multiple tables, each with different keys, names, or joins, when a single data source table needs to serve in different semantic roles. Setting up alias tables in this case is a way to avoid triangular or circular joins.

For example, an order date and a shipping date in a fact table may both point to the same column in the time dimension data source table, but you should alias the dimension table so that each role is presented as a separately labeled alias table with a single join. These separate roles carry over into the business model, so that "Order Date" and "Ship Date" are part of two different logical dimensions. If a single logical query contains both columns, the physical query uses aliases in the SQL statement so that it can include both of them.

- To include best practice naming conventions for physical table names. For example, you can prefix the alias table name with the table type (such as fact, dimension, or bridge), and leave the original physical table names as-is. Some organizations alias all physical tables to enforce best practice naming conventions. In this case, all mappings and joins are based on the alias tables rather than the original tables.

Alias table names appear in physical SQL queries. Using alias tables to provide meaningful table names can make SQL queries referencing those tables easier to read.

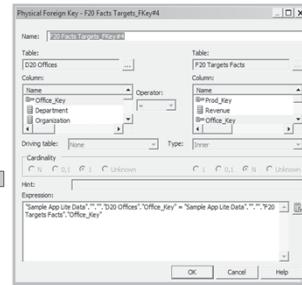
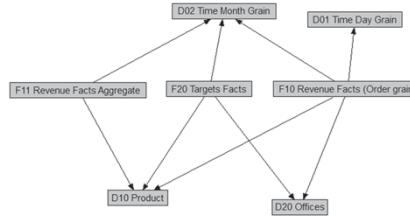
Key Columns

- A primary key and foreign key relationship defines a one-to-many relationship between two tables.
- Primary Key
 - Uniquely identifies a single row of data
 - Comprised of a column or set of columns
 - Set of columns represent a compound or composite key
- Foreign Key
 - A foreign key is a column or a set of columns in one table that references the primary key columns in another table

Physical Joins

- Joins can be viewed in the physical diagram
- Joins can be normal or complex joins

Normal Join



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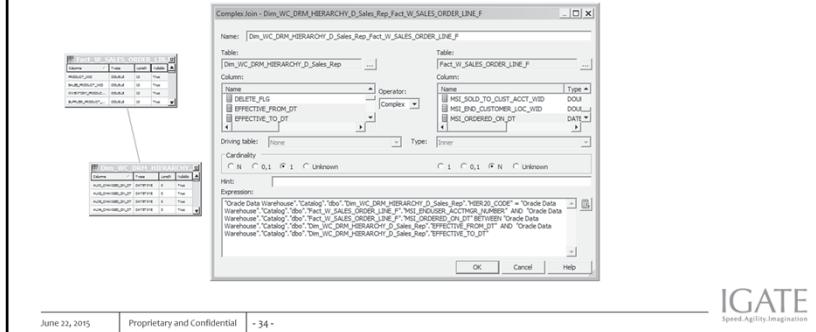
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Physical Joins

- Complex Join
 - Complex joins are joins over non foreign key and primary key columns
- Or
- Complex joins are joins that use an expression rather than key column relationships.



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Defining Physical Joins with the Physical Diagram : You can define foreign keys and complex joins between tables, whether or not the tables are in the same data source. When you use the Physical Diagram to create joins, the Administration Tool determines what type of join to create based on the selected object types and the join expression. If you do not want the Administration Tool to automatically determine what type of join to create, use the Joins manager to explicitly create the join.

To define a physical foreign key join or a complex join with the Physical Diagram:

1. In the Physical layer of the Administration Tool, select one or more tables and choose one of the Physical Diagram commands from the right-click menu.
2. Click the New Join button on the Administration Tool toolbar:
3. In the Physical Diagram, left-click the first table in the join (the table representing many in the one-to-many join) to select it.

4. Move the cursor to the table to which you want to join (the table representing one in the one-to-many join), and then left-click the second table to select it.

The Physical Foreign Key dialog appears. Although physical foreign key joins are the default join type, the object type might change to a complex join after you define the join and click OK, depending on the join information.

5. Select the joining columns from the left and the right tables. The SQL join conditions appear in the expression pane. The driving table option is shown in this dialog, but it is not available for selection because the Oracle BI Server implements driving tables only in the Business Model and Mapping layer. See "Specifying a Driving Table" for more information about driving tables.

6. For complex joins, you can optionally set the cardinality for each side of the join (for example, N, 0,1, 1, or Unknown).

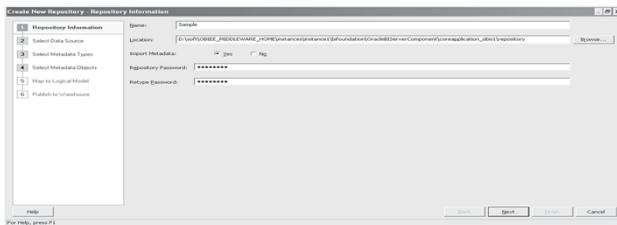
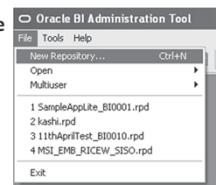
Note: To set the cardinality to unknown, you only need to select Unknown for one side of the join. For example, choosing unknown-to-1 is equivalent to unknown-to-unknown and appears as such the next time you open the dialog for this join.

7. If appropriate, specify a database hint.

9. Click OK to apply the selections.

Create Blank RPD

- A new RPD can be created from the Oracle BI Administration tool
- Select the location at which you want to save the rpd
- Set the Repository password used for encrypting objects



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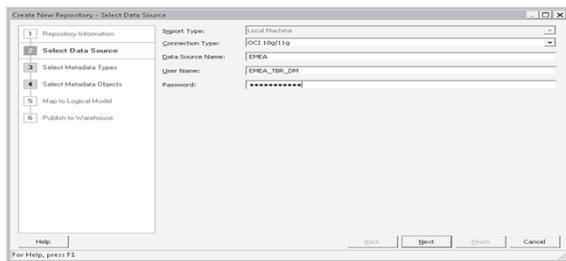
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Import Data Source Schemas

- Use the Oracle BI Administration Tool to import the data source schema
- Define entry for Data Sources
- Add the DSN entry in Oracle Middleware Oracle client
..|ORACLE_MW_HOME|Oracle_BI|network\admin



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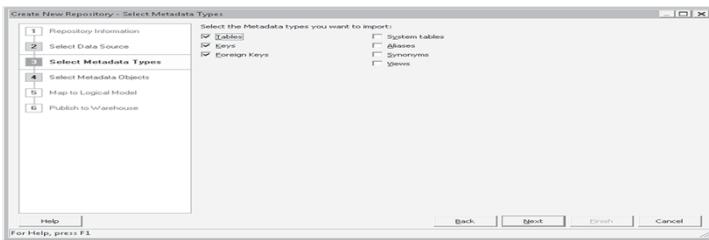
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Select Metadata Types

➤ Select the Database Object type



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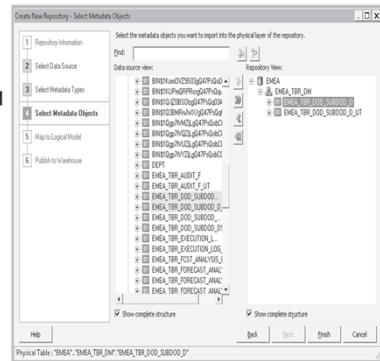
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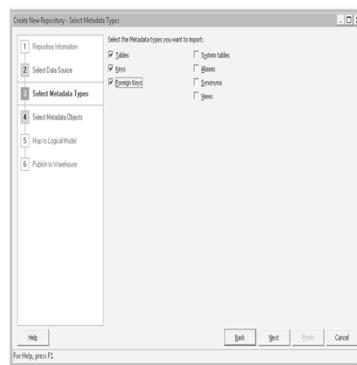
Select the Metadata to be imported

- Select the tables and columns needed to support the business model
- Limit to tables and columns needed to support the users' analytic requirements



Import Relationships

- Import primary key – reign key joins while importing Data source
- Primary Keys and foreign keys can be created in Administration tool alternatively



Define Physical Keys and Join Conditions

- The Administration Tool allows you to define physical keys and joins that were not imported automatically, in several different ways:
 - Define Primary Keys
 - Using the Physical Table > Keys tab
 - Define Joins and Foreign keys
 - Using the Physical Table Diagram
 - Using the Joins Manager

Define primary keys

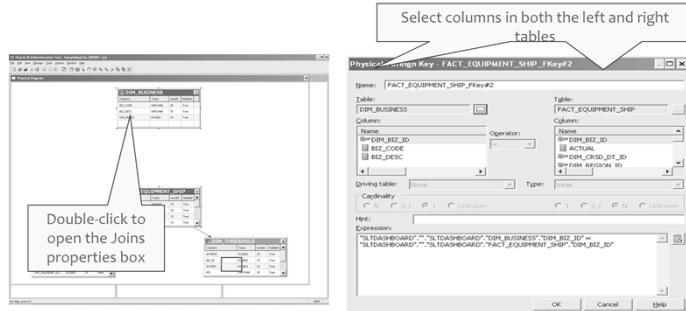
- Open the Table properties dialog box to define key column(s)
 - Right-click a table and select Properties
 - Define the Key name



Define Joins Using Physical Table Diagram

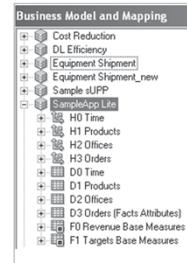
➤ Use the Physical Table Diagram editor to:

- View the table schema and joins



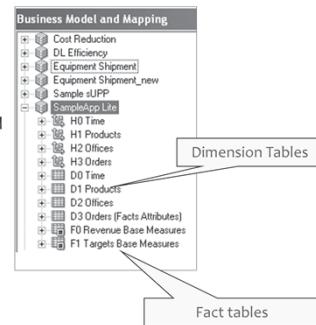
Business Model and Mapping (BMM) Layer

- Is the metadata that organizes physical sources into a dimensional business model
- Is the basis of the users' view of the data
- Is used by the Oracle BI Server to determine the data necessary to satisfy the user's request
- Is where the physical schemas are simplified and reorganized to form the basis of the users' view of the data



Business Model

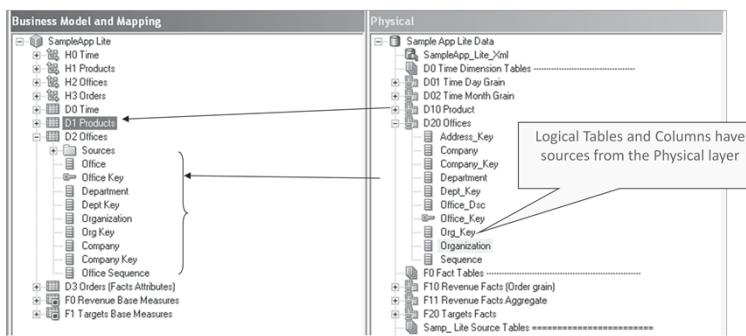
- Breaks down a business into several logical components
 - Dimensions are descriptive attributes, such as products and time periods
 - Facts are business measures, such as dollars and units sold



Business Model Objects

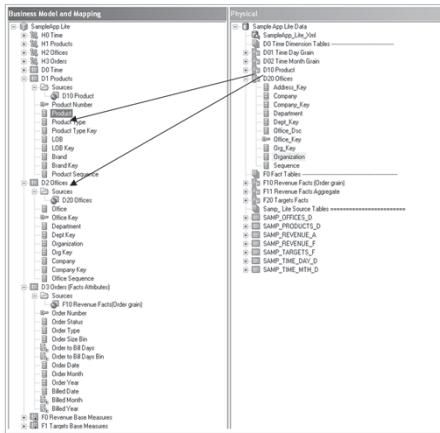
- **Expand the Business Model object to display the objects it contains**
 - Logical Table objects contain logical columns and have one or more data sources from the physical layer
 - Logical Column objects can have one or more table sources from the physical layer

Business Model Objects (Contd...)



Business Model Sources Objects

- The Sources folder is expanded to display the table and column sources from the Physical layer



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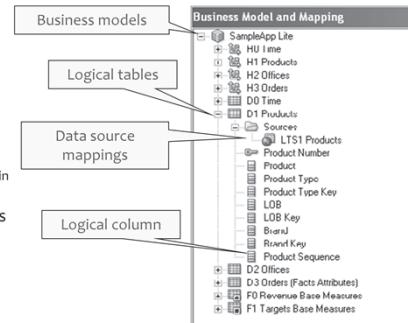
Business Models and Logical Tables

➤ Business Models

- Define subject areas
- Are the highest level in the BMM layer

➤ Logical Tables

- Define data source mappings
 - Allows multiple physical data sources in one logical table
- Have one or more logical columns



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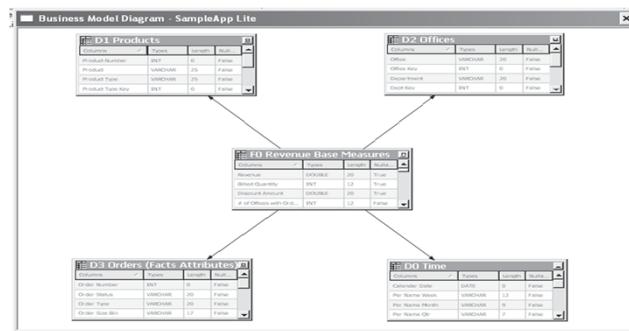
The tables in the BMM layer are called logical tables since there may not be a table with the same name in the physical layer.

After dragging the tables from the Physical layer into the BMM layer, the table names can be changed. The logical tables can have columns which are not present in the physical table.

Logical table schemas

- **Define logical table joins**
 - Required for a valid business model

Schema defines the relationships between the various objects of the business model



Logical table schemas

➤ Must be related via join links

- Logical joins help the server understand the relationships between various pieces of the business model
- Examining logical joins is an integral part of how the Oracle BI Server figures out how to construct the physical queries
- Logical joins help the server determine which tables are logical fact tables

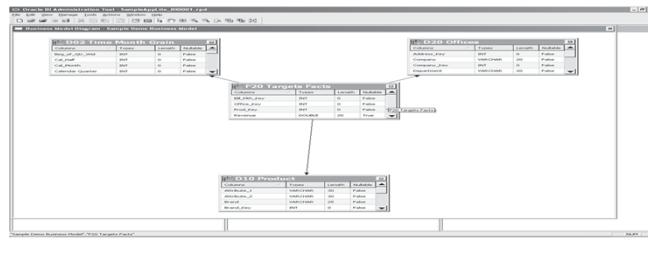
Logical Primary Keys

- Define joins between logical tables
- Consist of one or more logical columns
- Can be automatically defined if keys and joins were defined in the Physical layer



Logical Joins

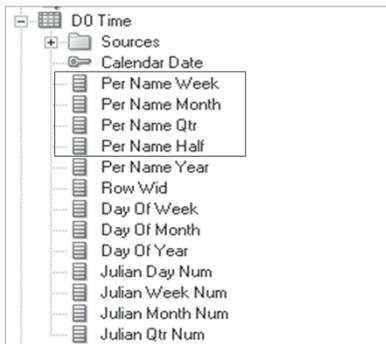
- Open the Business Model Diagram to define the relationships between the logical tables
 - OBIEE11g automatically creates the logical join ,if you have created physical joins between the tables
 - However any further editing of physical join does not reflect on the logical joins
 - Logical Joins can be created manually in a same way as of physical joins



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Logical Columns

- Represent the business view of the data
- A single logical column might map to many physical columns



Logical Dimensions Overview

- **Two types of Logical dimensions**
 - Level Based Hierarchy : Similar to Logical dimension of OBIEE 10g
 - Parent Child Hierarchy

Business Model and Mapping

- SampleApp_Lite
- H2 Offices
- H3 Orders
- D0 Time
- D1 New Object
 - Create Logical Dimension
 - Dimension with Level-Based Hierarchy...
 - Dimension with Parent-Child Hierarchy...
 - Check Out
 - Cut Ctrl+X
 - Copy Ctrl+C
 - Paste Ctrl+V
 - Delete Del
 - Duplicate
 - Check Consistency
 - Set Icon...
 - Expand All
- D2
- D3
- F0
- F1

Physical

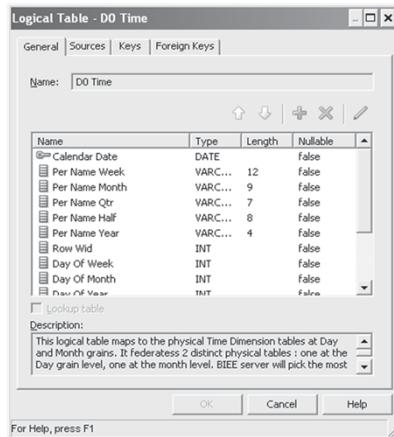
- SampleApp_Lite Data
 - D0 Time Dimension Tables
 - D01 Time Day Grain
 - D02 Time Month Grain
 - D03 Time Year Grain
 - D04 Time Week Grain
 - D05 Time Quarter Grain
 - D06 Time Half Year Grain
 - D07 Time Year Month Grain
 - D08 Time Year Week Grain
 - D09 Time Year Day Grain
 - D10 Time Year Month Day Grain
 - D11 Revenue Facts (Order grain)
 - F100 Revenue Facts - Aggregate
 - F11 Revenue Facts - Aggregate
 - SAMP_... Source Tables
 - SAMP_OFFICES_S
 - SAMP_ORDERS_S
 - SAMP_PRODUCTS_S
 - SAMP_REVENUE_A
 - SAMP_REVENUE_F
 - SAMP_TARGETS_F
 - SAMP_TIME_DAY_D
 - SAMP_TIME_MONTH_D
 - SAMP_TIME_YEAR_D

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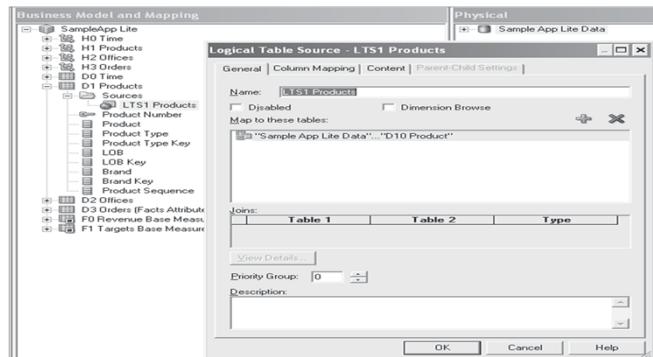
Logical table source

- Most of the columns are renamed in the BMM layer to have a more meaningful name for the column.
- The Column Mapping tab of the logical table source shows the relationship between physical and logical columns.



Logical table source

- Define the logical-to-physical table mappings
- Reduce complexity of the data model, allowing multiple physical data sources in one logical table

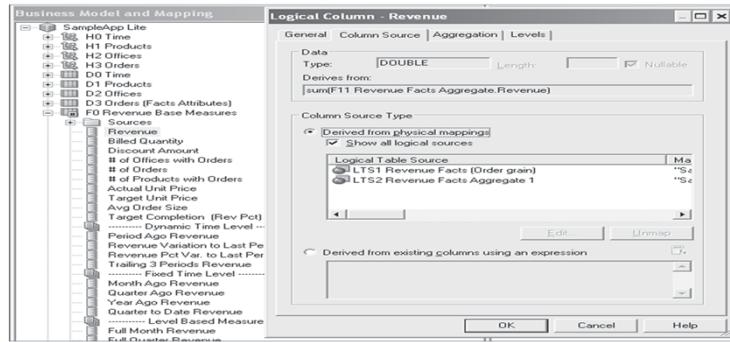


Logical table source is a set of sources for a given logical table.
They map to a physical object in the physical table.

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Measures

- Are calculations defining measurable quantities
- Are created on logical columns in the fact table
- Can be defined as default aggregations



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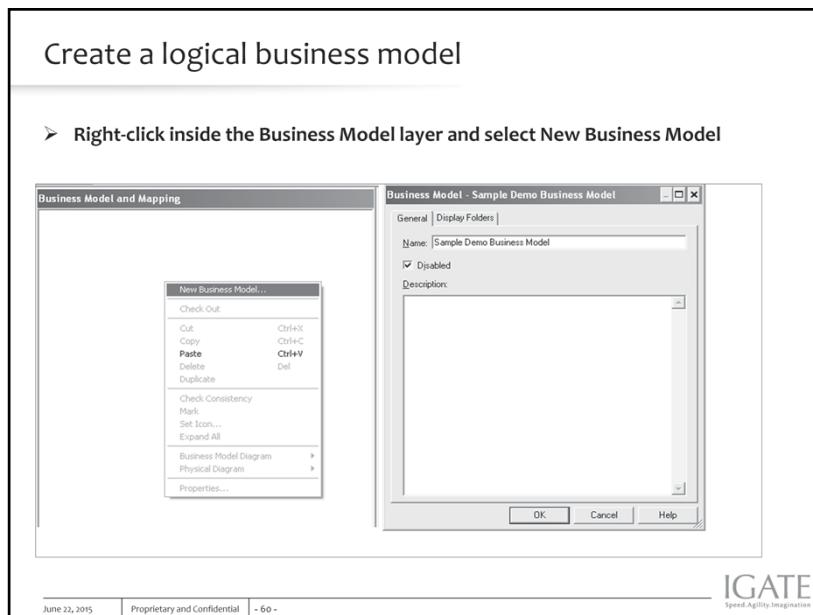
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Creating Business Models

- Create a logical business model
- Create logical tables
- Modify logical columns
- Create logical joins
- Define measures



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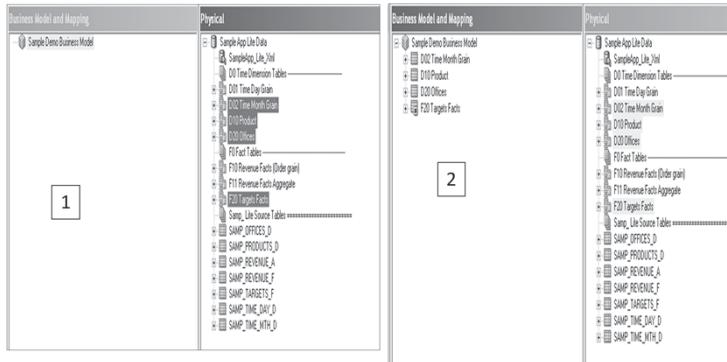
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Alternatively, the physical table objects are dragged from the Physical layer to the BMM layer and New Business Model is automatically created.

Create logical tables

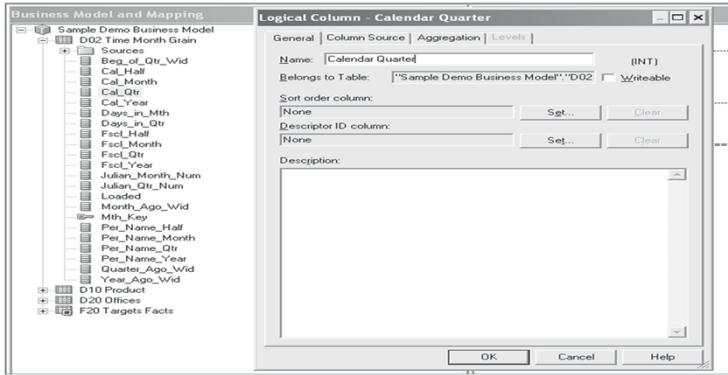
➤ Drag physical table objects into the business model



Modify Logical Tables

- Open the logical column properties box to modify its properties

- Consider renaming columns to make meaning clearer to users



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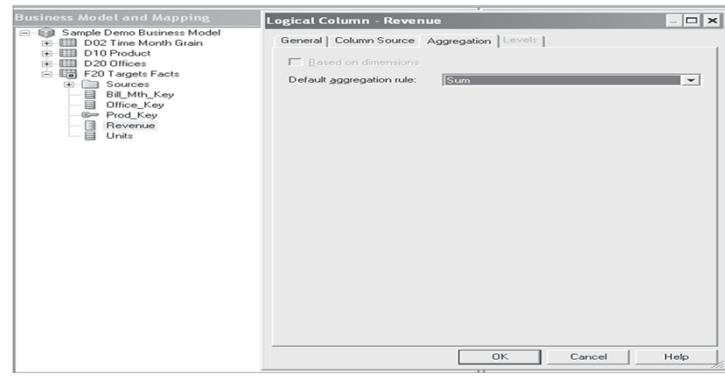
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Create Measures

- Right-click the logical column and select Properties > Aggregation



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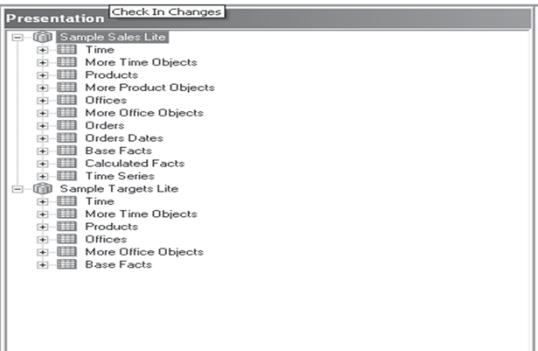
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Presentation Layer

- Contains Presentation Catalog objects that provide a customized view of a business model to users.
- Is the view of the data seen by users



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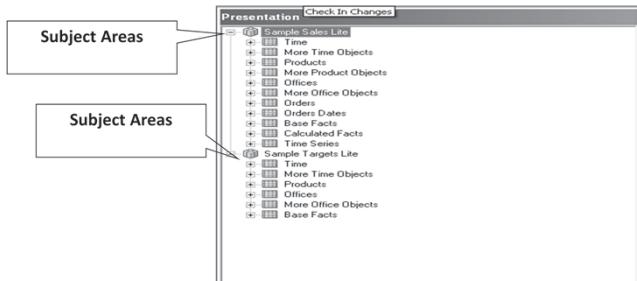
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Presentation Layer (Contd...)

- **Is the metadata that describes the users' view of the business model**
 - Simplifies the model and makes it easy for users to understand and query
 - Exposes only the data meaningful to the users
 - Organizes the data in a way that aligns with the way users think about the data
 - Renames data as necessary for the set of users

Subject Areas

- Is created using the Oracle BI Administration Tool
- Is the third layer built in the repository
- One RPD can have multiple subject area
- Can also be termed as Data mart
- One business model can map to multiple subject areas



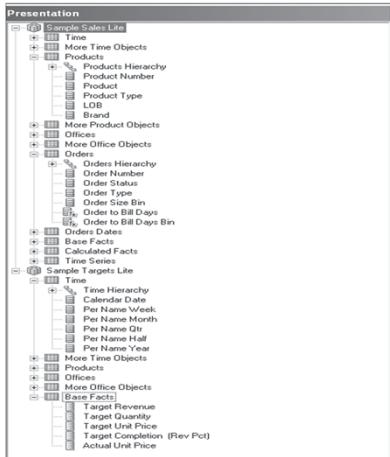
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Presentation Tables and Columns



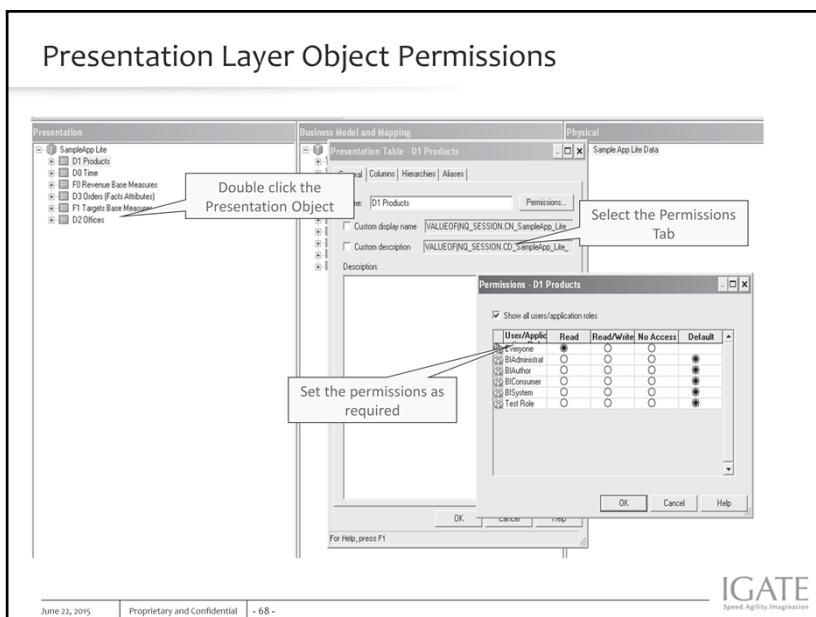
- Define the interface the user uses to query the data from the data sources
- Appear as folders and columns in Oracle BI Answers
- Refer to a subset of the logical tables and logical columns in the business model layer
- Use terminology that is meaningful to the user

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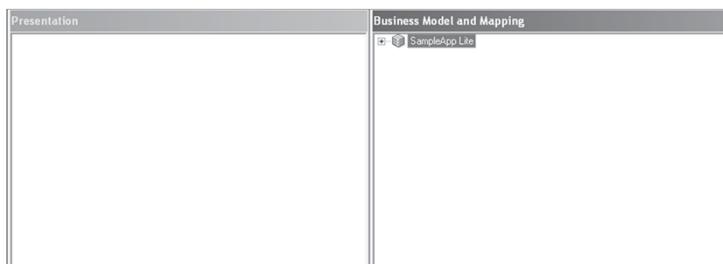


Steps to create a new presentation layer

- Create a new presentation catalog
- Customize the presentation catalog

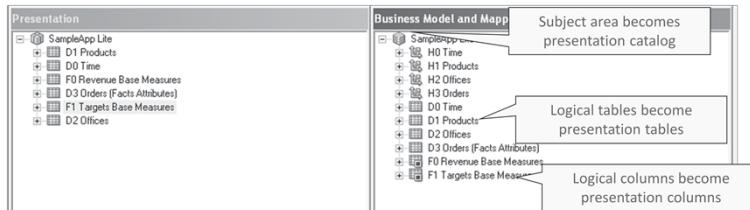
Create a new presentation catalog

- Drag and drop a business model from the Business Model layer to the Presentation layer



Create a new presentation catalog (Contd...)

- Corresponding presentation layer objects are automatically created for business model layer objects



Customize the Presentation Catalog

- **Organize and modify the presentation objects so that they make sense to the users**
 - Reorder tables and columns
 - Rename tables and columns
 - Remove columns that serve no business need

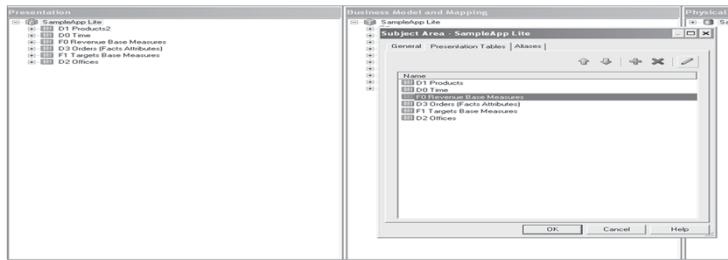
Reorder Tables

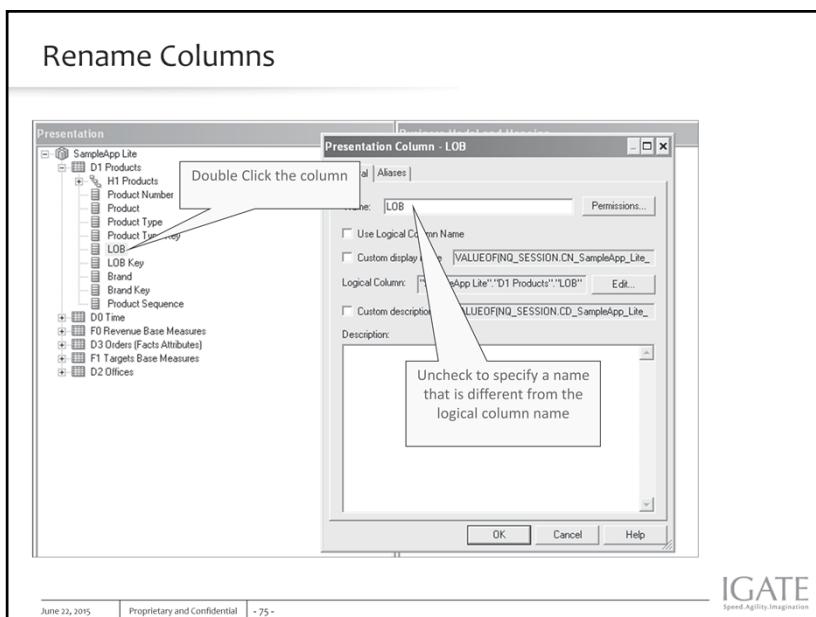
- Open the presentation catalog properties box and use the Up and Down buttons or drag and drop to reorder the tables



Rename Tables

- In the Subject Area properties box, use the Edit button to rename tables
- An alias is created automatically when the name of a presentation table is changed
 - Used to maintain compatibility with previously written queries





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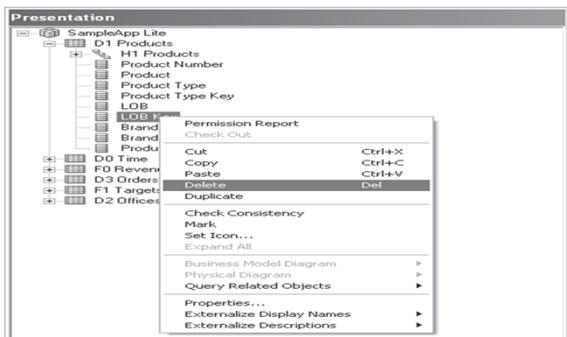
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Remove Columns

- Right-click and select delete to remove columns that are not needed
 - Remove keys that are used only for processing, unless they have an intrinsic meaning, such as date



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Variables

- The Variable Manager allows you to define variables. The Variable Manager dialog box has two panes. The left pane displays a tree that shows variables and initialization blocks, and the right pane displays details of the item you select in the left pane.
- There are two classes of variables:
 - Repository variables
 - Static
 - Dynamic
 - Session variables
 - System
 - Non System

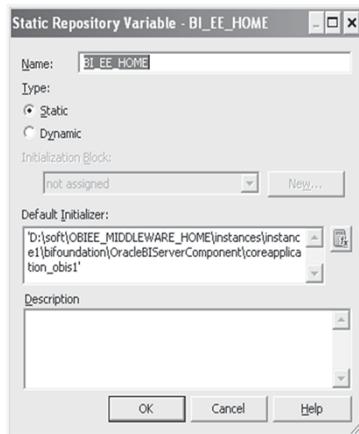
Understanding and Creating Repository Variables

- A repository variable has a single value at any point in time.
- Repository variables can be used instead of literals or constants in expression builders in the Administration Tool.
- The Oracle BI Server will substitute the value of the repository variable for the variable itself in the metadata



Static Repository Variables

- The value of a static repository value is initialized in the Variable dialog box.
- This value persists, and does not change until an Oracle BI Administrator decides to change it.



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Example

Suppose you want to create an expression to group times of day into different day segments. If Prime Time were one of those segments and corresponded to the hours between 5:00 PM and 10:00 PM, you could create a CASE statement like the following:

```
CASE WHEN "Hour" >= 17 AND "Hour" < 23 THEN 'Prime Time' WHEN... ELSE...END
where Hour is a logical column, perhaps mapped to a timestamp physical column
using the date-and-time Hour(<<timeExpr>>) function.
```

Rather than entering the numbers 17 and 23 into this expression as constants, you could use the Variable tab of the Variable dialog box to set up a static repository variable named prime_begin and initialize it to a value of 17, and create another variable named prime_end and initialize it to a value of 23.

Using Variables in Expression Builders

After created, variables are available for use in expression builders. In an expression builder, click on the Repository Variables folder in the left pane to display all repository variables (both static and dynamic) in the middle pane by name.

To use a repository variable in an expression, select it and double-click. The expression builder will paste it into the expression at the active cursor insertion point.

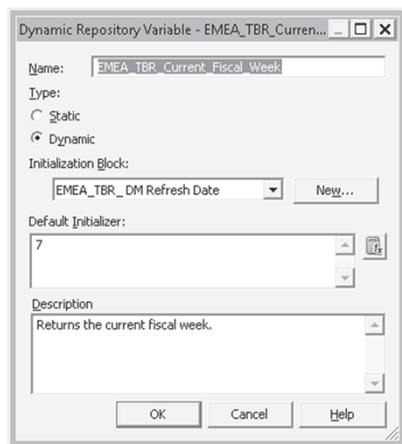
Variables should be used as arguments of the function VALUEOF(). This will happen automatically when you double-click on the variables to paste them into the expression.

For example, the following CASE statement is identical to the one explained in the preceding example except that variables have been substituted for the constants.

```
|  
CASE WHEN "Hour" >= VALUEOF("prime_begin") AND "Hour" <  
VALUEOF("prime_end") THEN 'Prime Time' WHEN ... ELSE...END
```

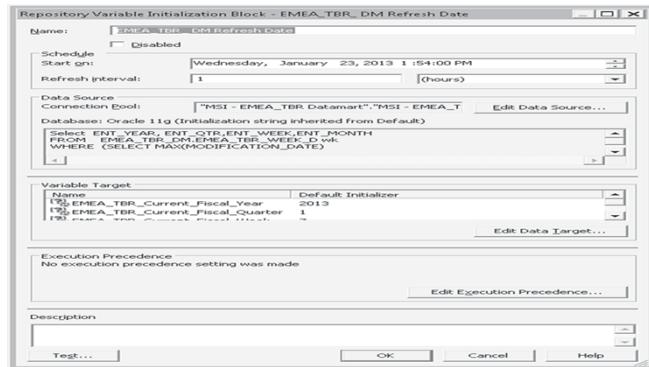
Dynamic Repository Variables

- You initialize dynamic repository variables in the same way as static variables, but the values are refreshed by data returned from queries.
- When defining a dynamic repository variable, you will create an initialization block or use a pre-existing one that contains a SQL query.



About Using Initialization Blocks With Variables

- Initialization blocks are used to initialize dynamic repository variables, system session variables, and nonsystem session variables.



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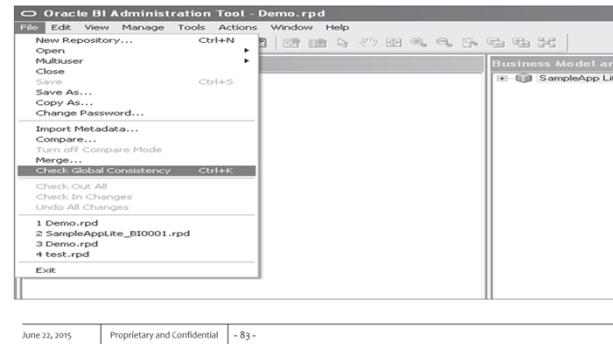
Understanding and Creating Session Variables

- Session variables are similar to dynamic repository variables in that they obtain their values from initialization blocks.
- Unlike dynamic repository variables, however, the initialization of session variables is not scheduled.
- When a user begins a session, the Oracle BI Server creates new instances of session variables and initializes them.

Unlike a repository variable, there are as many instances of a session variable as there are active sessions on the Oracle BI Server. Each instance of a session variable could be initialized to a different value.

Consistency Check

- Administration tool performs the consistent check utility to avoid any errors after deployment
- It shows the error message, warning for any violation of design practice
- Only consistent rpd's should be deployed to Oracle BI server



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Security Overview

- Row-level filters that are applied to data, either automatically by settings in the repository, or by developers by adding filters to reports
- Subject-area permissions and restrictions giving you access (or not) to whole sets of data
- Administering users and groups in the WebLogic Server LDAP Server, and mapping these through to Fusion Middleware application roles
- Roles are not created in Repository manually
- On BI server restart ,roles and users are synchronized from Enterprise manager

Repository Documentation

- The Repository Documentation utility documents the mapping from the presentation columns to the corresponding logical and physical columns.
- The documentation also includes conditional expressions associated with the columns.
- The documentation can be saved in comma separated (CSV) or tab delimited (TXT) format.

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The Repository Documentation utility allows you to extract Oracle BI metadata to a flat file so that it can be loaded into Excel and RDBMS.

You can query the resulting file to answer questions such as "If I delete physical column X, what logical columns will be affected?" or

"How many places in the business model refer to the physical table W_SRVREQ_F". Then you can establish dependency relationships among elements in the repository.

The Repository Documentation utility creates a comma-separated values file or a tab-separated values file that shows the connections between the presentation and physical layers in the current repository.

To run the Repository Documentation utility

From the Tools menu, choose Utilities.

In the Utilities dialog box, select Repository Documentation, and then click Execute.

In the Save As dialog box, choose the directory where you want to save the file.

Type a name for the file.

Choose a type of file and an Encoding value and click Save

Managing Query Execution Privileges

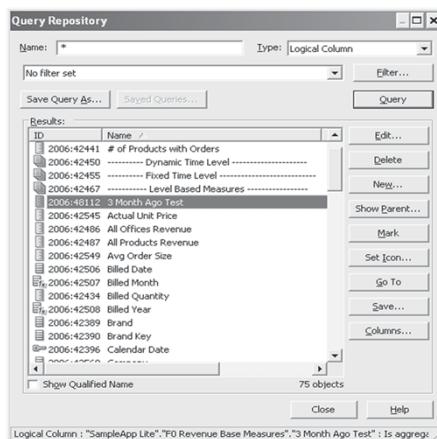
- The Oracle BI Server allows you to exercise varying degrees of control over the repository information that a user can access.
- You can limit Queries by -
 - objects for a user or group
 - number of rows received by a user or group
 - maximum run time or to time periods for a user or group

Rename Wizard

- The Rename Wizard allows you to rename presentation and Business Model and Mapping layer tables and columns.
- It provides a convenient way to transform physical names to user-friendly names.
- To start the Rename Wizard
 - From the Tools menu, choose Utilities > Rename Wizard, and then click Execute.

Query Repository Feature

- You can query for objects in the repository using the Query Repository tool.



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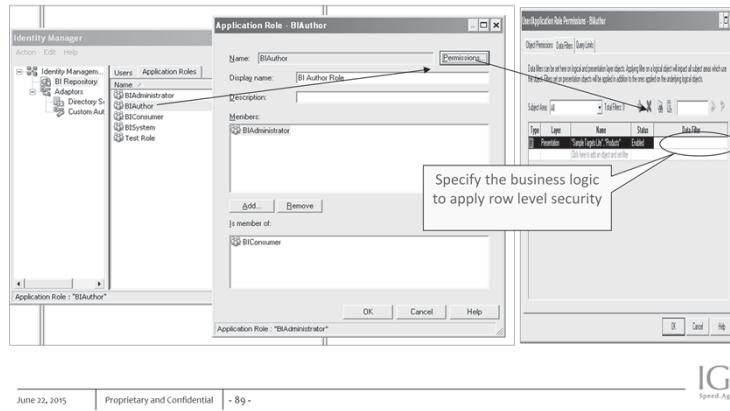
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Manage Identity

- Go to Manage > Identity
- Roles defined in Enterprise Manager are visible here
- Double Click on a Particular Role to apply Data level filter



Repository Deployment

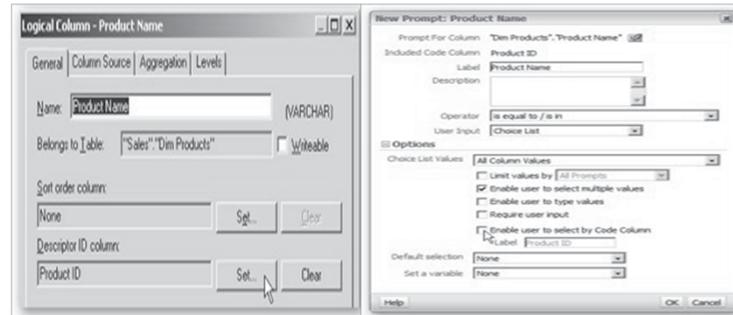
- Go to the weblogic EM console
- Expand 'Business Intelligence' node on the left and choose Coreapplication
- Now click on the Deployment tab on the right.
- Next, go to the Repository tab
- Click on 'Lock and Edit Configuration' to enable you to change the default settings
- Select the RPD you want to use
- Enter the RPD passwords and press update
- Press Apply
- Click on Activate Changes
- Restart the Oracle BI services

Double Column

- Many dashboards feature dashboard prompts that filter analyses
- Most of the time dashboard prompts are description columns
- Analyses have IS PROMPTED filters on description columns to respond to user selections
- Double column allows to specify another logical column as the ID column for a descriptor in RPD

Double Column

- Double column allows BI Server to use IDs in SQL instead of descriptive column
- Prompt can display IDs as well as description



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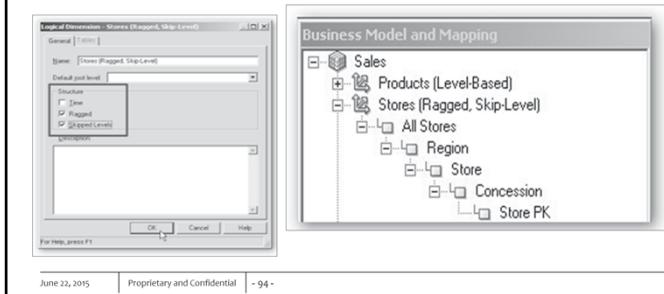
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Hierarchical Column

- Used for skip-levels and ragged hierarchies implementation
- Level-based hierarchies may have skip-levels, or ragged hierarchies
- Skip-levels are when members may not have an immediate parent
- Ragged hierarchies are when leaf members are not all at the same level
- Logical Dimensions can now be published to the Presentation Layer
- Can then be queried directly in Answers for enhanced OLAP-style analysis
- Referred to as a Hierarchical Column

Ragged and Skip-Level hierarchy

- Select Ragged and/or Skip-Level in the logical dimension properties
- Do not select for non-ragged, non-skip, as detecting NULLs adds overhead
- For ragged hierarchies, add surrogate key to ensure consistent logical PK
- Delete this additional level while creating the presentation hierarchy



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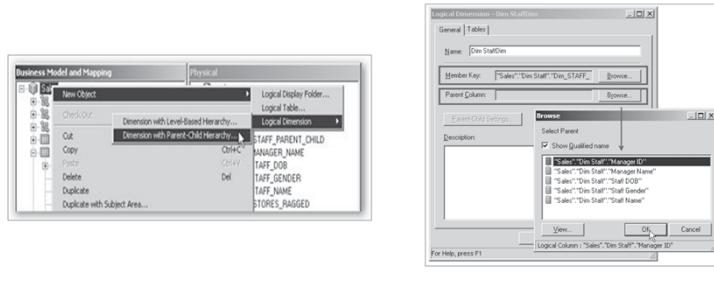
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Parent-Child (Value-Based) Dimensions

- Some data sets contain recursive, parent-child (value-based) hierarchies
- Hierarchy is defined in the data, rather than the column relationships
- Typically used for organizations and other implicitly ragged hierarchies
- Difficult to model relationally as recursive
- SQL queries would be required to traverse

Creating Parent-Child Hierarchies

- Command to create logical dimensions includes Parent-Child option
- Initial logical dimension dialog then prompts to select Parent Column
- Once selected, then need to define the closure table to resolve recursion



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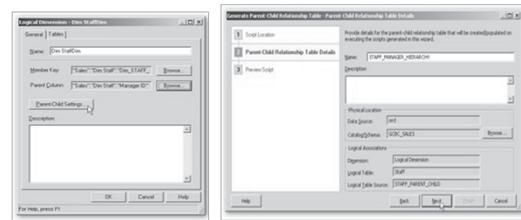
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Creating Parent-Child Hierarchies

- To avoid the need for recursive SQL, a closure table is defined for the hierarchy
- Iterates through the hierarchy once, speeds up all subsequently queries
- Creates two scripts; one to create closure table, one to populate it
- Population script will need to be re-run each time underlying data changes



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Summary

- In this module, you learned about the following:
 - OBIEE repository features
 - Physical Layer
 - Business Model and Mapping Layer
 - Presentation Layer



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Add the notes here.

OBIEE

Lab Book

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Document Revision History

Date	Revision No.	Author	Summary of Changes
11-Apr-2013		Vandana Mistry	Content Creation

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Getting Started

Overview

This lab book is a guided tour for learning OBIEE. It comprises solved examples and 'To Do' assignments. Follow the steps provided in the solved examples and work out the given 'To Do' assignments.

Setup Checklist for OBIEE

Here is what is expected on your machine in order for the lab to work.

Minimum System Requirements

- Intel Pentium 90 or higher (P166 recommended)
- Microsoft Windows 95, 98, or NT 4.0, 2k, XP.
- Memory: 32MB of RAM (64MB or more recommended)
- Internet Explorer 7.0 or higher

Please ensure that the following is done:

- NA

Instructions

- Create a folder in public folders. In this folder, create a subfolder by your empcode. Save all the lab exercise in this
-

Learning More (Bibliography if applicable)

- NA

Lab 1. Creating a Simple Report

Goals	<ul style="list-style-type: none">• Create a simple report• Use the Criteria tab• Use the Results tab• (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	30 minutes

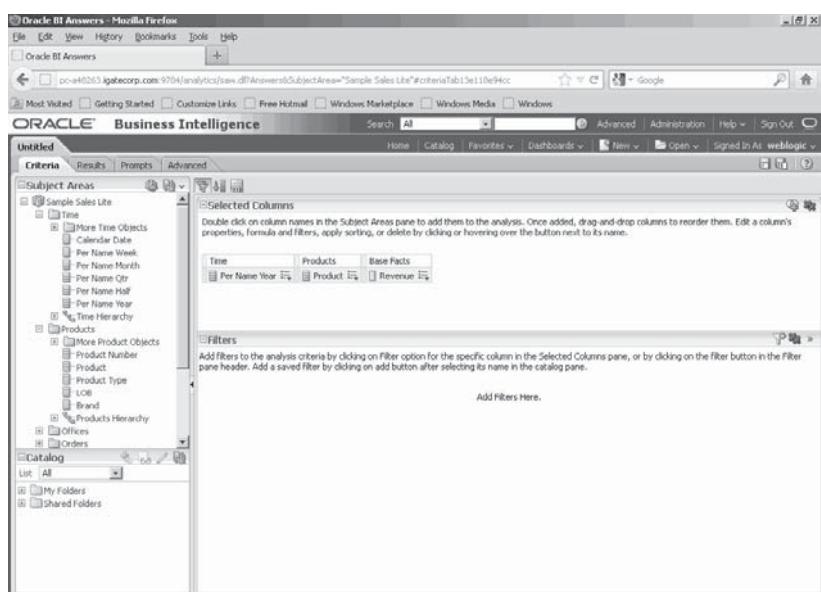
1.1: Create the first report .

Solution:

Step 1: Connect to OBIEE answers.

Step 2: Select the Subject Area Sample Sales Lite.

Step 3: Create a Report based on Time|Per Name Year, Products|Product and Base Facts | Revenue.



Step 4: Click on the Results tab to view the output.

The screenshot shows the Oracle Business Intelligence interface. On the left, there's a navigation pane with 'Subject Areas' (Sample Sales Lite, Time, Products, Offices, Orders, Base Facts, Calculated Facts), 'Catalog' (List: All, My Folders, Shared Folders), and 'Views' (Title, Table). The main area is titled 'Compound Layout' and contains a 'Table' component. The table has three columns: 'Per Name Year', 'Product', and 'Revenue'. The data is grouped by year (2008, 2009) and then by product. The 2008 data includes: V3x Flip Phone (100,742), CoverIt Case (67,492), TouchScreen TS (102,482), KeyMax S-Phone (76,029), Sound!D Name #4 (102,666), MicroPod 500b (125,403), Bluetooth Adapter (42,077), MP3 Speakers System (40,098), MP3G4 Camcorder (115,434), 7 Megapixel Digital Camera (101,653), PodatFun E5 (114,222), Maxfun 2000 (66,736), Game Gear (99,200), HomeCoach 2000 (44,606), Plasma HD Television (48,250), Tungsten E Plasma TV (71,015), LCD 342 Standard (68,858), LCD HD Television (64,156), Install (24,236), Maintenance (22,100), and V5x Flip Phone (156,850). The 2009 data includes: CoverIt Case (76,411).

Per Name Year	Product	Revenue
2008	V3x Flip Phone	100,742
	CoverIt Case	67,492
	TouchScreen TS	102,482
	KeyMax S-Phone	76,029
	Sound!D Name #4	102,666
	MicroPod 500b	125,403
	Bluetooth Adapter	42,077
	MP3 Speakers System	40,098
	MP3G4 Camcorder	115,434
	7 Megapixel Digital Camera	101,653
	PodatFun E5	114,222
	Maxfun 2000	66,736
	Game Gear	99,200
	HomeCoach 2000	44,606
	Plasma HD Television	48,250
	Tungsten E Plasma TV	71,015
	LCD 342 Standard	68,858
	LCD HD Television	64,156
	Install	24,236
	Maintenance	22,100
	V5x Flip Phone	156,850
	CoverIt Case	76,411
Selection Steps		

Step 5: Save the report in \Shared Folders\OBIEE Demo\Reports\Batch Code\Emp Code with the name as "**Year wise Product wise Revenue**"

Lab 2. Creating Filters

Goals	<ul style="list-style-type: none">• Use various types of Filters• Apply Multiple Filters• Group Filters• (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	120 minutes

2.1: Create Column filters

Solution:

Step 1: Refer to the report created in the previous lab

Step 2: Apply a filter for column Year to display data only for Year 2008.

Step 3: Click the Results tab to view the output.

The screenshot shows the Oracle Business Intelligence interface. The title bar reads "ORACLE® Business Intelligence". The main menu bar includes "Untitled", "Criteria", "Results" (which is selected), "Prompts", and "Advanced". The top right has a "Search All" field, "Home", and "Catalog" buttons. The left sidebar contains three sections: "Subject Areas" (with Sample Sales Lite expanded, showing Time, Products, Offices, Orders, Base Facts, and Calculated Facts), "Catalog" (with List set to All, showing My Folders and Shared Folders), and "Views" (with Title and Table selected). The central area is titled "Compound Layout" and contains two tabs: "Title" and "Table". The "Table" tab displays a data grid with the following data:

Per Name	Year	Product	Revenue
2008		V5x Flip Phone	112,742
		CompCell RX3	57,256
		Touch-Screen T5	102,482
		KeyMax S-Phone	76,029
		SoundX Nano 4Gb	102,606
		MicroPod 60Gb	125,403
		Bluetooth Adaptor	42,077
		MP3 Speakers System	40,098
		MPEG4 Camcorder	115,434
		7 Megapixel Digital Camer	101,653
		PocketFun ES	114,222
		MaxiFun 2000	66,736
		Game Station	99,962
		HomeCoach 2000	44,606
		Plasma HD Television	48,350
		Tungsten E Plasma TV	71,015
		LCD 36X Standard	68,858
		LCD HD Television	64,136
		Install	24,236
		Maintenance	22,100

Below the table is a "Selection Steps" section.

2.2: Apply Multiple Filters

Step 4: Edit the filter to Display Data for Year 2008 or 2009 for the Products shown below.

Step 5: Click the Results tab to View the output.

Compound Layout		
Title		
Table		
Per Name Year	Product	Revenue
2008	V5x Flip Phone	112,742
	CompCell RX3	57,256
	Touch-Screen T5	102,482
	KeyMax S-Phone	76,029
2009	V5x Flip Phone	156,850
	CompCell RX3	76,511
	Touch-Screen T5	118,062
	KeyMax S-Phone	88,383

Step 7: Save the report in \Shared Folders\OBIEE Demo\Reports\Batch Code\Emp Code with the name as "**Year wise Product wise Revenue for Year and Product**".

2.3: Save Filter

Step 8: Save the filter in \Shared Folders\OBIEE Demo\Batch Code\Emp Code with the name as "**Filter for Year and Product**".

2.4: Group Filters

Step 7: Modify the Filter to Create a group filter for Year 2008 or 2009 for the above products where the Revenue is Greater than 900000.

Step 8: View the output.

Compound Layout		
Title		X
Table		X
Per Name Year	Product	Revenue
2008	V5x Flip Phone	112,742
	CompCell RX3	57,256
	Touch-Screen T5	102,482
	KeyMax S-Phone	76,029
	SoundX Nano 4Gb	102,606
	MicroPod 60Gb	125,403
	MPEG4 Camcorder	115,434
	7 Megapixel Digital Camer	101,653
	PocketFun E5	114,222
2009	Game Station	99,962
	V5x Flip Phone	156,850
	CompCell RX3	76,511
	Touch-Screen T5	118,062
	KeyMax S-Phone	88,383
	SoundX Nano 4Gb	107,547
	MicroPod 60Gb	143,130
	MPEG4 Camcorder	125,118
	7 Megapixel Digital Camer	102,436

Step 8: Save the report in \Shared Folders\OBIEE Demo\Reports\Batch Code\Emp Code with the name as "**Year wise Product wise Revenue for Year and Product for High Revenue**".

2.5: Insert a Shared Filter

Step 9: Delete the filters for the above report.

Step 10: Insert the shared filter saved in Step 8

Step 11: View the results in the results tab. Save the request.

Lab 3. Formatting Reports

Goals	<ul style="list-style-type: none">• Edit properties of column<ul style="list-style-type: none">◦ Change Column Heading◦ Allow display of related data• Conditional formatting• (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	60 minutes

3.1: Column formatting

Solution:

Step 1: Open the Report “Year wise Product wise Revenue for Year and Product.

Step 2: Change the Column heading of Year to Financial Year. Allow the values of the Column Year to be repeated.

Step 3: Click the Results tab to View the output.

Compound Layout		
Title		
Table		
Financial Year ▾▼	Product	Revenue
2010	V5x Flip Phone	178,864
2010	CompCell RX3	84,862
2010	Touch-Screen T5	140,899
2010	KeyMax S-Phone	110,537
2010	SoundX Nano 4Gb	143,987
2010	MicroPod 60Gb	206,197
2010	Bluetooth Adaptor	78,209
2010	MP3 Speakers System	75,927
2010	MPEG4 Camcorder	82,187
2010	7 Megapixel Digital Camer	88,923
2010	PocketFun E5	82,901
2010	MaxiFun 2000	47,445
2010	Game Station	68,799
2010	HomeCoach 2000	30,467
2010	Plasma HD Television	79,688
2010	Tungsten E Plasma TV	97,930
2010	LCD 36X Standard	83,611
2010	LCD HD Television	54,170
2010	Install	23,498
2010	Maintenance	40,900
2009	V5x Flip Phone	156,850

3.2: Conditional formatting

Step 3: Apply appropriate conditional formatting do display revenue less than 800000 in Red color and Revenue above 800000 in green color.

Step 4: Click the Results tab to View the output.

Compound Layout		
Title		
Table		
Financial Year ▾▼	Product	Revenue
2010	V5x Flip Phone	178,864
2010	CompCell RX3	84,862
2010	Touch-Screen T5	140,899
2010	KeyMax S-Phone	110,537
2010	SoundX Nano 4Gb	143,987
2010	MicroPod 60Gb	206,197
2010	Bluetooth Adaptor	78,209
2010	MP3 Speakers System	75,927
2010	MPEG4 Camcorder	82,187
2010	7 Megapixel Digital Camer	88,923
2010	PocketFun ES	82,901
2010	MaxiFun 2000	47,445
2010	Game Station	68,799
2010	HomeCoach 2000	30,467
2010	Plasma HD Television	79,688
2010	Tungsten E Plasma TV	97,930
2010	LCD 36X Standard	83,611
2010	LCD HD Television	54,170
2010	Install	23,498
2010	Maintenance	40,900
2009	V5x Flip Phone	156,850

Step 5: Save the report in |Shared Folders|OBIEE Demo|Reports|Batch Code\Emp Code with the name as “**Year wise Product wise Revenue- Conditional formatting**”. Revenue”..

Lab 4. Working with Views

Goals	<ul style="list-style-type: none">• Work with the various views:<ul style="list-style-type: none">◦ Title View◦ Table View◦ Pivot View◦ Filter View◦ Column Selector View◦ View Selector• (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	120 minutes

4.1: Title View

Solution:

Step 1: Create a report based on Per Name Year, Per Name Qtr, Brand, Product Type, Revenue and Billed Quantity.

Step 2: In the title View Enter the Title, Subtitle and Display the started time.

Step 3: In the Table prompt add Per Name Year, In the sections add Brand, exclude Per Name Qtr.

Compound Layout

Title   

Year Wise Revenue and Billed Qty

Product Details
Time run: 4/16/2013 3:24:59 PM

Table   

Per Name Year 

BizTech

Product Type	Revenue	Billed Quantity
Accessories	131,342	10846
Audio	250,677	27136
Cell Phones	233,361	21675
Smart Phones	206,446	21192

FunPod

Product Type	Revenue	Billed Quantity
Camera	227,554	27748
Fixed	160,558	14248
Portable	168,554	15472

HomeView

Product Type	Revenue	Billed Quantity
Install	25,273	2560
LCD	123,167	13064
Maintenance	35,787	3242
Plasma	137,282	13652

4.2: Pivot View

Step 4: Create a Pivot View to display the report as shown below.

Per Name Year [2009 ▾]			
Brand	Product Type	Revenue	Billed Quantity
BizTech	Accessories	131,342	10846
	Audio	250,677	27136
	Cell Phones	233,361	21675
	Smart Phones	206,446	21192
FunPod	Camera	227,554	27748
	Fixed	160,558	14248
	Portable	168,554	15472
HomeView	Install	25,273	2560
	LCD	123,167	13064
	Maintenance	35,787	3242
	Plasma	137,282	13652

4.3: Table View

Step 5: Create a Table View to display the subtotals Year wise, Brand Wise.

Per Name Year	Brand	Product Type	Revenue	Billed Quantity
2008	BizTech	Accessories	82,175	11034
		Audio	228,008	27176
		Cell Phones	169,997	22286
		Smart Phones	178,511	22332
		BizTech Total	658,692	82928
	FunPod	Camera	217,088	30551
		Fixed	144,568	16846
		Portable	180,958	20196
	FunPod Total		542,613	67593
	HomeView	Install	24,236	2608
		LCD	132,994	13236
		Maintenance	22,100	2783
		Plasma	119,365	14042
		HomeView Total	298,695	32669
2008 Total			1,500,000	183090
2009	BizTech	Accessories	131,342	10846
		Audio	250,677	27136
		Cell Phones	233,361	21675
		Smart Phones	206,446	21192
		BizTech Total	821,826	80849
	FunPod	Camera	227,554	27748
		Fixed	160,558	14248
		Portable	168,554	15472
	FunPod Total		556,666	57468
	HomeView	Install	25,273	2560
		LCD	123,167	13064
		Maintenance	35,787	3242
		Plasma	137,282	13652
		HomeView Total	321,508	32518
2009 Total			1,700,000	170835

4.4: Filter View

Step 7: Create a Filter to display records of Year 2008 and 2009.

Step 6: Create a Filter View to display the filter.

Step 7: Add all the views to the compound Layout to display the report as shown below.

4.5: View Selector

Step 7: Create a View selector.

Step 8: Rename the Table view to Tabular and Pivot View to Crosstab.

Step 9: Add the View selector view to the compound layout and Delete all the views from the compound Layout. Select the appropriate view to display the results.

The screenshot shows the OBIEE View Selector interface. At the top, there is a toolbar with icons for New, Edit, and Close. Below the toolbar is a dropdown menu labeled "Crosstab" with a small arrow pointing down. A submenu is open, showing five options: "Crosstab", "Title", "Crosstab", "Tabular", and "Filters". The third "Crosstab" option is highlighted with a mouse cursor. Below the menu is a table with a title "Per Name Year" and a row number "20". The table has three columns: Brand, Product Type, and two numerical columns. The data in the table is as follows:

Brand	Product Type	Revenue	
		Billed Quantity	
BizTech	Accessories	82,175	11034
	Audio	228,008	27176
	Cell Phones	169,997	22286
	Smart Phones	178,511	22332
FunPod	Camera	217,088	30551
	Fixed	144,568	16846
	Portable	180,958	20196
HomeView	Install	24,236	2608
	LCD	132,994	13236
	Maintenance	22,100	2783
	Plasma	119,365	14042

Lab 5. Chart Options

Goals	<ul style="list-style-type: none"> • Create and format charts • (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	60 minutes

5.1: Create Charts

Solution:

Step 1: Create a Report with the following Criteria.

Selected Columns

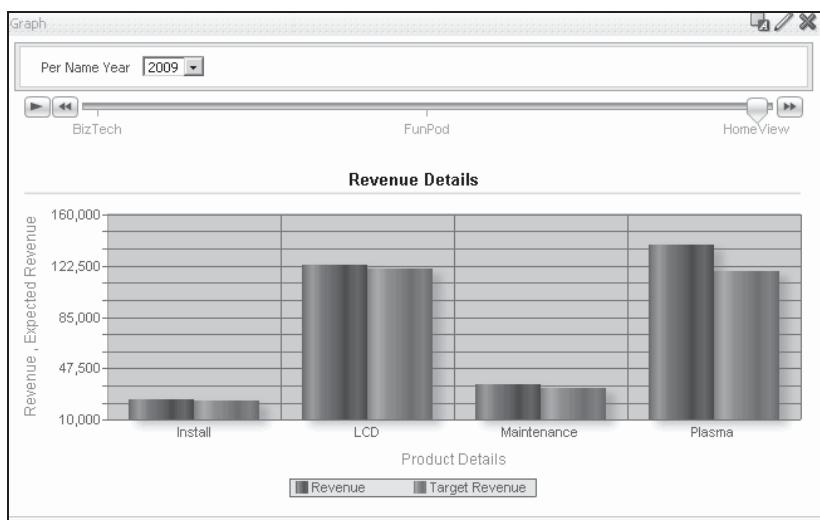
Double click on column names in the Subject Areas pane to add them to the analysis. Once added, drag-and-drop properties, formula and filters, apply sorting, or delete by clicking or hovering over the button next to its name.

Time	Products	Base Facts
Per Name Year	Brand	Product Type
	Target Revenue	Revenue

Step 2: Create a Vertical Bar Chart and give it a title as ‘Revenue Details for Product’. Display the Legend at the left. Display the data labels on Rollover.

Specify the background color of Plot Area as blue. Specify Horizontal and Vertical lines for Major Grid. Specify the color as Red. Specify color of Minor Grid as Green. Specify background and Border color for legend.

Let the major ticks be 5 and minor ticks 2. Specify the minimum value as 10000 and maximum value as 160000. Change the Left and Bottom title as shown in the figure below.



Step 3: Save the report as Product wise Revenue.

Lab 6. Narrative View

Goals	<ul style="list-style-type: none"> Create a Narrative View (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	60 minutes

Step 1: Create a report based on Brand, Product Type , Revenue and discount amount.

Step 2: Add an additional column to calculate the %discount. Edit the formula of this column.

The screenshot shows the 'Edit Column Formula' dialog box. The 'Column Formula' tab is selected. In the 'Available' section, under 'Subject Areas', there is a checkbox for 'Sample Sales Lite' which is checked. The 'Column Formula' field contains the formula: ("Base Facts"."Discount Amount" / "Base Facts"."Revenue")*100.

Step 3: Filter the report for Brand Biztech. Edit the table view and hide Brand. View the report.

Product Discount By Brand			
Product Type	Revenue	Discount Amount	Discount Pct to Revenue
Accessories	367,652	10,761	2.93
Audio	828,870	24,842	3.00
Cell Phones	667,085	19,577	2.93
Smart Phones	636,393	18,166	2.85

Step 4: Add a narrative View and put the following text.

Narrative

This analysis shows the discount percentage for each product within the **BizTech** brand.

[b]@1 [/b]

Rows to display

Postfix
brand

Step 5: View the report.

Compound Layout

This analysis shows the discount percentage for each product within the **BizTech** brand.

Product Discount By Brand

Product Type	Revenue	Discount Amount	Discount Pct to Revenue
Accessories	367,652	10,761	2.93
Audio	828,870	24,842	3.00
Cell Phones	667,085	19,577	2.93
Smart Phones	636,393	18,166	2.85

Lab 7. Selection Steps

Goals	<ul style="list-style-type: none">• Apply selection steps to Report• (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	60 minutes

6.1: Keep Bottom 4

Step 1: Create a report based on Brand, Product Type, Product and Revenue.
Select Bottom 4 Product Based on Revenue.

Bottom 4 Product based on Revenue			
Brand	Product Type	Product	Revenue
FunPod	Fixed	HomeCoach 2000	113,106
HomeView	Install	Install	73,007
	Maintenance	Maintenance	98,787
	Plasma	Plasma HD Television	165,466
Grand Total			450,365

Step 2: Save the report.

6.2: Rank

Step 1: Create a report based on Product and Revenue. Add a column in the criteria tab to display Rank of Revenue.

The screenshot shows the 'Edit Column Formula' dialog box. At the top, there's a 'Selected Columns' pane with a list of columns: Products, Base Facts, Product, Revenue, and RANK(Revenue). Below this is the 'Edit Column Formula' main area. It has tabs for 'Column Formula' (selected) and 'Bins'. Under 'Column Formula', settings include: Folder Heading set to 'Base Facts'; Column Heading set to 'RANK(Revenue)'; 'Custom Headings' checked; 'Contains HTML Markup' unchecked; and Aggregation Rule (Totals Row) set to 'Default'. To the left, under 'Available' is a 'Subject Areas' pane showing 'Sample Sales Lite' expanded, revealing 'Time' and 'Products'. To the right, the 'Column Formula' pane contains the formula 'RANK("Base Facts"."Revenue")'.

Step 2: View the results.

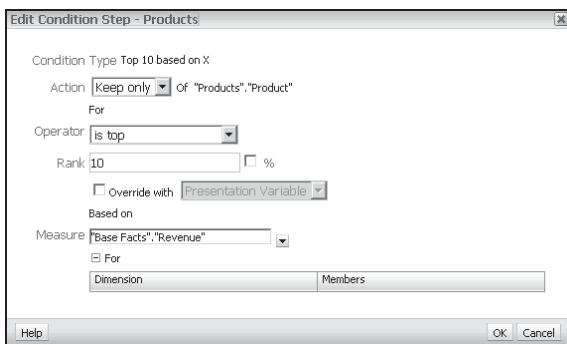
Title

Selection Steps and Rank

Table

Product	Revenue	RANK(Revenue)
MicroPod 60Gb	474,729	1
V5x Flip Phone	448,456	2
Touch-Screen T5	361,443	3
SoundX Nano 4Gb	354,140	4
MPEG4 Camcorder	322,740	5
PocketFun E5	314,018	6
7 Megapixel Digital Camer	293,012	7
Game Station	291,285	8
KeyMax S-Phone	274,950	9
Tungsten E Plasma TV	268,799	10
LCD 36X Standard	221,517	11
CompCell RX3	218,630	12
MP3 Speakers System	187,480	13
Bluetooth Adaptor	180,172	14
LCD HD Television	172,425	15
MaxiFun 2000	165,839	16
Plasma HD Television	165,466	17
HomeCoach 2000	113,106	18
Maintenance	98,787	19
Install	73,007	20
Grand Total	5,000,000	1

Step 3: In the selection steps pane add a condition to display only Top 10 Ranks.

**Step 4:** View the results.

Selection Steps and Rank		
Product	Revenue	RANK(Revenue)
MicroPod 60Gb	474,729	1
V5x Flip Phone	448,456	2
Touch-Screen T5	361,443	3
SoundX Nano 4Gb	354,140	4
MPEG4 Camcorder	322,740	5
PocketFun ES	314,018	6
7 Megapixel Digital Camer	293,012	7
Game Station	291,285	8
KeyMax S-Phone	274,950	9
Tungsten E Plasma TV	268,799	10
Grand Total	5,000,000	1

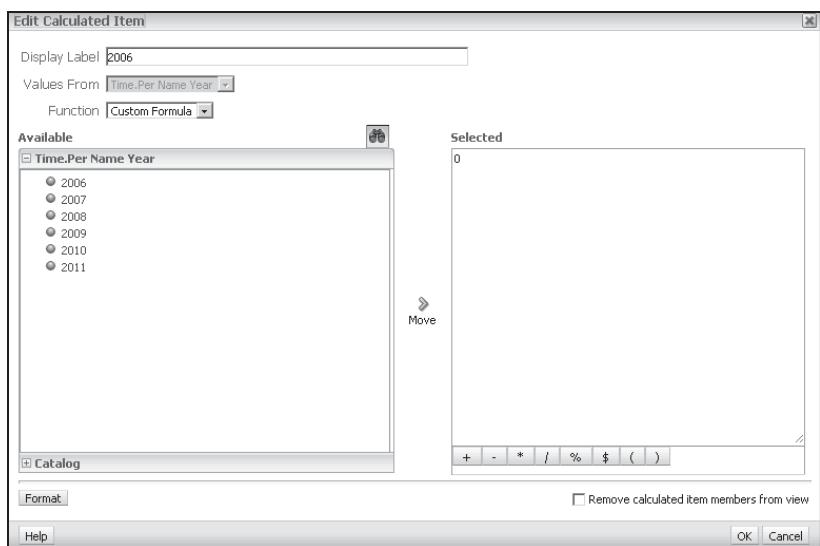
Lab 8. Calculated Items and custom Groups

Goals	<ul style="list-style-type: none">• Create Calculated Items and Custom Group• (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	60 minutes

Step 1: Create a report based on Year and Revenue.

Per Name	Year
	1,500,000
	1,700,000
	1,800,000

Step 2: Create a custom calculated item for the other years such that the revenue is displayed as 0 even if there is no revenue in those years.



Step 3: View the results.

Title	
Table	
Per Name Year	Revenue
2008	1,500,000
2009	1,700,000
2010	1,800,000
2006	0

Lab 9. Dashboard

Goals	<ul style="list-style-type: none">• Explore and Edit Mydashboard• Create a New Dashboard• Add contents to Dashboard• Create dashboard prompt• (Ensure that all previous lab assignments are complete before beginning the current lab)
Time	120 minutes

6.1: Exploring and editing Mydashboard

Create Dashboard

Solution:

Step 1: Create a report based on Order Type, Product and Revenue. Make Order Table as Table Prompt. Save the report as Order Type wise revenue.

Step 2: On the Home page click on Dashboards, MyDashboard.

Step 3: Drag the report created in Step 1, on the section of the Dashboard. View the dashboard.

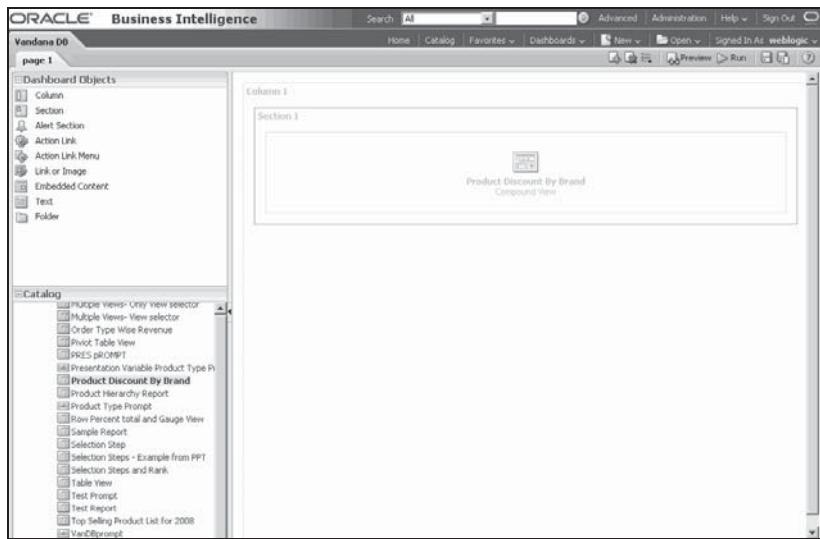
The screenshot shows a Oracle Business Intelligence dashboard titled "My Dashboard". A report titled "Order Type Wise Revenue" is displayed. The report has a filter "Order Type: Express" and a table of data:

Product	Revenue
V5x Flip Phone	56,016
CompCell RX3	46,987
Touch-Screen T5	77,655
KeyMax S-Phone	53,907
SoundX Nano 4Gb	57,338
MicroPod 60Gb	122,785
MP3 Speakers System	36,300
MPEG4 Camcorder	85,159
7 Megapixel Digital Camer	54,936
PocketFun E5	84,216
MaxiFun 2000	26,768
Game Station	67,030
HomeCoach 2000	23,992
Plasma HD Television	43,534
Tungsten E Plasma TV	47,508
LCD 36X Standard	35,911
LCD HD Television	26,244
Install	15,537
Maintenance	12,205

6.2: Creating a Dashboard

Step 1: Select New > Dashboard in the global header.

Step 2: Enter the Dashboard Name. Drag and Drop the report created in the previous Lab(Narrative View).



Step 3: View the report.

The screenshot shows a web browser window for 'Oracle BI Interactive Dashboards - Vandana DB - Google Chrome'. The URL is pc-a48263.igatecorp.com:9704/analytics/saw.dll?Dashboard&DashboardPreview=true&Done=close. The dashboard title is 'Product Discount By Brand'. A subtitle states: 'This analysis shows the discount percentage for each product within the **BizTech** brand'. Below this is a table:

Product Type	Revenue	Discount Amount	Discount Pct to Revenue
Accessories	367,652	10,761	2.93
Audio	828,870	24,842	3.00
Cell Phones	667,085	19,577	2.93
Smart Phones	636,393	18,166	2.85

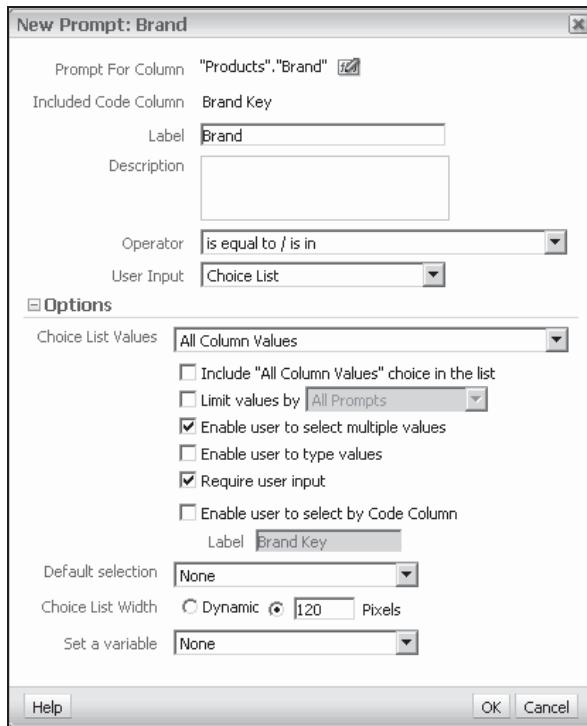
The right side of the dashboard interface shows a sidebar with navigation links like 'Home', 'Logout', and 'Administration'. A 'Preview' button is highlighted with a mouse cursor. The overall interface is clean and professional, typical of Oracle BI dashboards.

6.3: Create Dashboard Prompt

Step 1: Create a dashboard prompt based on the Subject Area Sample Sales Lite

Create the prompt on Brand.

Save the prompt|Shared Folders|OBIEE Demo|Prompt|Batch Code|Emp Code with the name as “**Brand Prompt**”.



Step 2: Add the prompt to the dashboard.

Step 3: Run the report to view it.

Product Type	Revenue	Discount Amount	Discount Pct to Revenue
Camera	615,752	25,166	4.09
Fixed	404,391	16,610	3.96
Portable	479,857	18,060	3.76

OBIEE 11g

Lab Book

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Getting Started

Overview

This OBIEE Lab Book shows you how to build an Oracle BI metadata repository using the Oracle BI Administration Tool. You learn how to import metadata from databases and other data sources, simplify and reorganize the imported metadata into a business model, and then structure the business model for presentation to users who request business intelligence information via Oracle BI user interfaces.

Creating a Repository Using the Oracle Business Intelligence Administration Tool

Purpose

This tutorial covers using the Oracle Business Intelligence (BI) Administration Tool to build, modify, enhance, and manage an Oracle BI repository

Time to Complete

Approximately 5 hours.

Prerequisites

Before starting this tutorial, you should:

1. Have access to or have Installed Oracle Business Intelligence Client Enterprise Edition 11g.
2. Have access to BISAMPLE Excel sheet.

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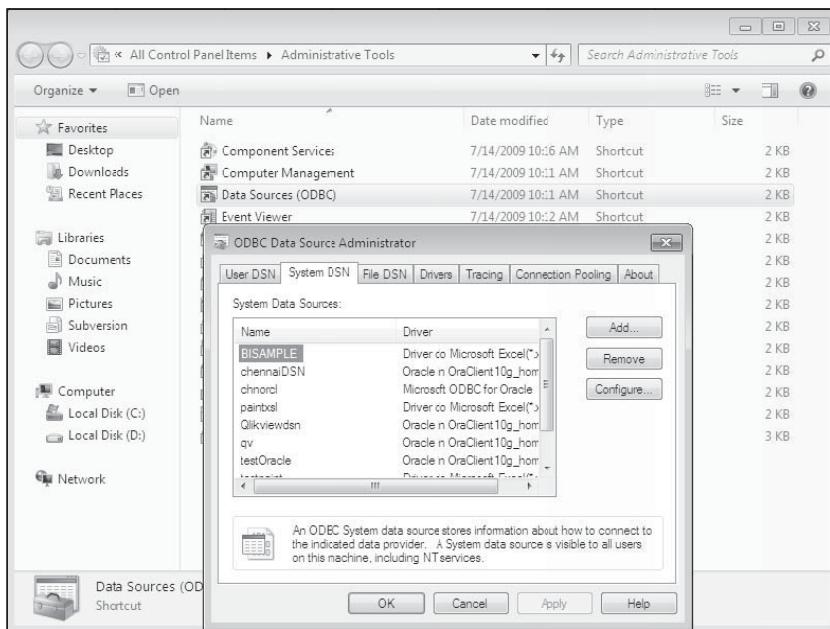
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Lab 1-1 Create DNS for BISAMPLE Excel Sheet.

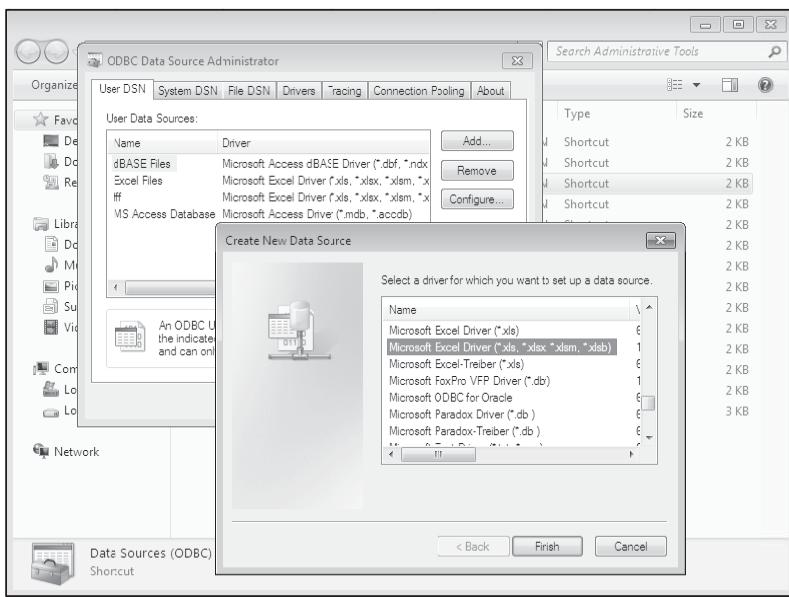
Goals	<ul style="list-style-type: none"> To Learn to create DNS Create DNS for BISAMPLE Excel Sheet.
Time	15 minutes

Solution:

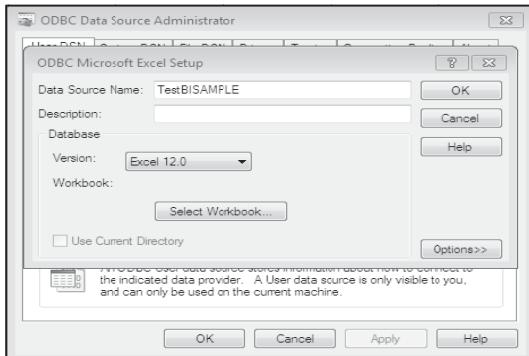
- Select Start > Control Panel > Administrative Tools > Data Sources (ODBC)
- Click on Data Sources and then click Add Button.



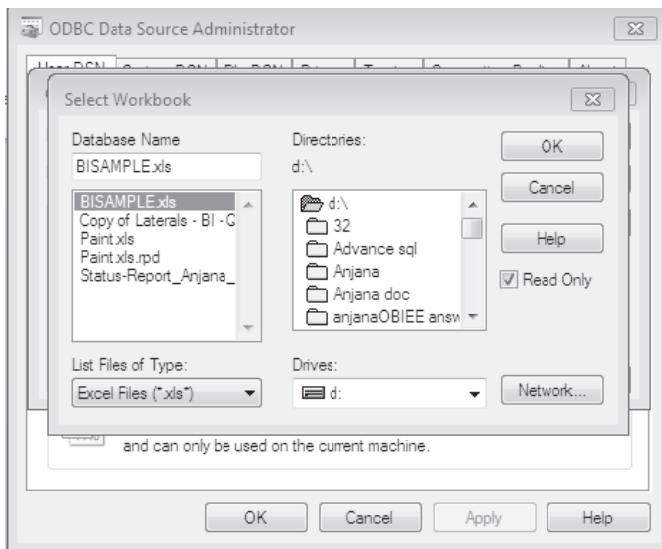
- Use Microsoft Excel driver (*.xls, *.xlsx, *.xlsm, *.xlsb) and then click finish Button



4. Give Data Source Name and Click on Select WorkBook Button



5. Select BISAMPLE.xls Sheet and click on ok Button

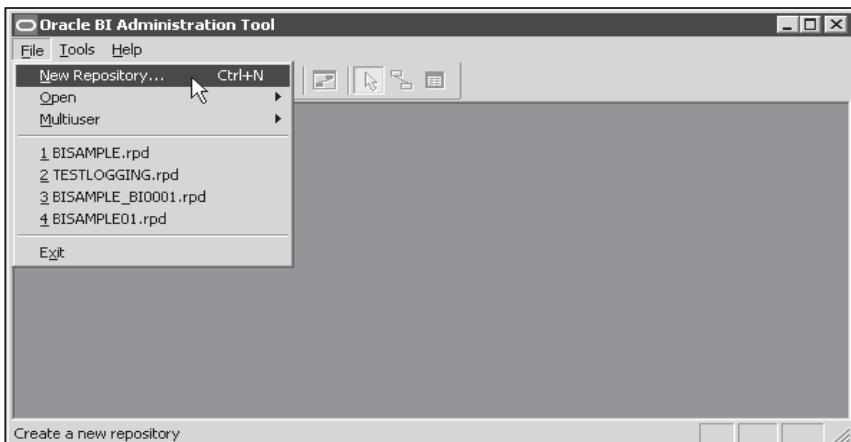


Lab 1-2 Create a New Repository.

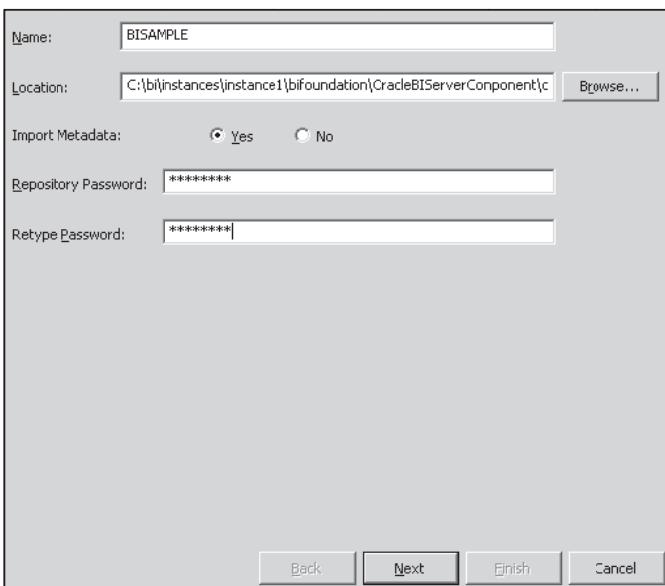
Goals	• Create a New Repository using DNS for BISAMPLE Excel Sheet
Time	15 minutes

Solution:

1. Select Start > Programs > Oracle Business Intelligence > BI Administration to open the Administration Tool.
2. Select File > New Repository.



3. Enter a name for the repository. In this tutorial the repository name is **BISAMPLE**.
4. Leave the default location as is. It points to the default repository directory.
5. Leave Import Metadata set to **Yes**.
6. Enter and retype a password for the repository. In this tutorial **BISAMPLE** is the repository password.



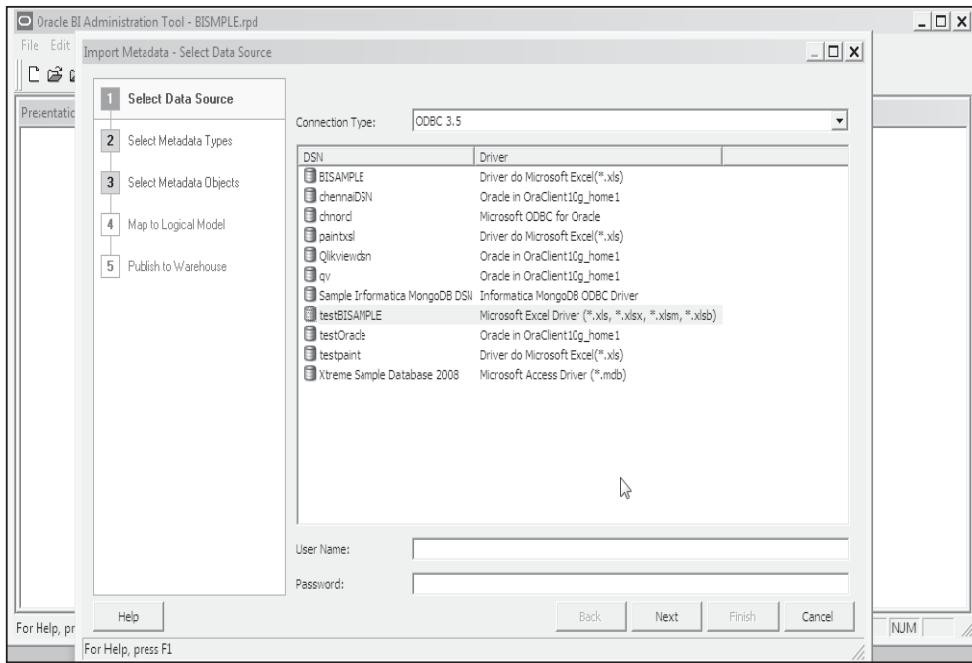
7. Click **Next**.

Lab 1-3 Import Metadata and Verify Connection

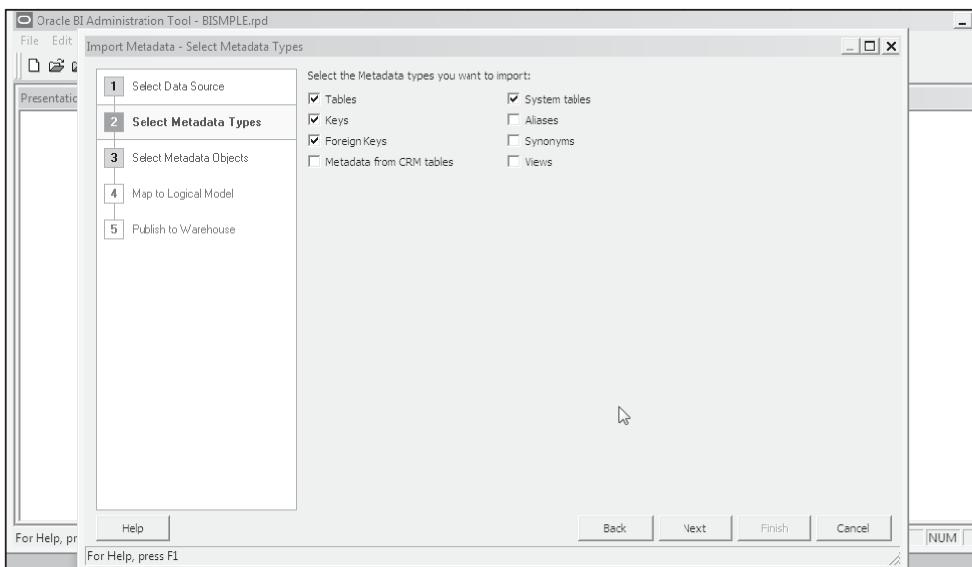
Goals	• Import Metadata and Verify Connection.
Time	20 minutes

Solution:

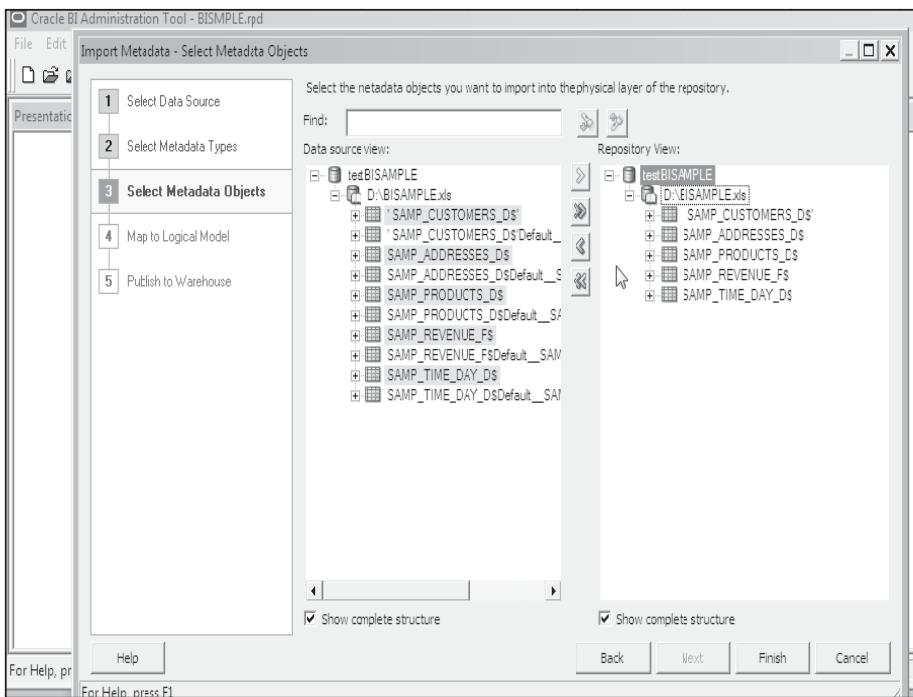
1. Select testBISAMPLE DSN and click on next Button

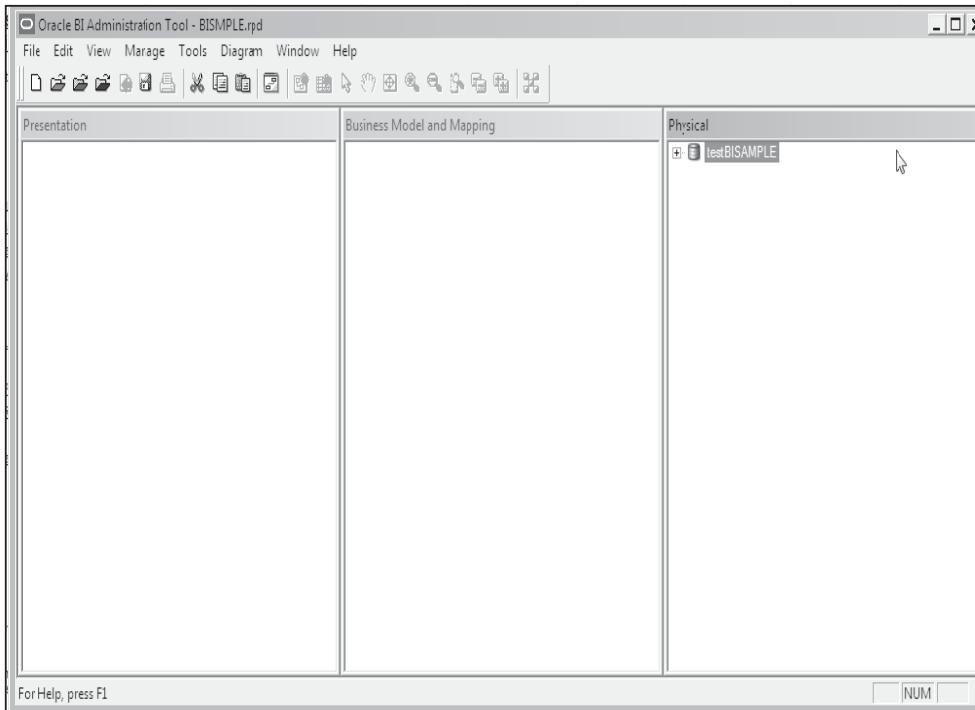


2. Select metadata types and click Next

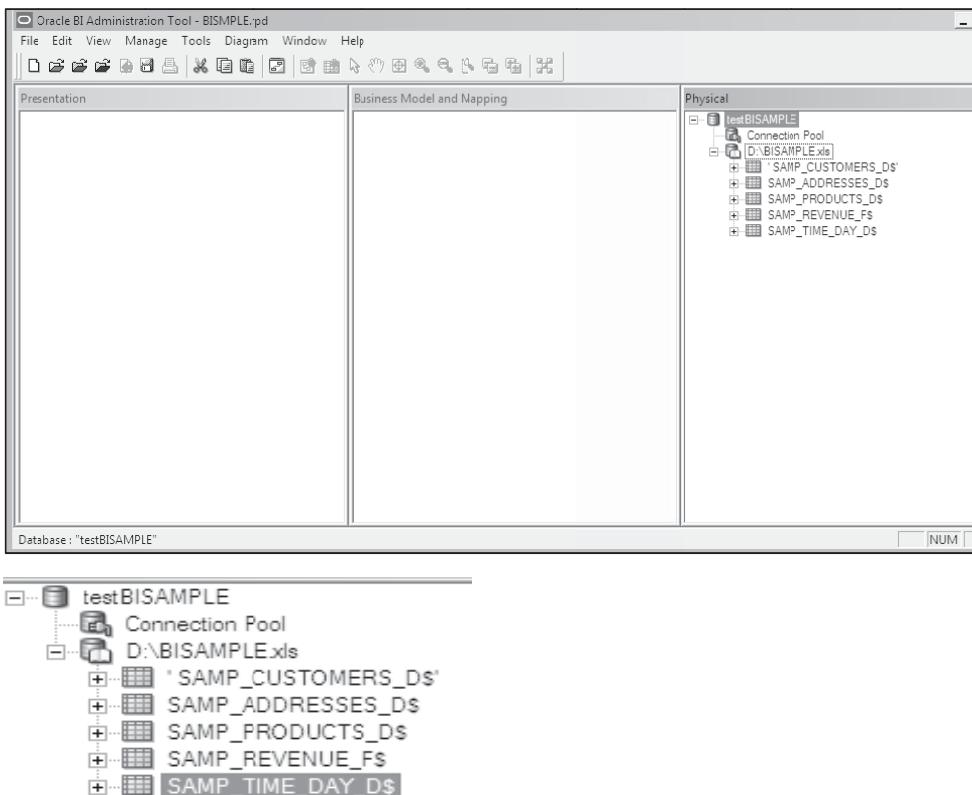


3. In the Data source view, expand the **BISAMPLE** schema
4. Use **Ctrl+Click** to select the following
 - SAMP_ADDRESSES_D\$**
 - SAMP_CUSTOMERS_D\$**
 - SAMP_PRODUCTS_D\$**
 - SAMP_REVENUE_F\$**
 - SAMP_TIME_DAY_D\$**
5. Click the **Import Selected** button to add the Sheets to the Repository View.
6. Click **Finish** to open the repository





-
7. Expand **testBISAMPLE > BISAMPLE** and confirm that the five tables are imported into the Physical layer of the repository.



Verify Connection

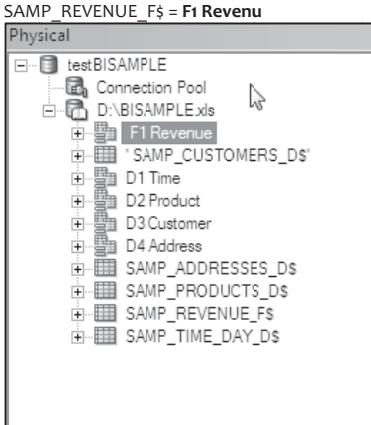
1. Select Tools > Update All Row Counts.
2. Right-click a table and select View Data to view the data for the table.

Lab 2-1 Building the Physical Layer of a Repository (Create Aliases)

Goals	• Building the Physical Layer of a Repository (Create Aliases)
Time	20 minutes

Solution:

1. Right-click **SAMP_TIME_DAY_DS** and select New Object > Alias to open the Physical Table dialog box.
Enter **D1 Time** in the Name field.
- 2.
3. Click **OK** to close the Physical Table dialog box
4. Repeat the steps and create the following aliases for the remaining physical tables
SAMP_ADDRESSES_DS = D4 Address
SAMP_CUSTOMERS_DS = D3 Customer
SAMP_PRODUCTS_DS = D2 Product
SAMP_REVENUE_F\$ = F1 Revenue

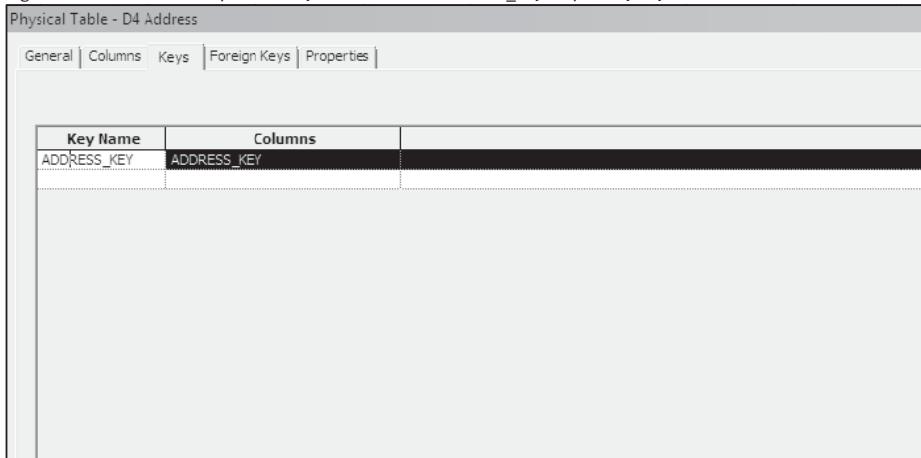


Lab 2-2 Building the Physical Layer of a Repository (Create Keys and Joins)

Goals	• Building the Physical Layer of a Repository (Create Keys and Joins)
Time	25 minutes

Solution:

1. Right click D4 Address Properties>Keys tab . To make Address_key as primary key

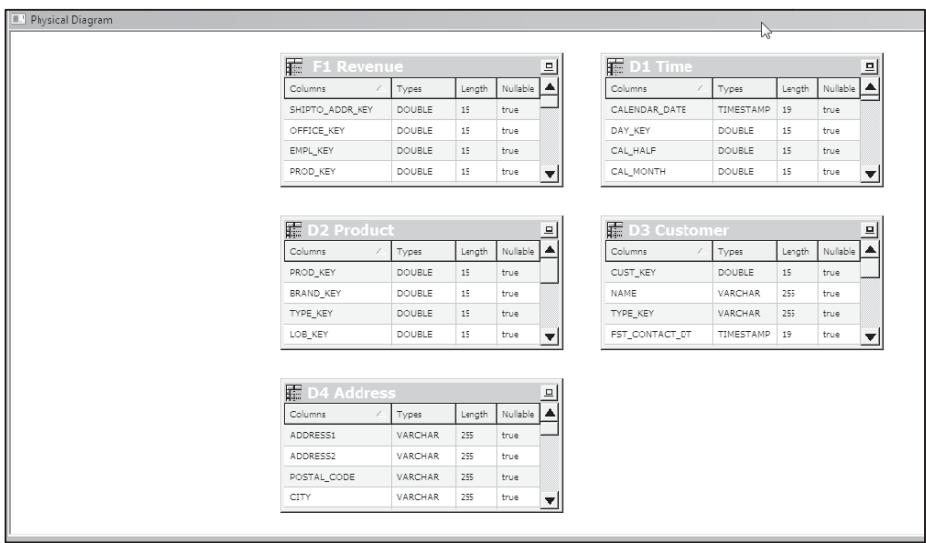


2. Similarly make following columns as primary key in respective tables

CUST_KEY in D3 Customer
PROD_KEY in D2 Product

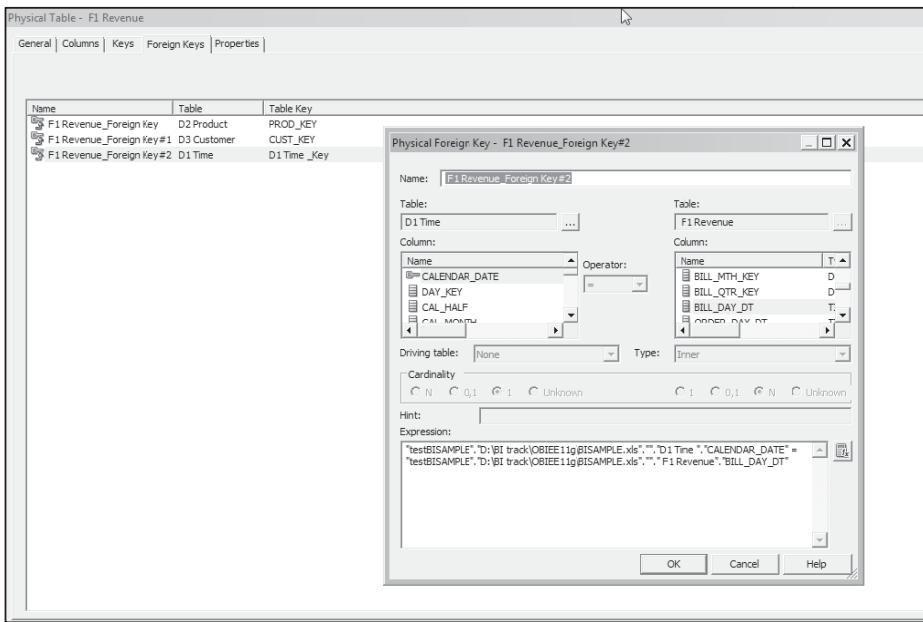
3. Select the five alias tables in the Physical layer.

4. Right-click one of the highlighted alias tables and select **Physical Diagram > Selected Object(s) Only** to open the Physical Diagram.



5. Click the **F1 Revenue** table table, and go to Foreign Key tab and click on '+' symbol to add foreign key.
6. Select the **D1 Time.CALENDAR_DATE** column, and then select **F1 Revenue.BILL_DAY_DT** to join the tables. Ensure that the Expression edit box (at the bottom) contains the following expression:

```
"testBISAMPLE"."D:\BI track\OBIEE11g\BISAMPLE.xls".""."D1 Time ."."CALENDAR_DATE" = "testBISAMPLE"."D:\BI track\OBIEE11g\BISAMPLE.xls".""." F1 Revenue"."BILL_DAY_DT"
```



7. Repeat the steps to create joins for the remaining tables. Use the following expressions as a guide:
- ```
"testBISAMPLE"."D:\BISAMPLE.xls""."."D2 Product"."PROD_KEY" = "testBISAMPLE"."D:\BISAMPLE.xls""."."F1 Revenue"."PROD_KEY"
```
- ```
"testBISAMPLE"."D:\BISAMPLE.xls""."."D3 Customer"."CUST_KEY" = "testBISAMPLE"."D:\BISAMPLE.xls""."."F1 Revenue"."CUST_KEY"
```
- ```
"testBISAMPLE"."D:\BISAMPLE.xls""."."D4 Address"."ADDRESS_KEY" = "testBISAMPLE"."D:\BISAMPLE.xls""."."D3 Customer"."ADDRESS_KEY"
```
8. Select **File > Save** or click the **Save** button on the toolbar to save the repository
9. Click **No** when prompted to check global consistency. Checking Global Consistency checks for errors in the entire repository. Some of the more common checks are done in the Business Model and Mapping layer and Presentation layer.



---

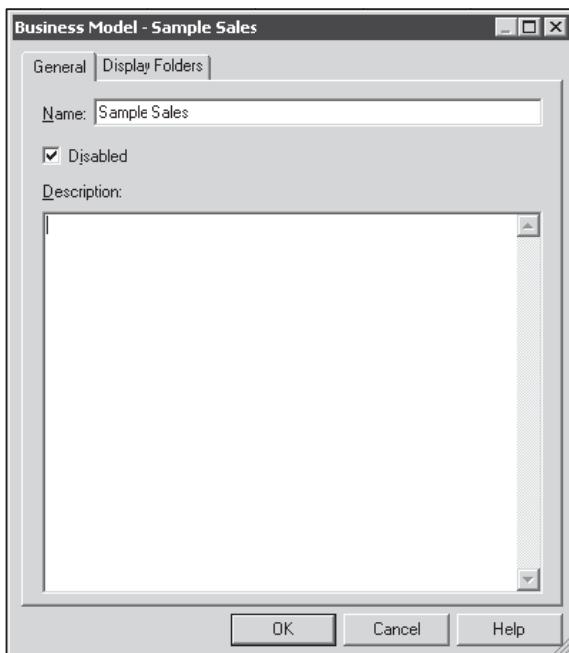
### Lab 3-1 Create a Business Model

---

|       |                           |
|-------|---------------------------|
| Goals | • Create a Business Model |
| Time  | 30 minutes                |

**Solution:**

1. Right-click the white space in the Business Model and Mapping layer and select **New Business Model** to open the Business Model dialog box.
2. Enter **Sample Sales** in the Name field. Leave **Disabled** checked.



3. Click **OK**. The Sample Sales business model is added to the Business Model and Mapping layer.

4. In the Physical layer, select the following four alias tables:

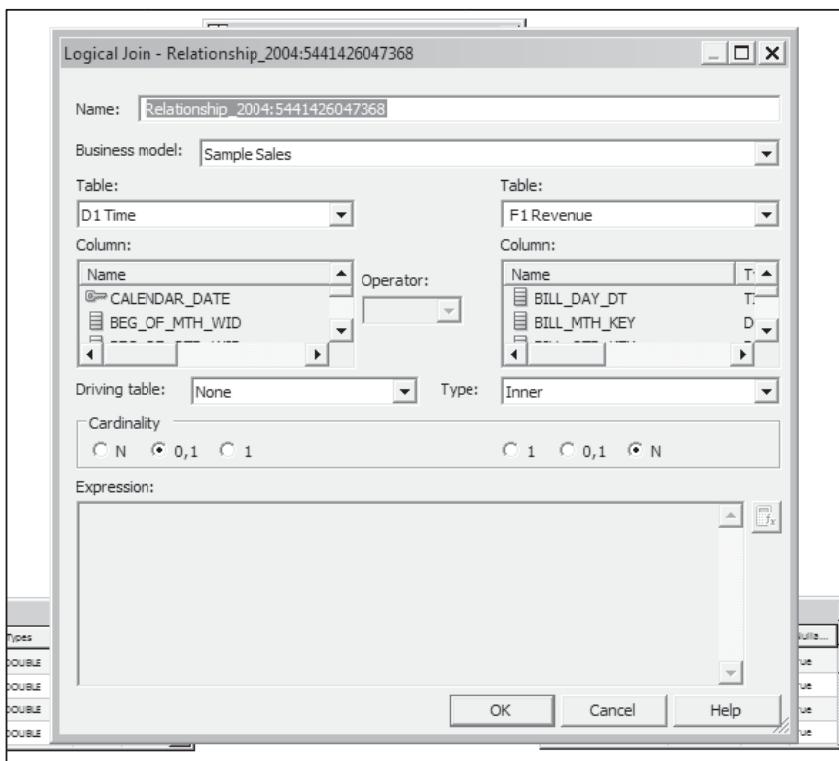
**D1 Time**  
**D2 Product**  
**D3 Customer**  
**F1 Revenue**

Do not select **D4 Address** at this time

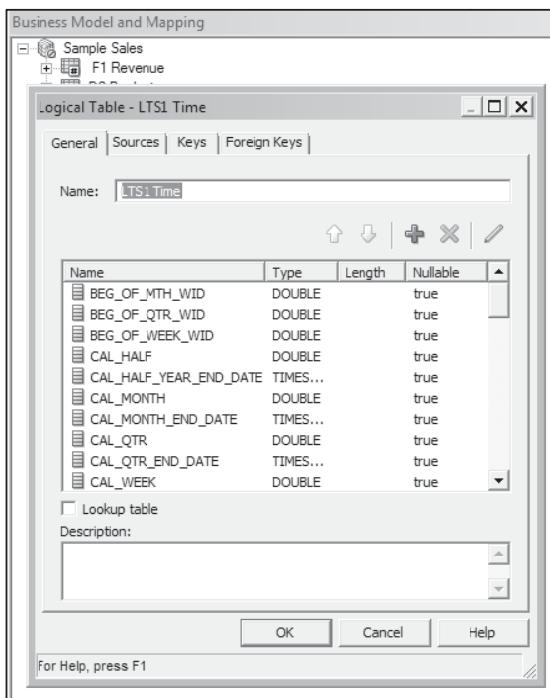
5. Drag the four alias table from the Physical layer to the **Sample Sales** business model in the Business Model and Mapping layer. The tables are added to the Sample Sales business model.
6. Examine Logical Joins by Right-click the **Sample Sales** business model and select **Business Model Diagram > Whole Diagram** to open the Business Model Diagram.



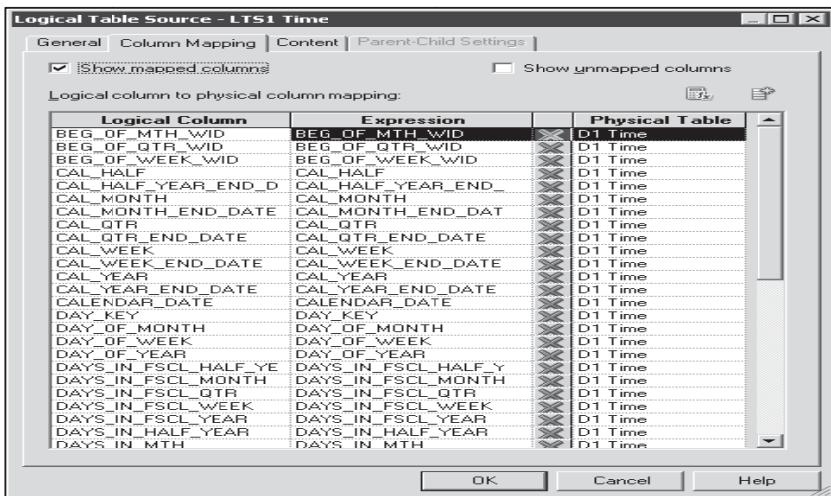
7. Double-click any one of the joins in the diagram to open the Logical Join dialog box. In this example the join between D1 Time and F1 Revenue is selected



8. Click **OK** to close the Logical Join dialog box and Click the **X** to close the Business Model Diagram
9. Expand the **Sources** folder for the **D1 Time** logical table. Notice there is a logical table source, **D1 Time**. This logical table source maps to the **D1 Time** alias table in the Physical layer.
10. On the General tab, rename the **D1 Time** logical table source to **LTS1 Time**. Notice that the logical table to physical table mapping is defined in the "Map to these tables" section.



11. On the Column Mapping tab, notice that logical column to physical column mappings are defined. If mappings are not visible, select **Show mapped columns**.



- 12 Rename **BEG\_OF\_MONTH\_WID** to **Beg of Mth Wid**. This is the manual method for renaming objects. You can also right-click an object and select **Rename** to manually rename an object.

---

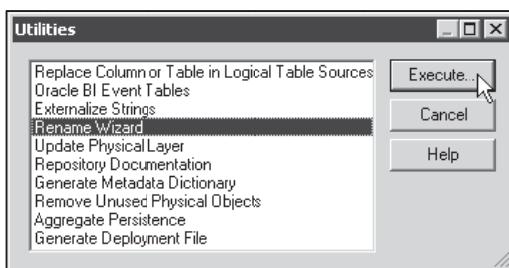
### Lab 3.2 Rename Objects Using the Rename Wizard

---

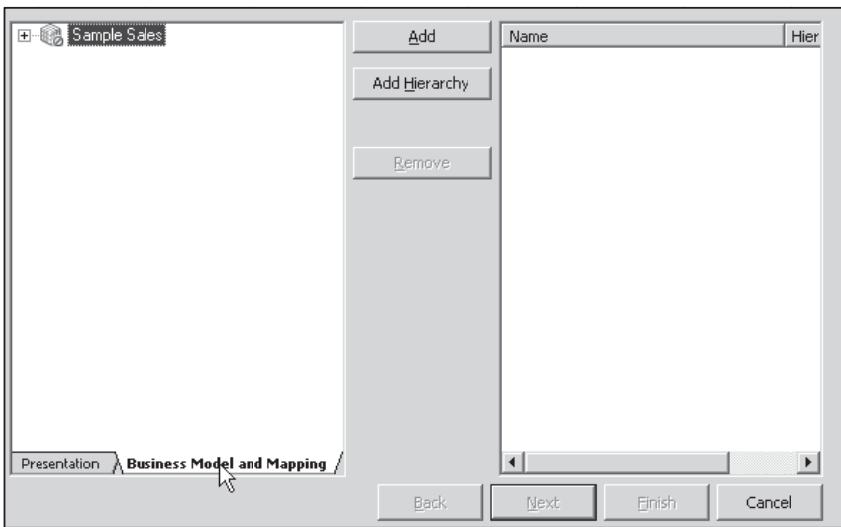
|       |                                          |
|-------|------------------------------------------|
| Goals | • Rename Objects Using the Rename Wizard |
| Time  | 15 minutes                               |

**Solution:**

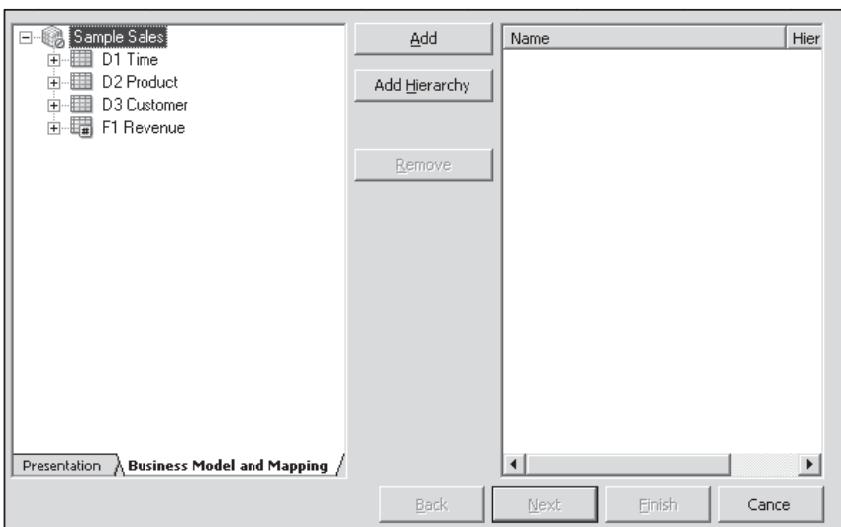
1. Select Tools > Utilities > Rename Wizard > Execute to open the Rename Wizard.



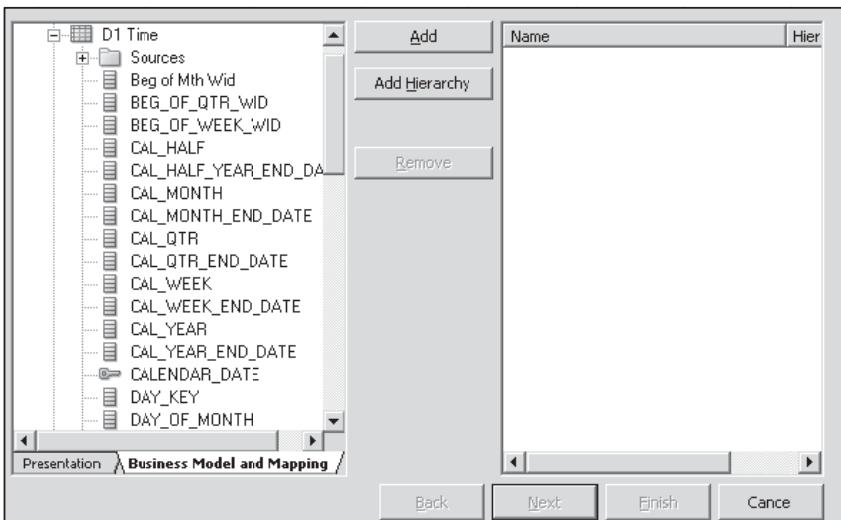
2. In the Select Objects screen, click Business Model and Mapping in the middle pane.



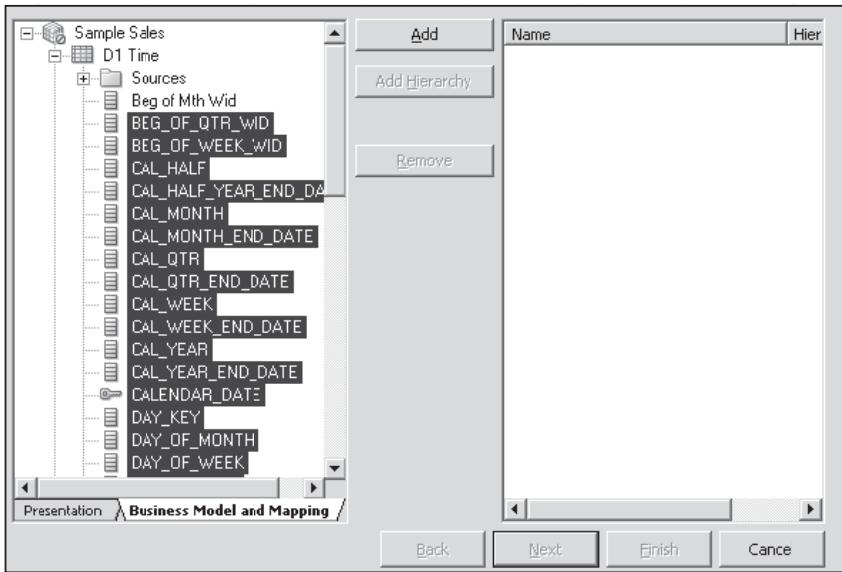
3. Expand the **Sample Sales** business model.



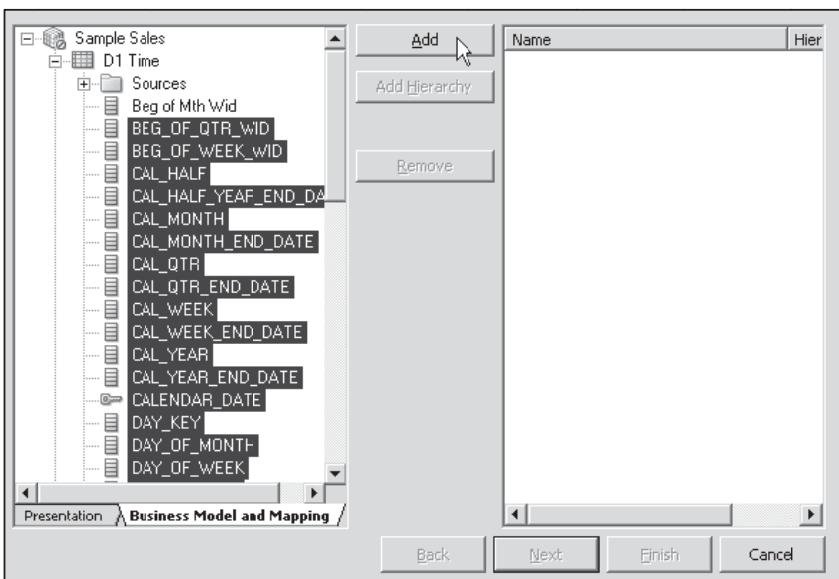
4. Expand the **D1 Time** logical table.



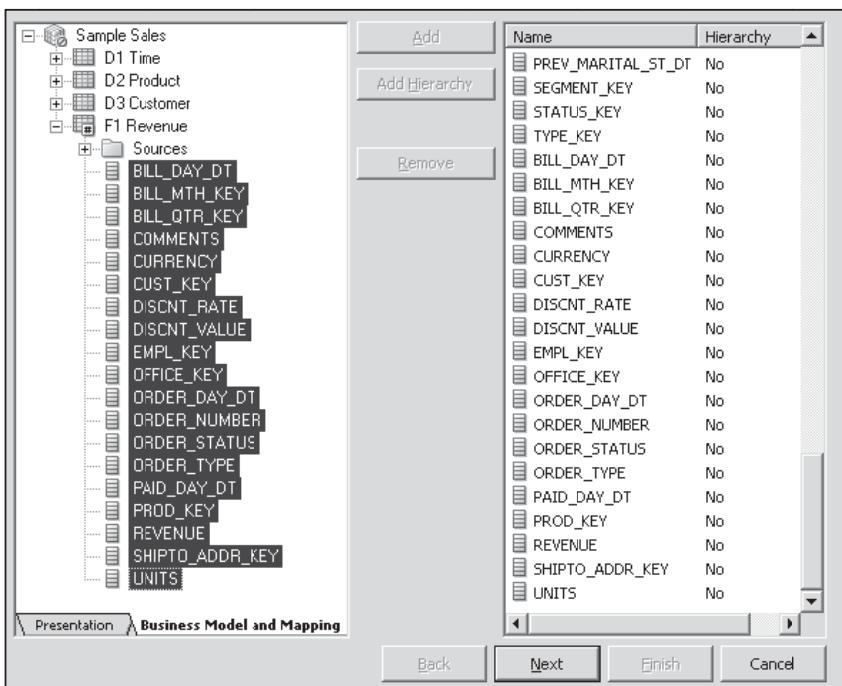
5. Use Shift+click to select all of the logical columns except for the column you already renamed, Beg of Mth Wid.



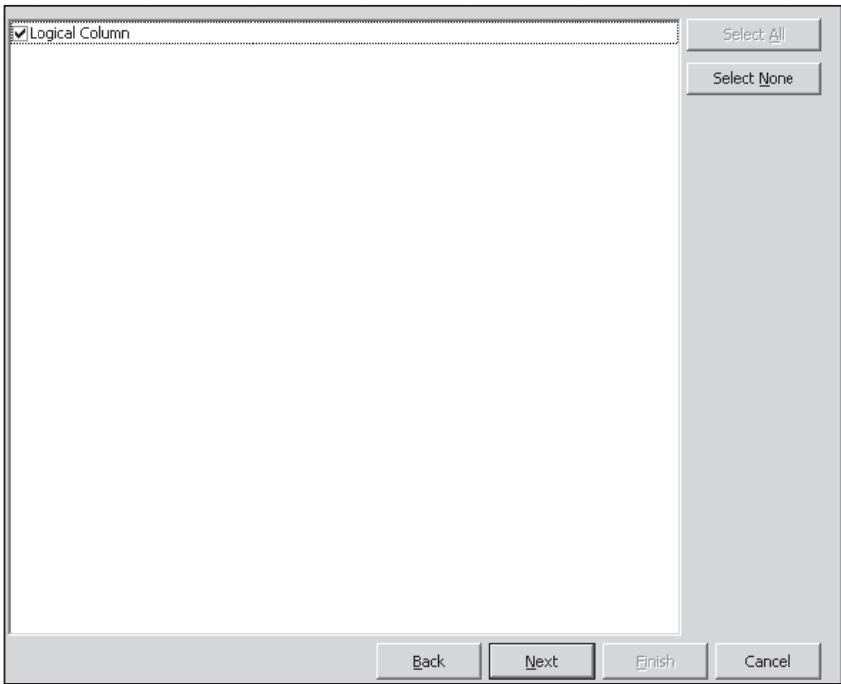
6. Click **Add** to add the columns to the right pane.



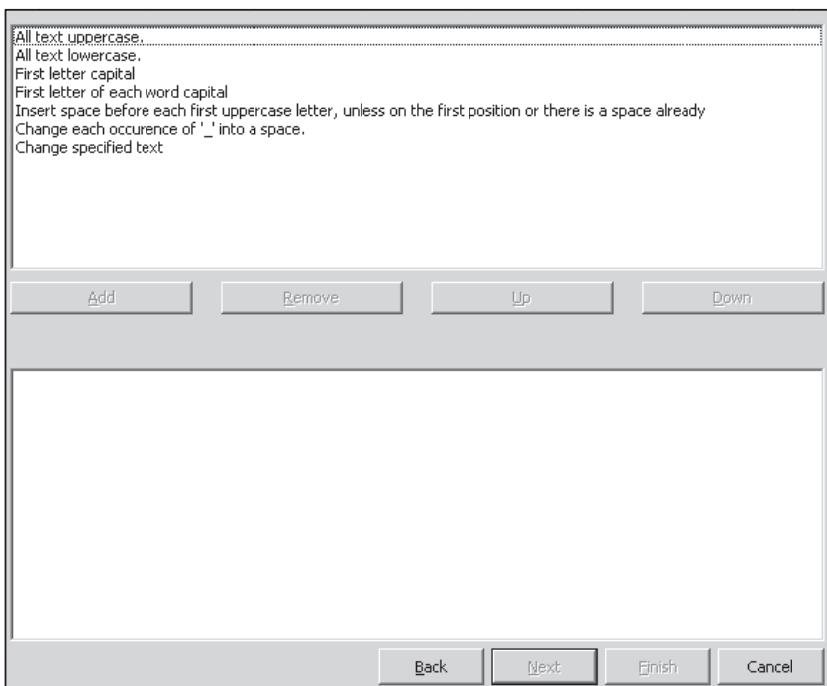
7. Repeat the steps for the three remaining logical tables so that all logical columns from the Sample Sales business model are added to the right pane. Only the columns from F1 Revenue are shown in the screenshot.



8. Click Next to move to the Select Types screen.



9. Click **Next** to open the Select Rules screen.



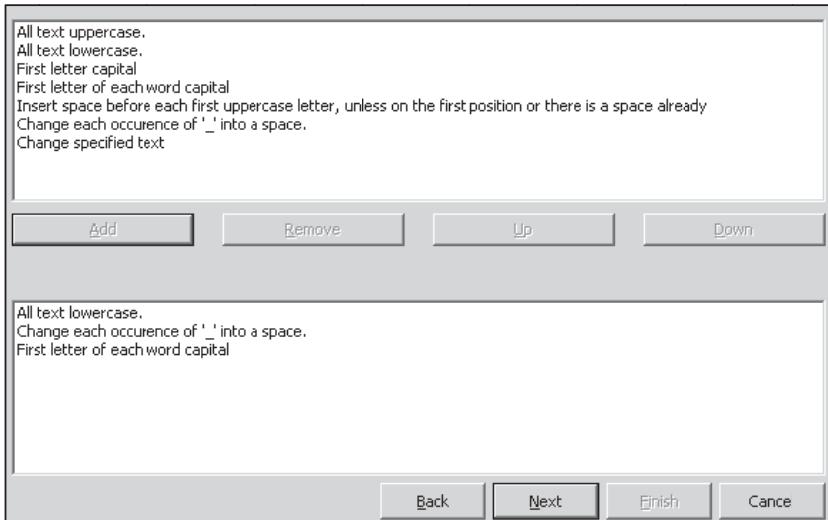
10. In the Select Rules screen, select **All text lowercase** and click **Add** to add the rule to the lower pane.

|                                                                                                                                                                                                                                                                                              |      |        |        |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------|--------|--------|
| All text uppercase.<br>All text lowercase.<br>First letter capital<br>First letter of each word capital<br>Insert space before each first uppercase letter, unless on the first position or there is a space already<br>Change each occurrence of '_' into a space.<br>Change specified text | Add  | Remove | Up     | Down   |
| All text lowercase.                                                                                                                                                                                                                                                                          | Back | Next   | Finish | Cancel |

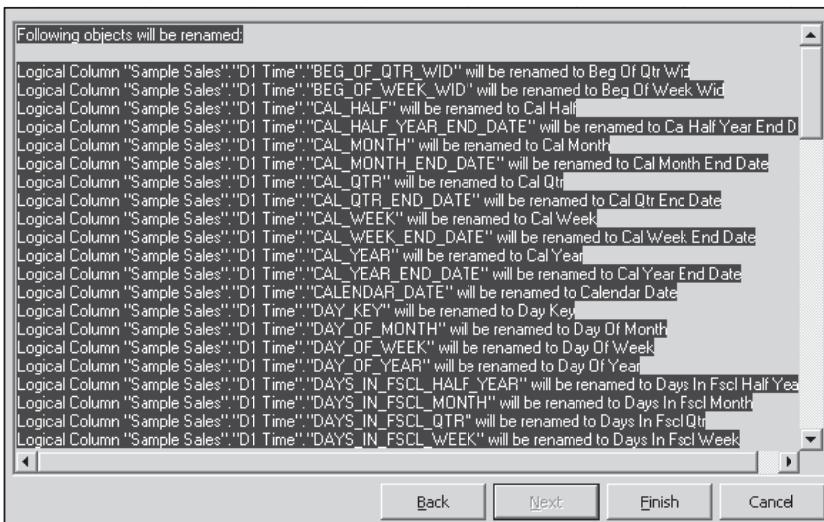
11. Add the rule **Change each occurrence of '\_' into a space.**

|                                                                                                                                                                                                                                                                                            |      |        |        |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------|--------|--------|
| All text uppercase<br>All text lowercase<br>First letter capital<br>First letter of each word capital<br>Insert space before each first uppercase letter, unless on the first position or there is a space already<br>Change each occurrence of '_' into a space.<br>Change specified text | Add  | Remove | Up     | Down   |
| All text lowercase.<br>Change each occurrence of '_' into a space.                                                                                                                                                                                                                         | Back | Next   | Finish | Cancel |

12. Add the rule **First letter of each word capital**.



13. Click **Next** to open the Finish screen. Verify that all logical columns will be named according to the rename rules you selected.



14. Click Finish.

---

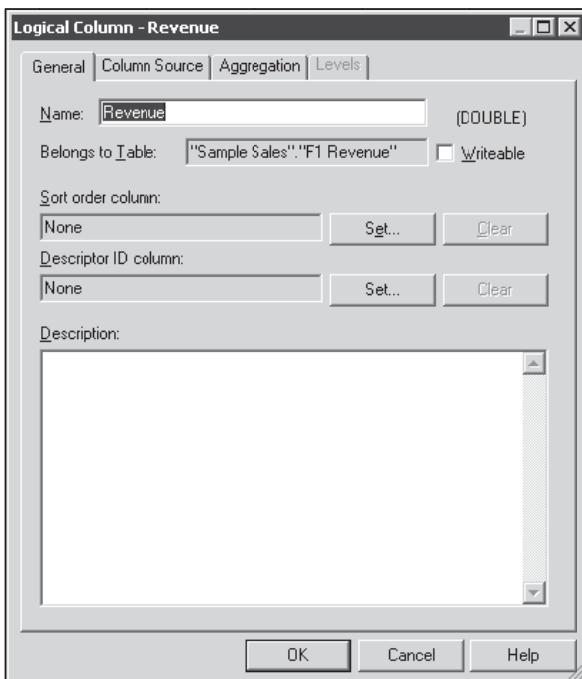
### Lab 3.3 Delete Unnecessary Logical Objects and Create Simple Measures

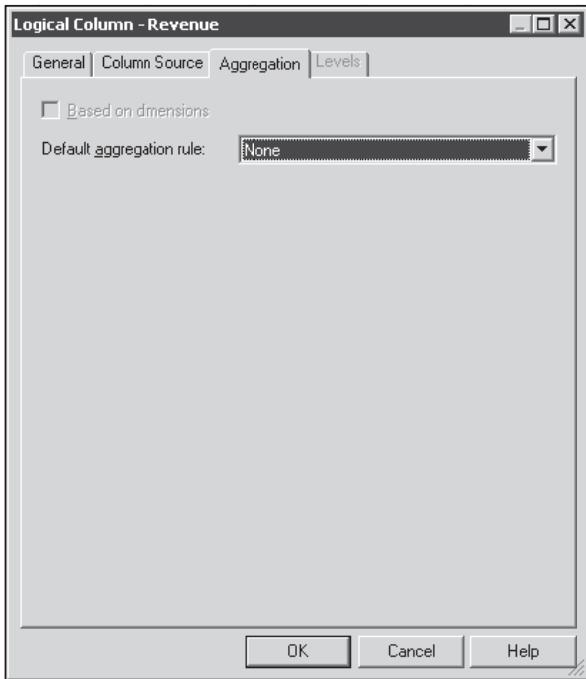
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|       |                                                                 |
|-------|-----------------------------------------------------------------|
| Goals | • Delete Unnecessary Logical Objects and Create Simple Measures |
| Time  | 15 minutes                                                      |

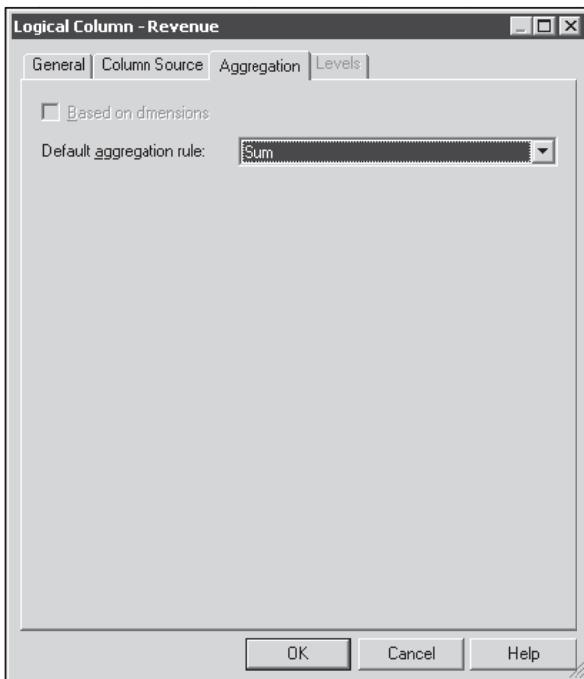
**Solution:**

1. F1 Revenue contains only the **Revenue** and **Units** columns ,delete all other columns.
2. Double-click the **Revenue** logical column to open the Logical Column dialog box and Click the **Aggregation** tab

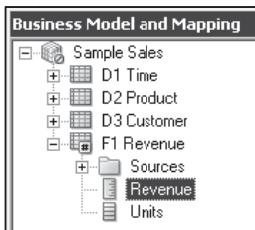




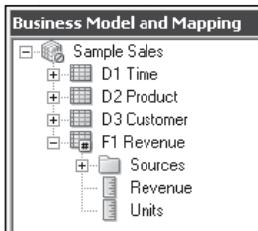
Change the default aggregation rule to **Sum**.



3. Click **OK** to close the Logical Column dialog box



4. Repeat the steps to define the **SUM** aggregation rule for the **Units** logical column



5. Save the repository without checking global consistency

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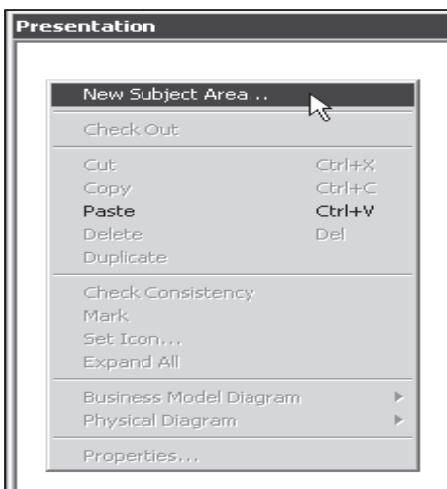
## Lab 4.1 Building the Presentation Layer of a Repository

---

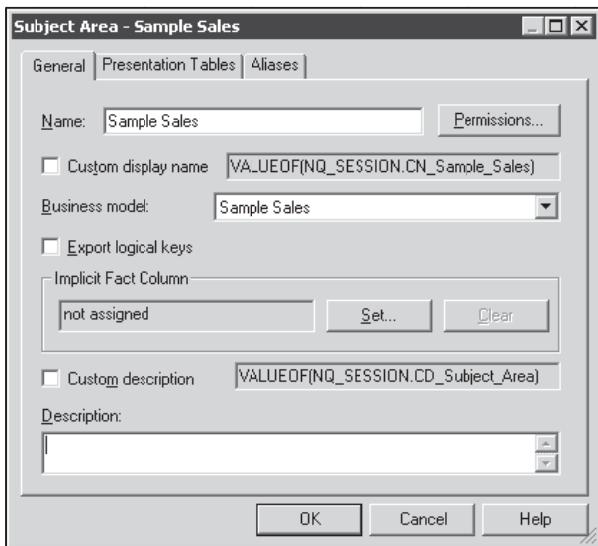
|       |                                                   |
|-------|---------------------------------------------------|
| Goals | • Building the Presentation Layer of a Repository |
| Time  | 30 minutes                                        |

**Solution:**

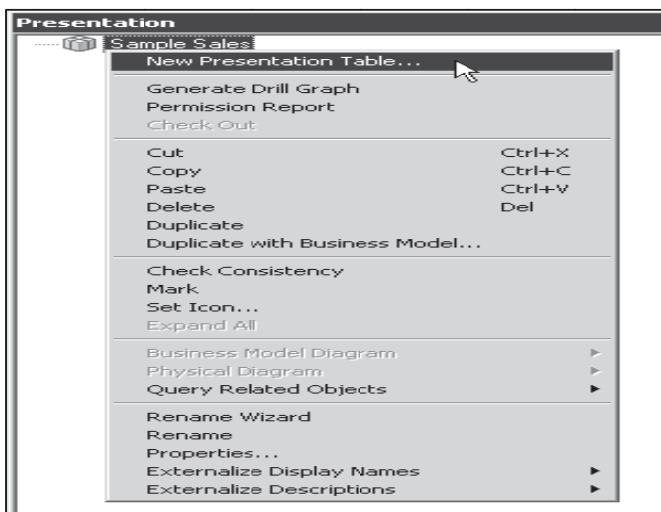
1. To Create a Subject Area by Right-click the white space in the Presentation layer and select New Subject Area to open the Subject Area dialog box.



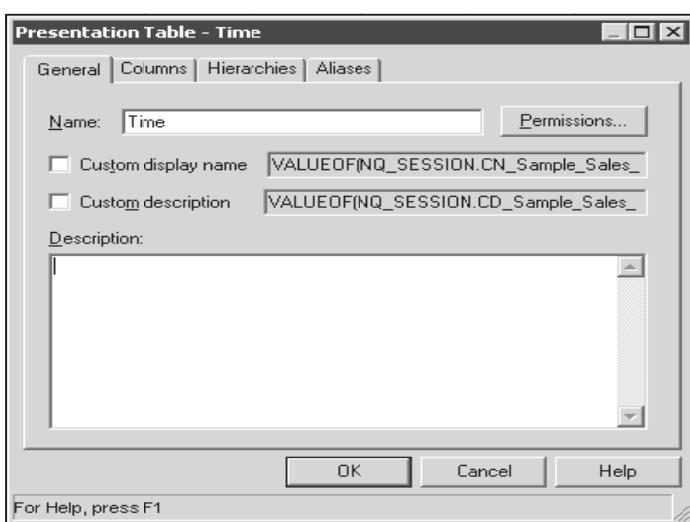
2. On the General tab, enter **Sample Sales** as the name of the subject area and Click **OK** to close the Subject Area dialog box.



3. Right-click the **Sample Sales** subject area and select **New Presentation Table** to open the Presentation Table dialog box.



4. On the General tab, enter **Time** as the name of the presentation table.



- Click **OK** to close the Presentation Table dialog box. The Time presentation table is added to the Sample Sales subject area.



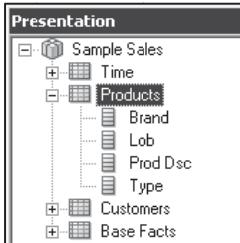
- Repeat the process and add three more presentation tables: **Products**, **Customers**, and **Base Facts**
- To create** Presentation Columns, In the BMM layer, expand the **D1 Time** logical table and

Use **Ctrl+ Click** to select the following logical columns:

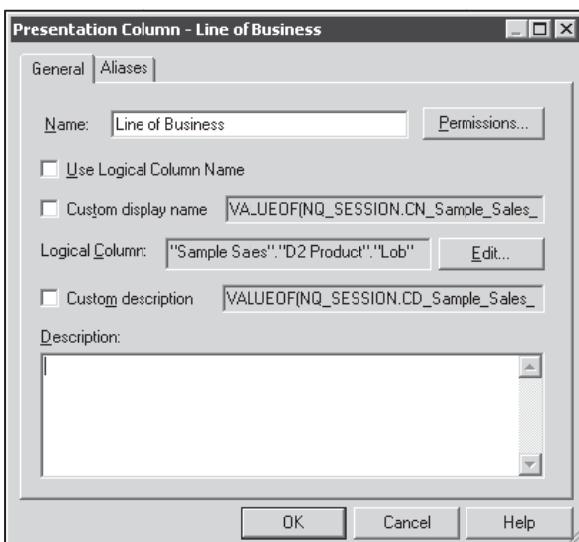
- Calendar Date**
- Per Name Half**
- Per Name Month**
- Per Name Qtr**
- Per Name Week**
- Per Name Year**

- Drag the selected logical columns to the **Time** presentation table in the Presentation layer
- Repeat the process and add the following logical columns to the remaining presentation tables:
- Products:** Drag **Brand**, **Lob**, **Prod Dsc**, **Type** from **D2 Product**.
- Customers:** Drag **Cust Key**, **Name** from **D3 Customer**.
- Base Facts:** Drag **Revenue**, **Units** from **F1 Revenu**

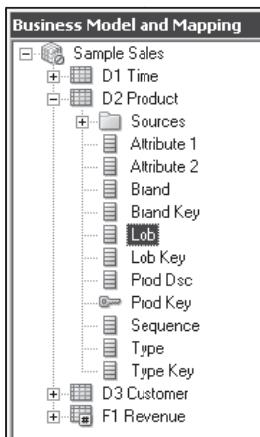
- Rename Presentation columns in the Presentation layer by expand the **Products** presentation table



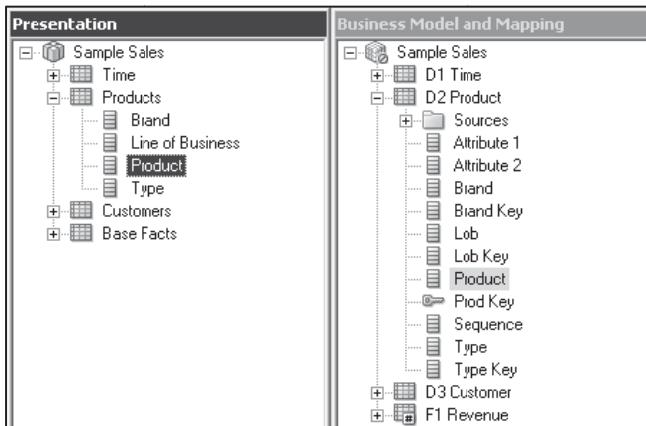
11. Double-click the **Lob** presentation column to open the Presentation Column dialog box. On the General tab notice that "Use Logical Column Name" is selected. When you drag a logical column to a presentation table, the resulting presentation column inherits the logical column name by default. In this example the Lob presentation column inherits the name of the logical column "Sample Sales"."D2 Product"."Lob"
12. Deselect **Use Logical Column Name**. The Name field is now editable and Enter **Line of Business** in the Name field.



13. In the BMM layer, expand **D2 Product**. Notice that the **Lob** logical column name is not changed. The point here is you can change object names in the Presentation layer without impacting object names in the BMM or Physical layers.



14. In the BMM layer, rename the **Prod Dsc** logical column to **Product**. Notice that the name change is inherited by the corresponding presentation column.

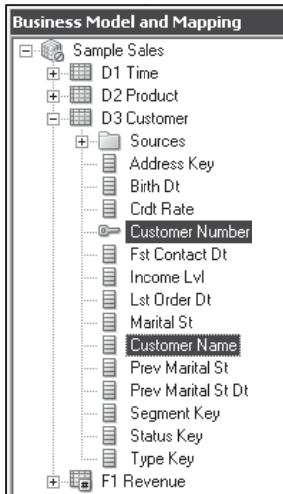


- 
15. Make the following name changes to logical objects in the BMM layer so that the names of the corresponding presentation columns are also changed:

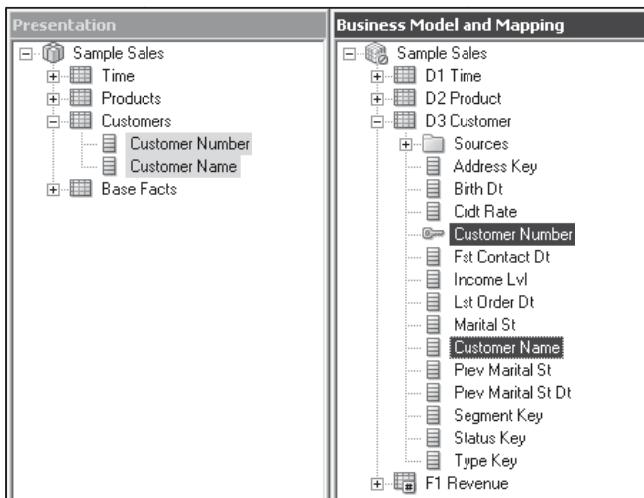
For the **D3 Customer** logical table:

Change **Cust Key** to **Customer Number**.

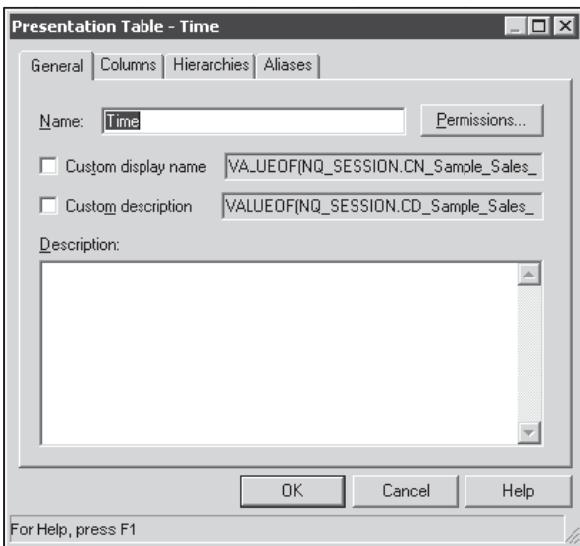
Change **Name** to **Customer Name**.



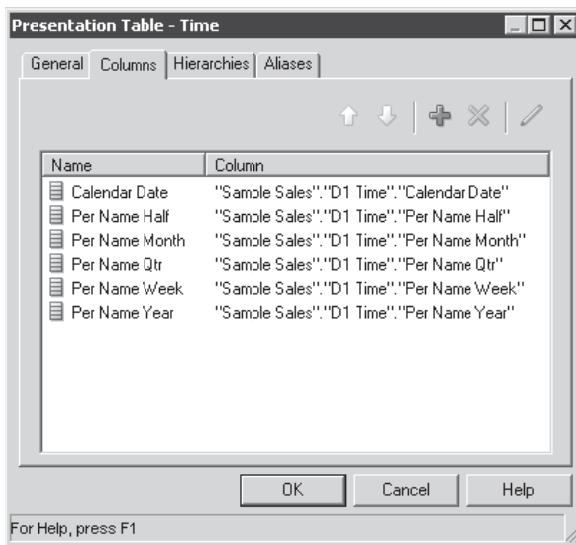
16. Confirm that the corresponding presentation column names are changed.



17. In the Presentation layer, double-click the **Time** presentation table to open the Presentation Table dialog box

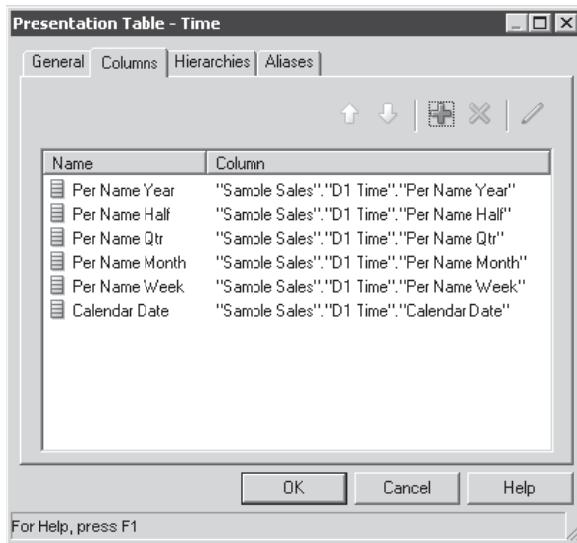


18. Click the **Columns** tab

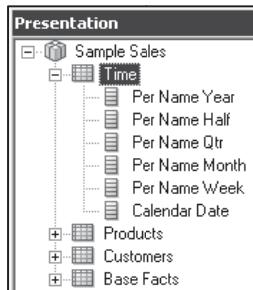


19. Select columns and use the up and down arrows, or drag the columns. to rearrange the presentation columns into the following order from top to bottom:

Per Name Year  
Per Name Half  
Per Name Qtr  
Per Name Month  
Per Name Week  
Calendar Date



20. Click **OK** to close the Presentation Table dialog box and confirm that the presentation column order is changed in the Presentation layer.



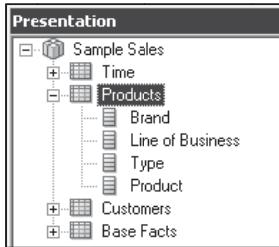
21. Repeat the steps to reorder the columns in the **Products** presentation table:

Brand

Line of Business

Type

Product



---

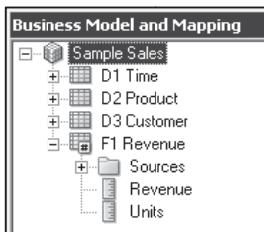
## Lab 4.2 Create a Calculation Measure Derived from Existing Columns

---

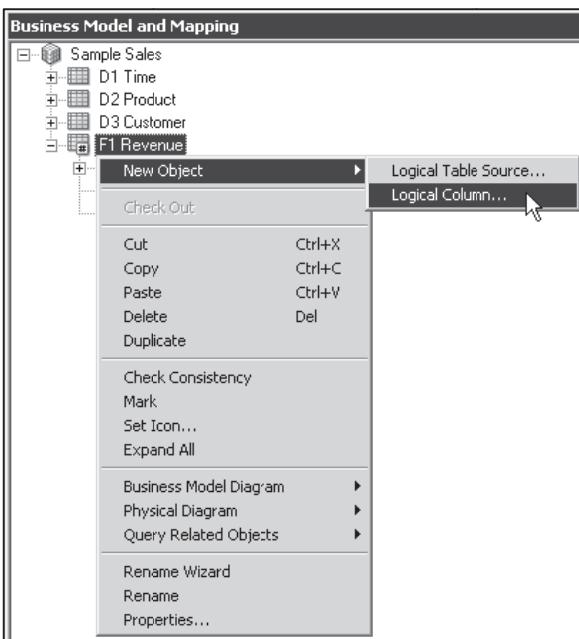
|       |                                                              |
|-------|--------------------------------------------------------------|
| Goals | • Create a Calculation Measure Derived from Existing Columns |
| Time  | 30 minutes                                                   |

**Solution:**

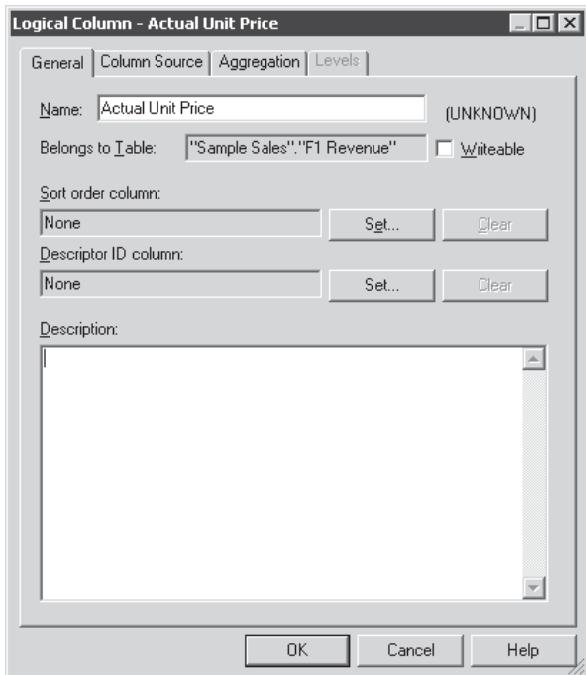
1. In the BMM layer, expand **Sample Sales > F1 Revenue**.



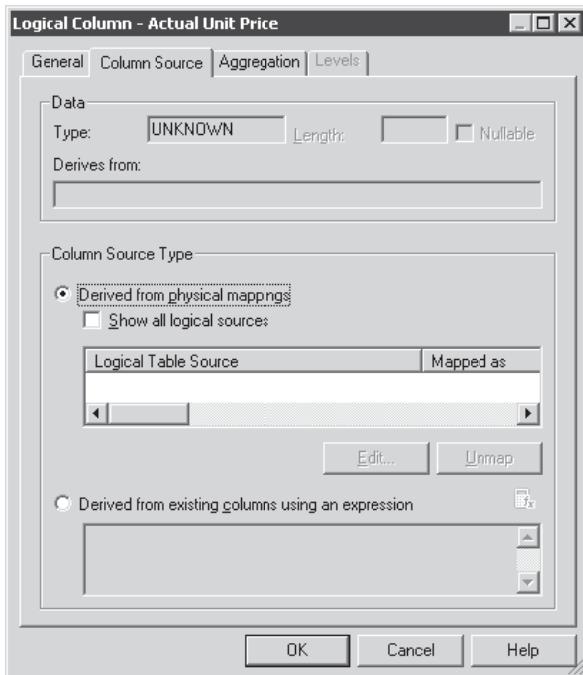
2. Right-click **F1 Revenue** and select **New Object > Logical Column** to open the Logical Column dialog box.



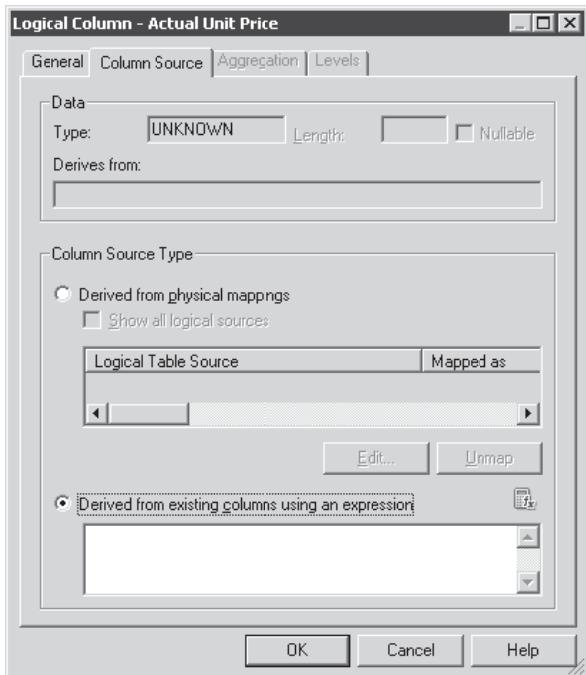
3. On the General tab, enter **Actual Unit Price** in the Name field.



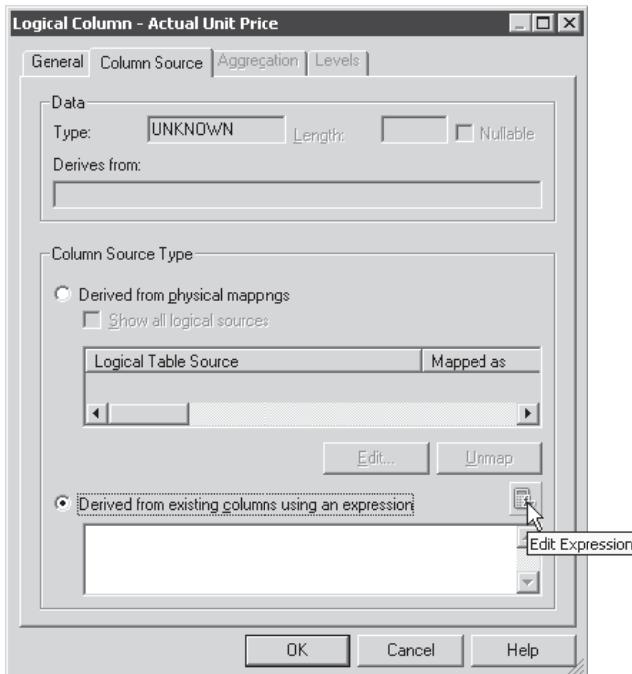
4. Click the **Column Source** tab.



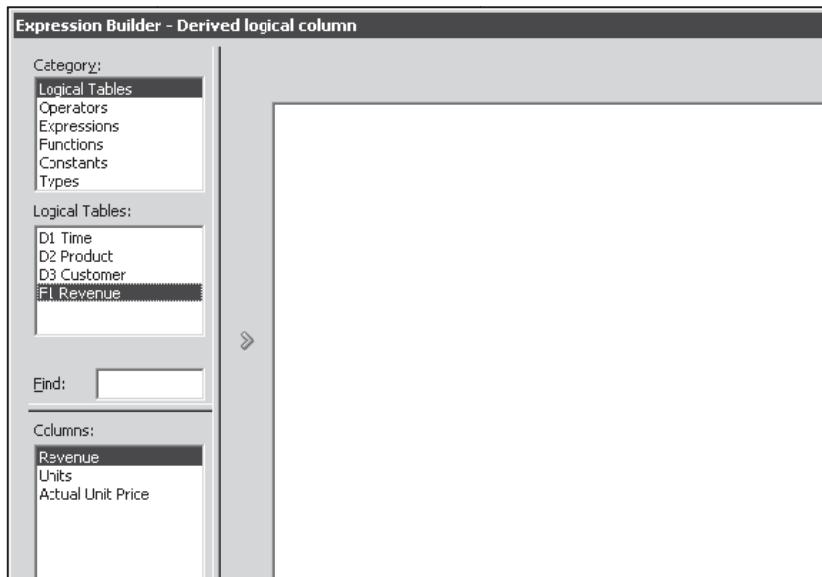
5. Select **Derived from existing columns using an expression**.



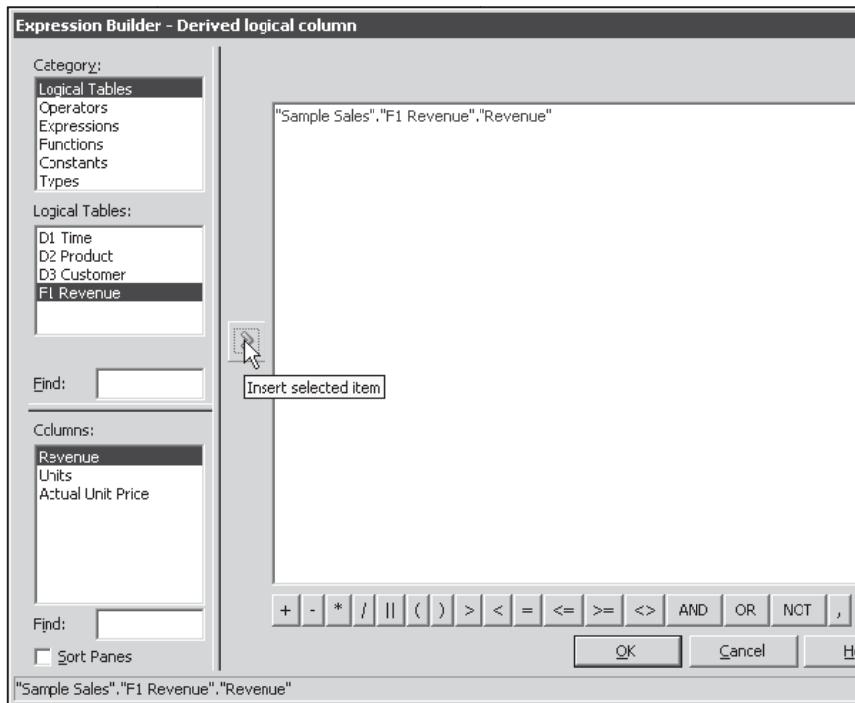
- 6 . Click the **Edit Expression** button to open Expression Builder.



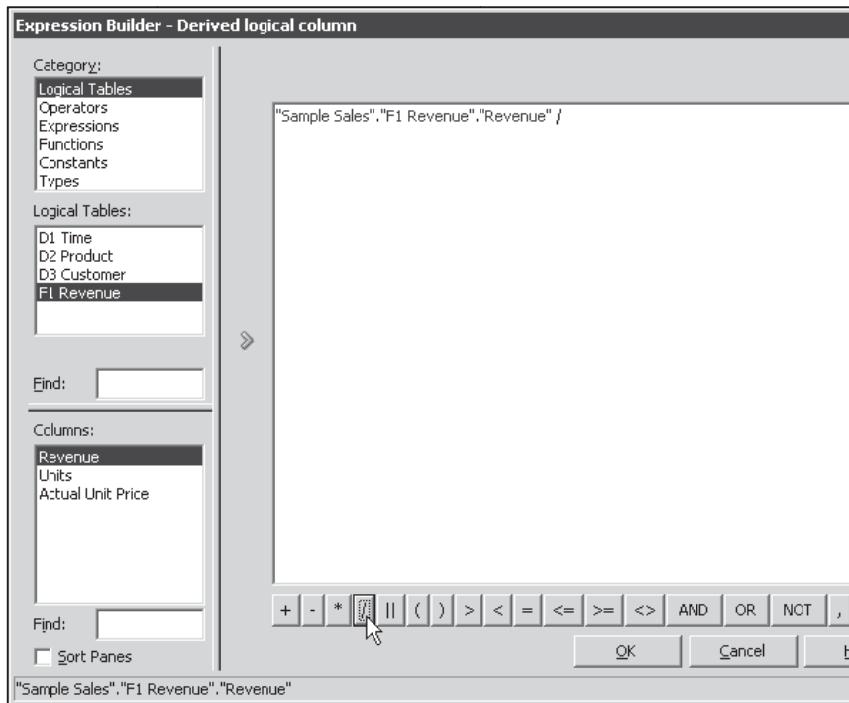
7. In the left pane select **Logical Tables > F1 Revenue > Revenue**.



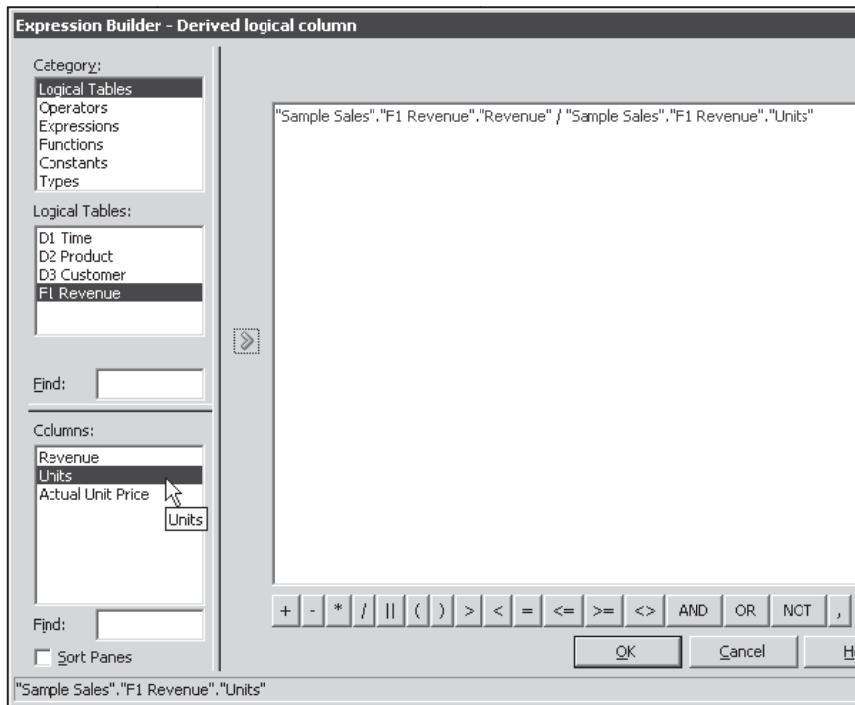
- 8 . Click the **Insert selected item** button to move the Revenue column to the right pane.



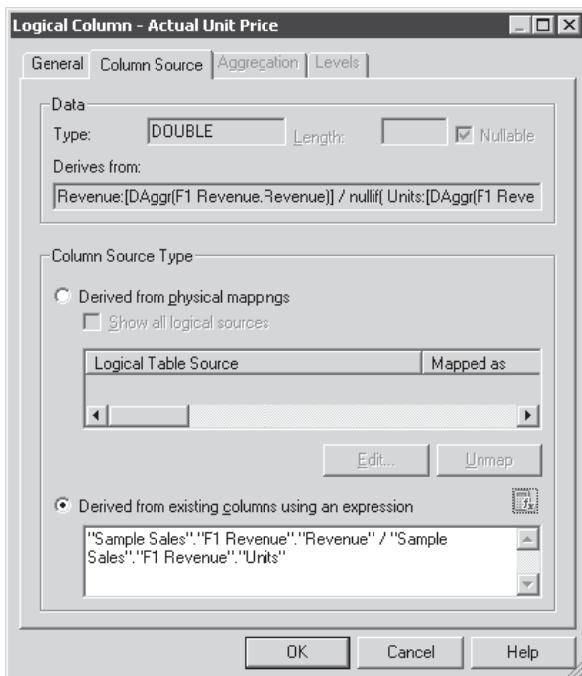
9. Click the **division operator** to add it to the expression.



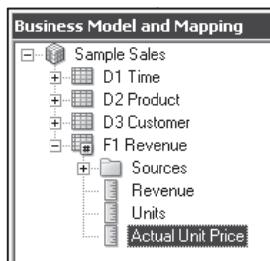
- 10 . In the left pane select **Logical Tables** > **F1 Revenue** and then double-click **Units** to add it to the expression.



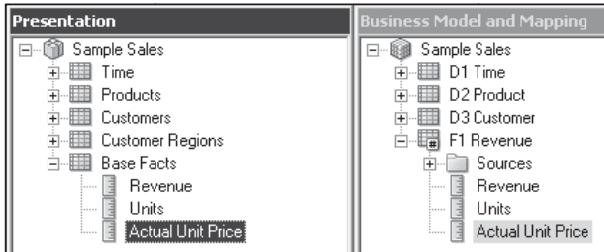
11. Click **OK** to close Expression Builder. Notice that the formula is added to the Logical Column dialog box.



- 12 . Click **OK** to close the Logical Column dialog box. The **Actual Unit Price** calculated measure is added to the business model.



- 13 . Drag Actual Unit Price from the BMM layer to the **Base Facts** presentation table in the Presentation layer.



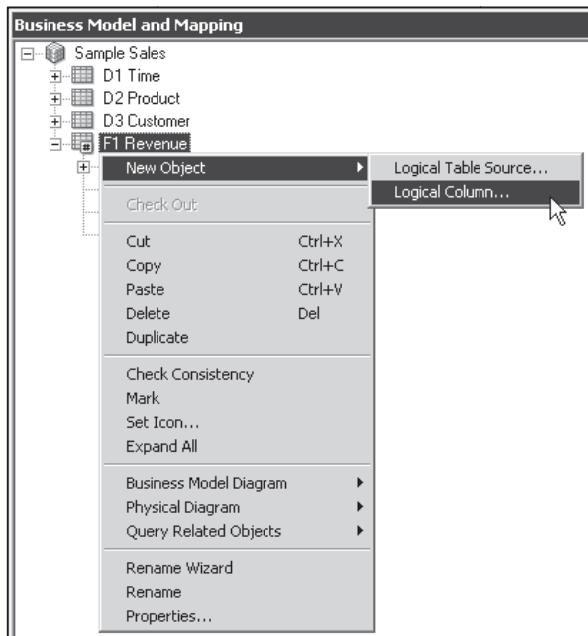
- 14 . Save the repository and check consistency. Fix any errors or warnings before proceeding.

### Lab 4.3 Create a Calculation Measure Using a Function

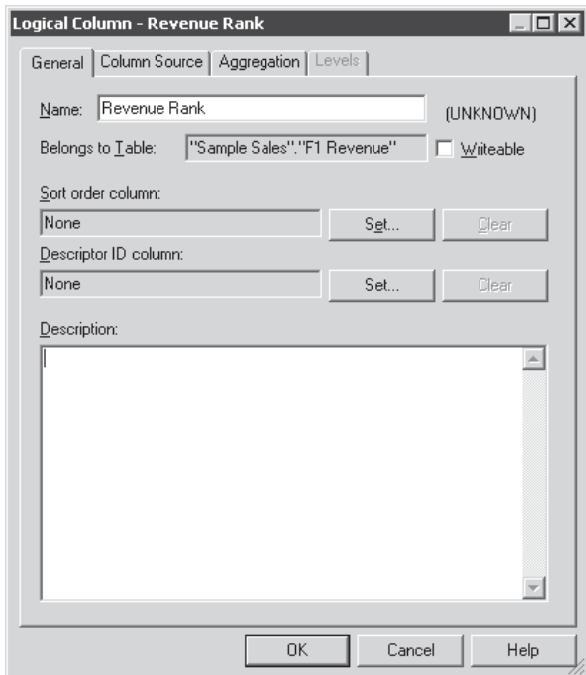
|       |                                                                |
|-------|----------------------------------------------------------------|
| Goals | • Building the Physical Layer of a Repository (Create Aliases) |
| Time  | 25 minutes                                                     |

#### Solution:

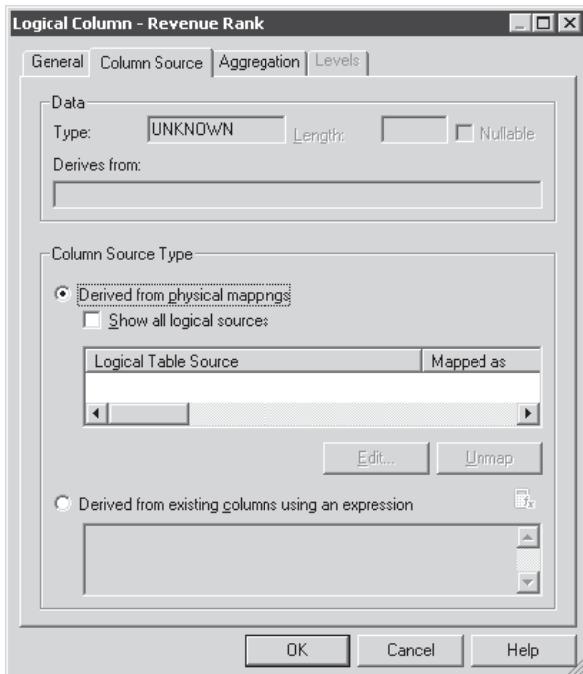
1. In the BMM layer, right-click **F1 Revenue** and select **New Object > Logical Column** to open the Logical Column dialog box.



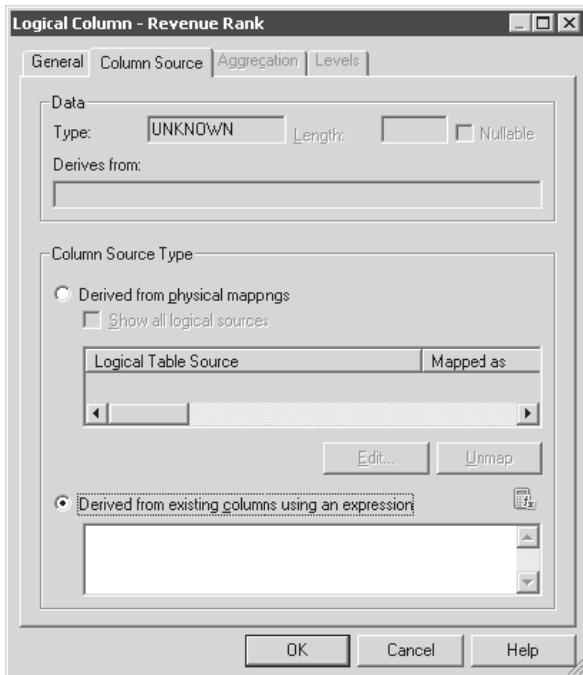
2. On the General tab, enter **Revenue Rank** in the Name field.



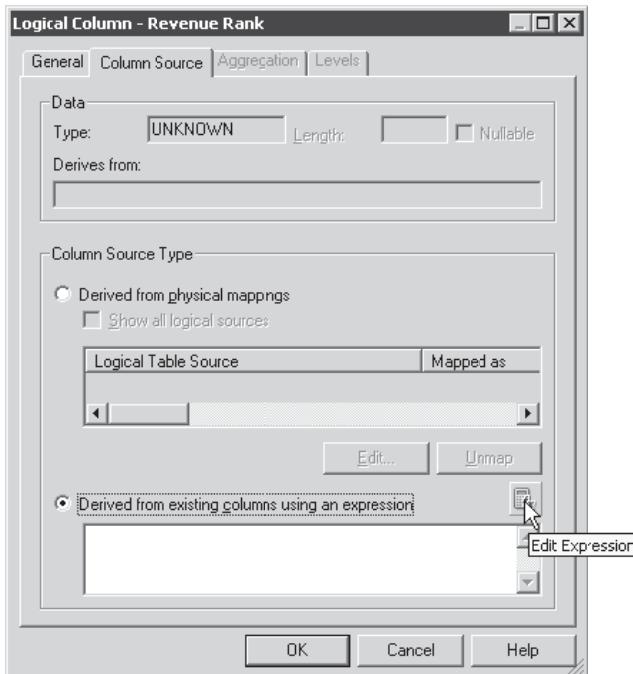
3. Click the **Column Source** tab.



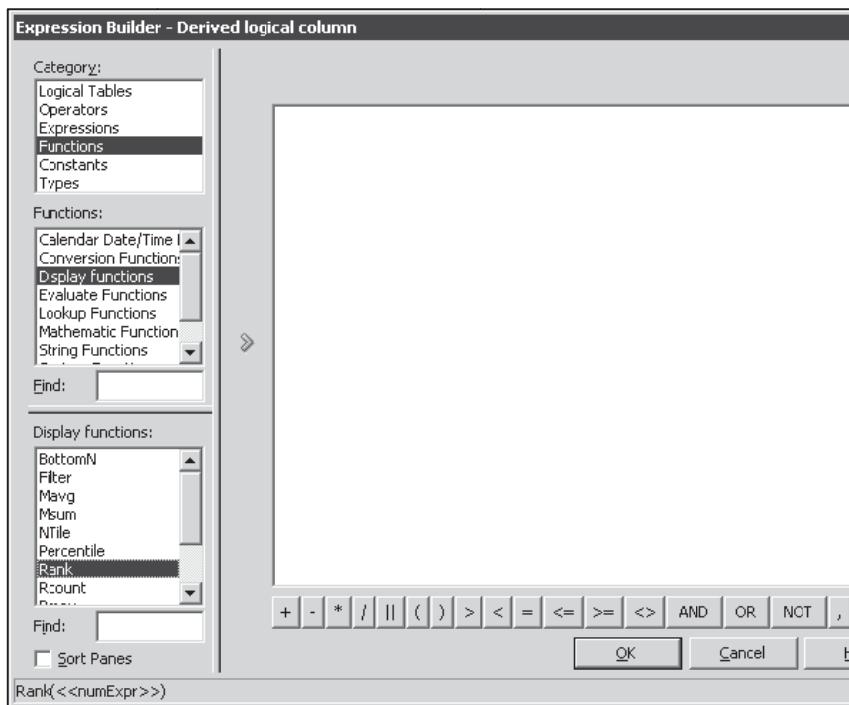
- 4 . Select **Derived from existing columns using an expression**.



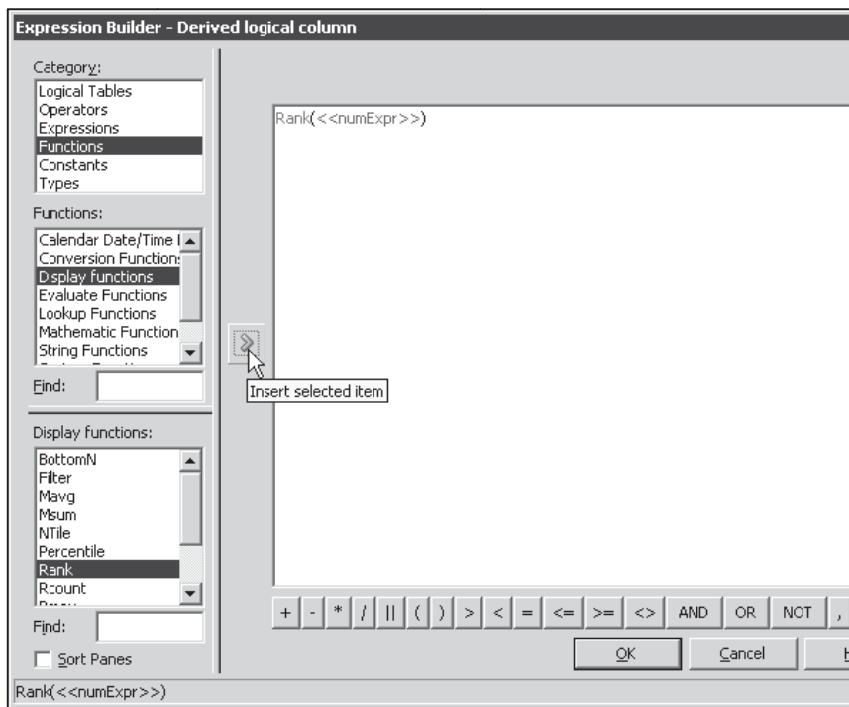
5. Click the **Edit Expression** button to open Expression Builder.



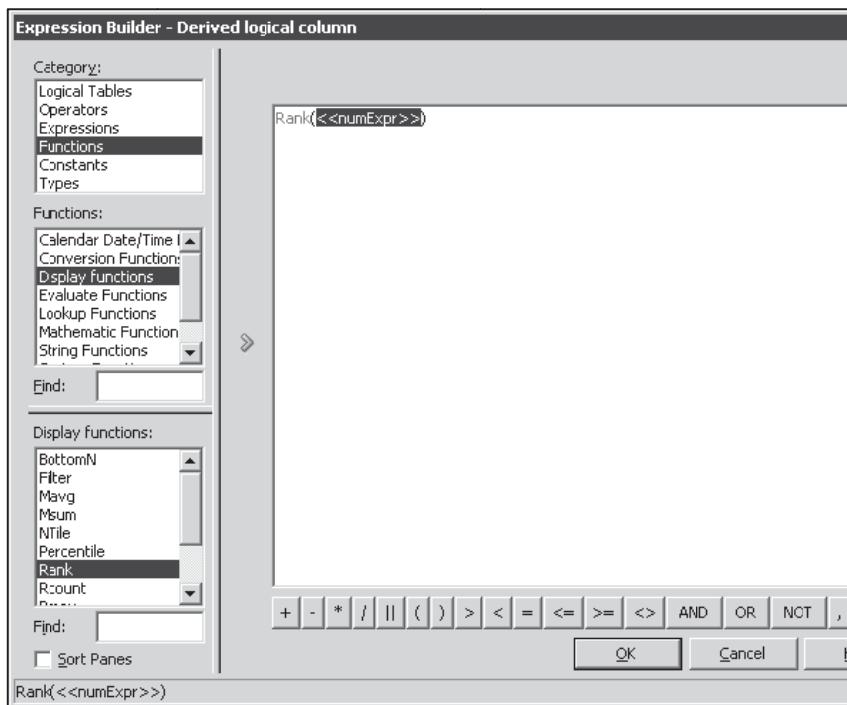
6. In the left pane select **Functions > Display functions > Rank**.



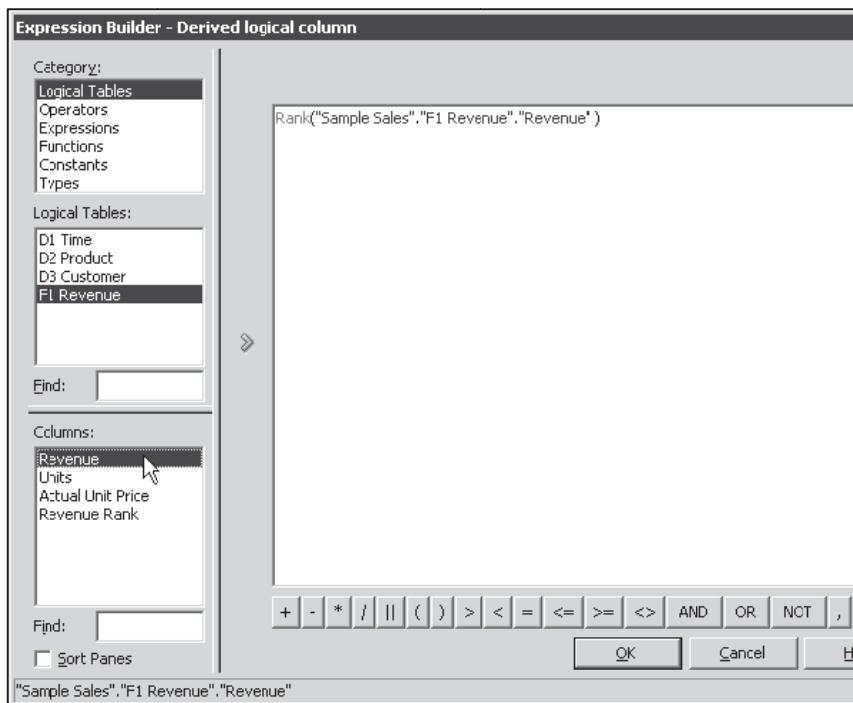
7. Click the **Insert selected item** button to move the Rank function to the right pane.



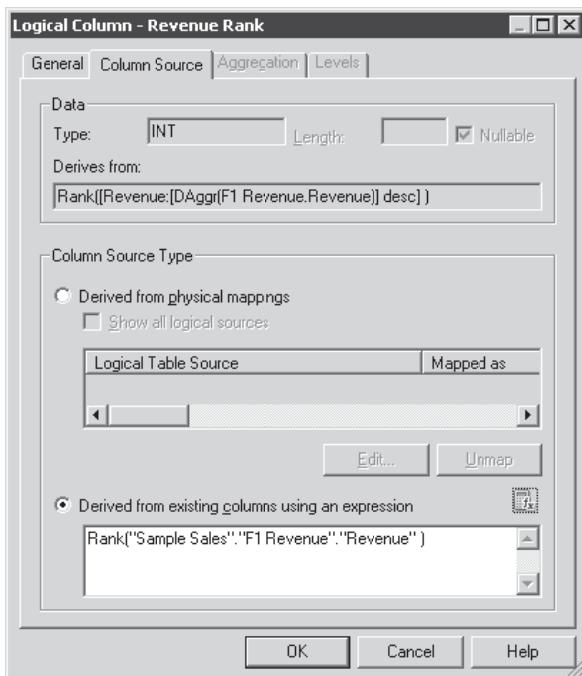
- 8 . Click <<numExpr>> in the expression.



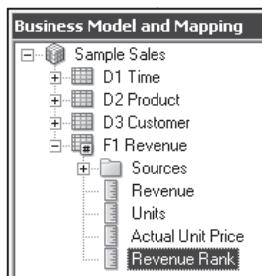
9. In the left pane select **Logical Tables > F1 Revenue** and then double-click **Revenue** to add it to the expression.



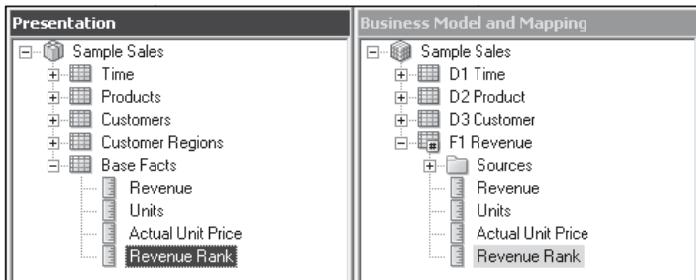
10 . Click **OK** to close Expression Builder. Notice that the formula is added to the Logical Column dialog box.



- Click **OK** to close the Logical Column dialog box. The Revenue Rank calculated measure is added to the business model.



- 12 . Drag Revenue Rank from the BMM layer to the **Base Facts** presentation table in the Presentation layer.



- 13 . Save the repository and check consistency. Fix any errors or warnings before proceeding.



- 14 . Close the repository.

---

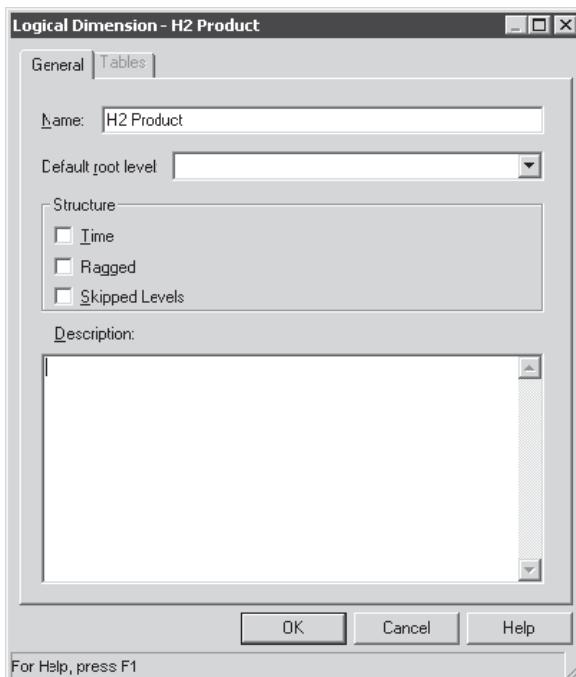
#### Lab 4.4 Create a Logical Dimension with Level-Based Hierarchy

---

|       |                                                         |
|-------|---------------------------------------------------------|
| Goals | • Create a Logical Dimension with Level-Based Hierarchy |
| Time  | 40 minutes                                              |

**Solution:**

1. In the BMM layer, right-click the **Sample Sales** business model and select **New Object > Logical Dimension > Dimension with Level-Based Hierarchy** to open the Logical Dimension dialog box.
2. Name the logical dimension **H2 Product**.

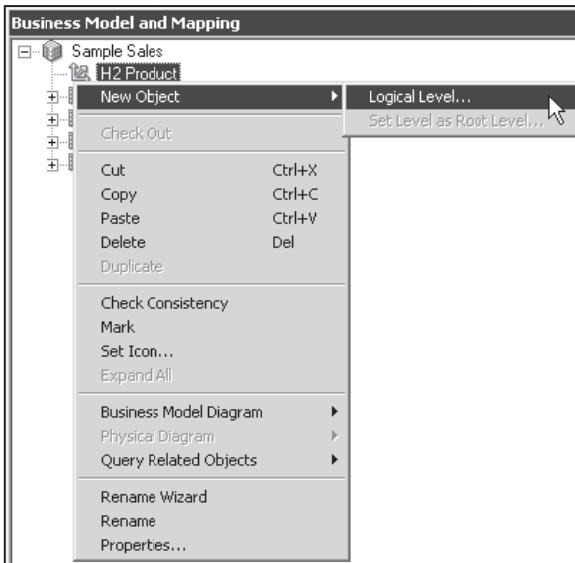


3. Click **OK**. The logical dimension is added to the Sample Sales business model.

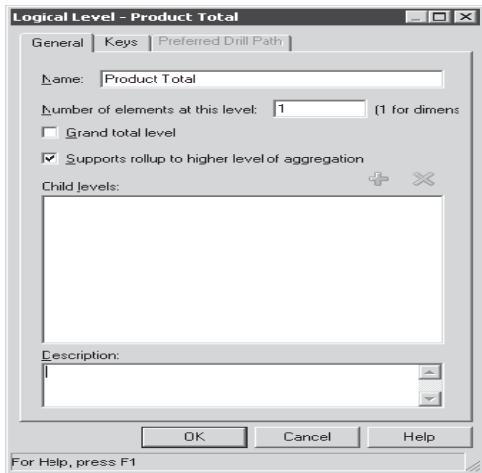


4. Create Logical Levels

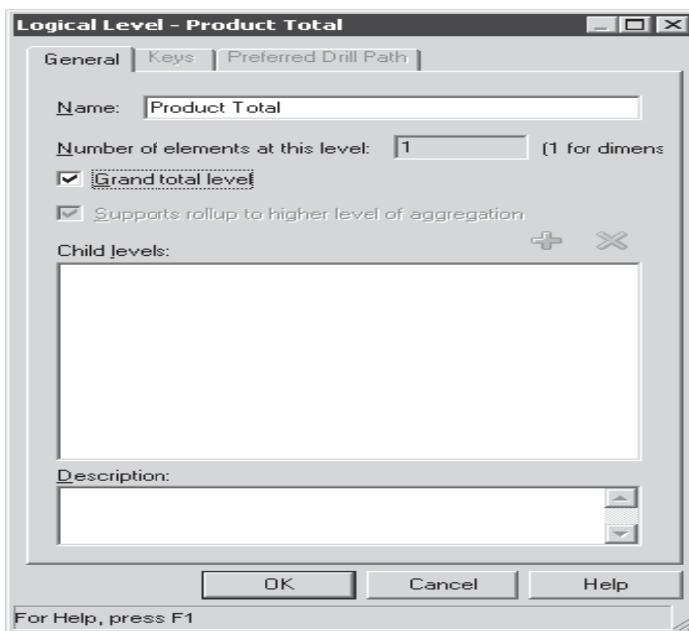
Right-click H2 Product and select New Object > Logical Level.



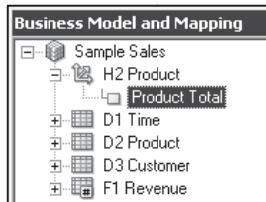
5. Name the logical level Product Total .



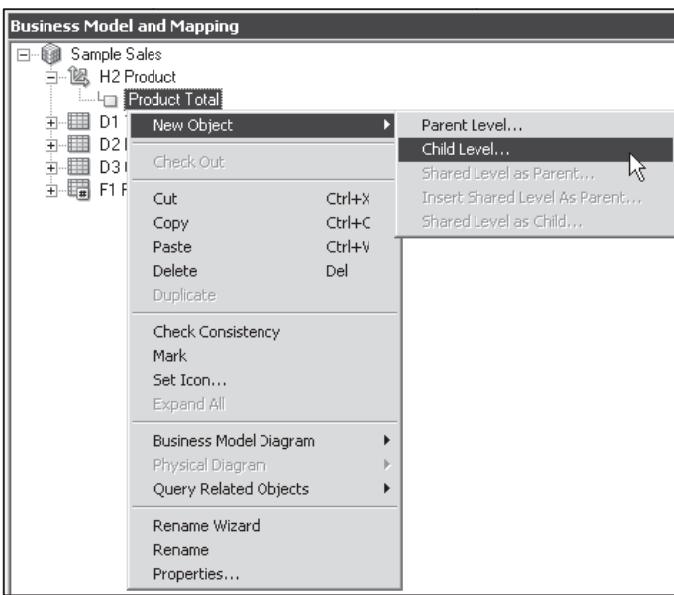
- 6 . Because this level represents the grand total for products, select the Grand total level check box.



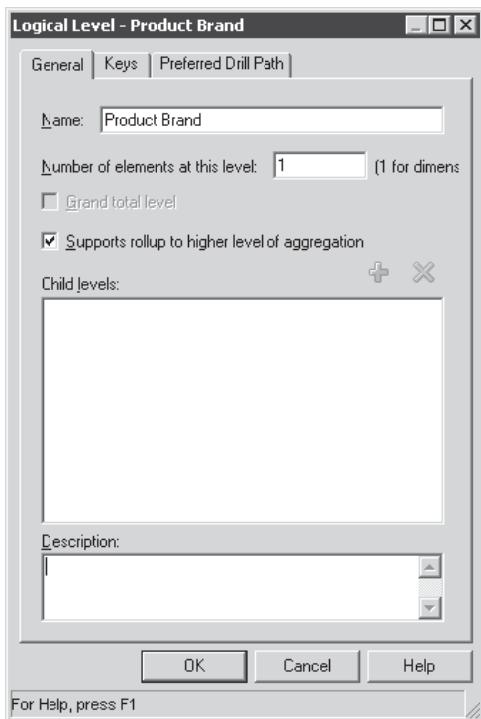
- Click OK to close the Logical Level dialog box. The Product Total level is added to the H2 Product logical dimension.



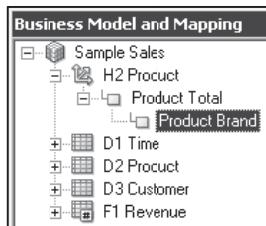
- Right-click Product Total and select New Object > Child Level to open the Logical Level dialog box.



- 6 . Name the logical level Product Brand.



7. Click OK to close the Logical Level dialog box. The Product Brand level is added to the logical dimension.

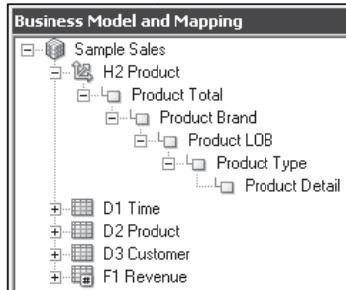


8 . Repeat the steps to add the following child levels:

Product LOB as a child of Product Brand

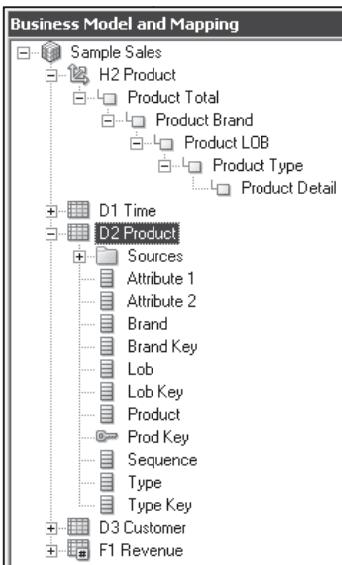
Product Type as a child of Product LOB

Product Detail as a child of Product Type

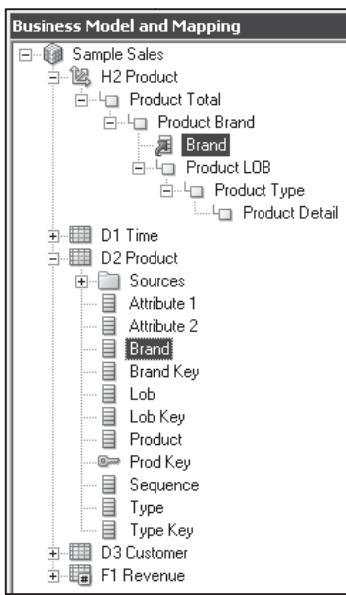


9. Associate Logical Columns with Logical Levels

Expand the D2 Product logical table.

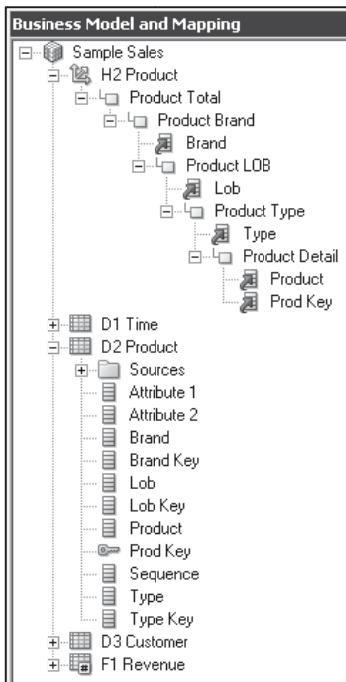


10. Drag the Brand column from D2 Product to the Product Brand level in H2 Product.



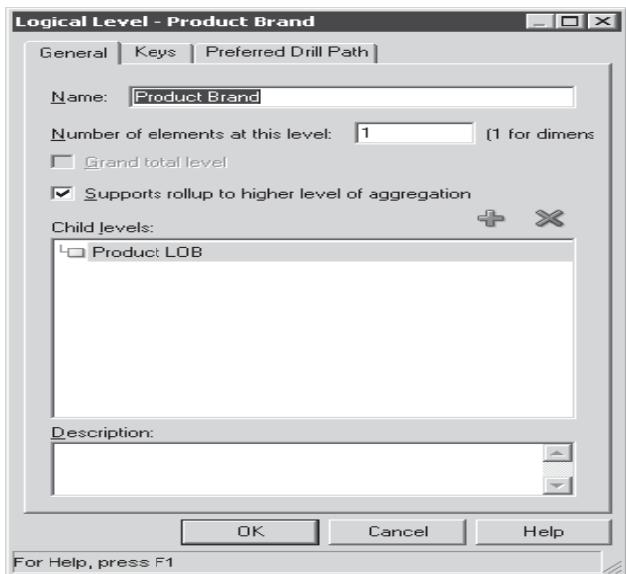
11. Continue dragging logical columns from the D2 Product logical table to their corresponding levels in the H2 Product logical dimension:

| Logical Column | Logical Level  |
|----------------|----------------|
| Lob            | Product LOB    |
| Type           | Product Type   |
| Product        | Product Detail |
| Prod Key       | Product Detail |

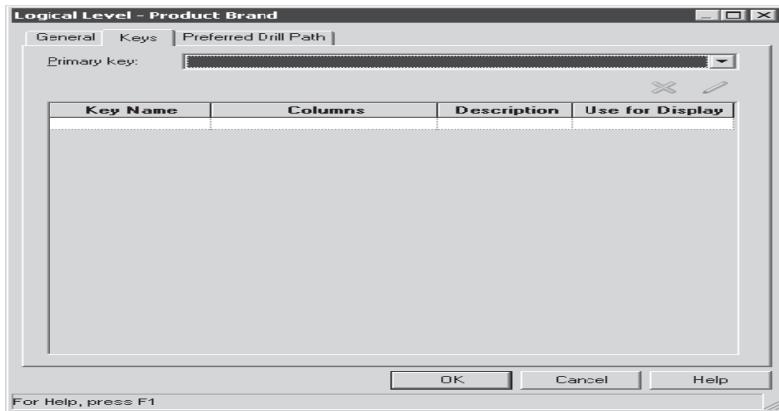


## 12. Set Logical Level Keys

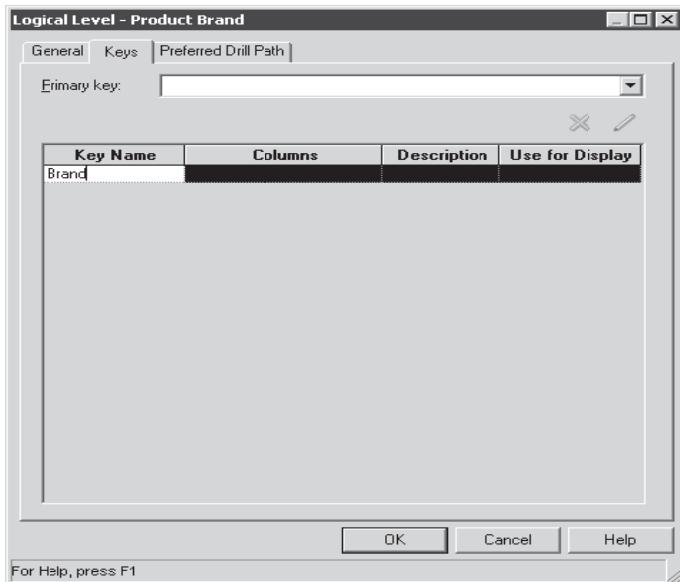
Double-click the Product Brand logical level to open the Logical Level dialog box. On the General tab, notice that the Product LOB child level is displayed.



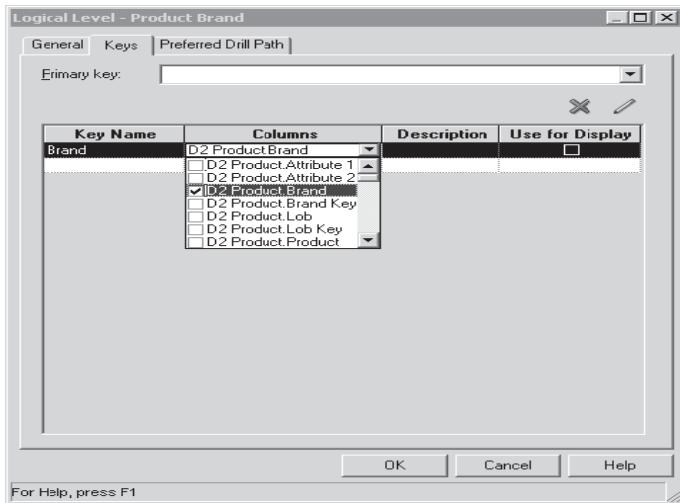
13. Click the Keys tab.



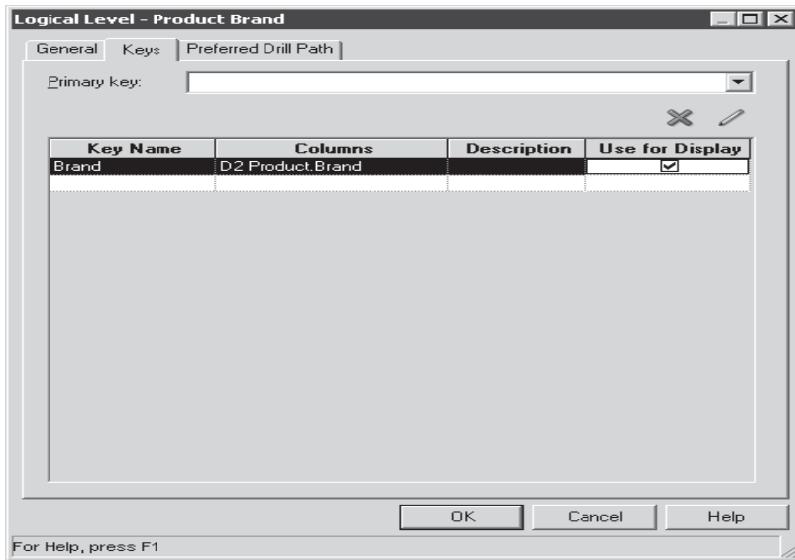
14 . Enter Brand for Key Name.



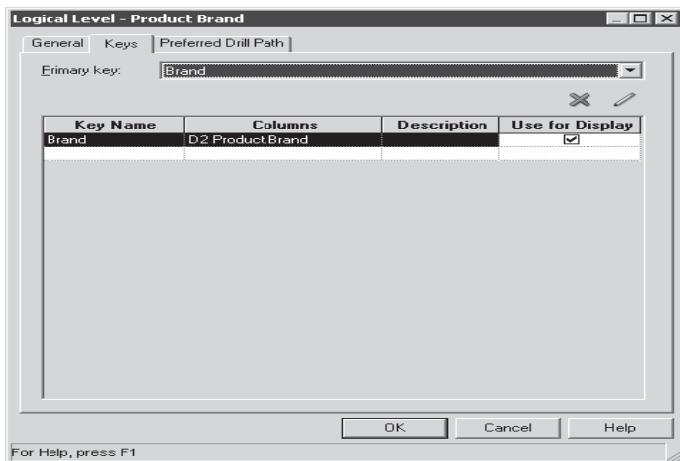
- 15 . In the Columns field, use the drop down list to select D2 Product.Brand.



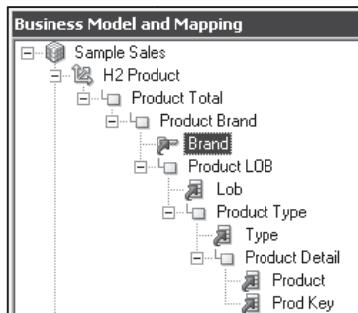
- 16 . Check Use for Display. When this is selected, users can drill down to this column from a higher level.



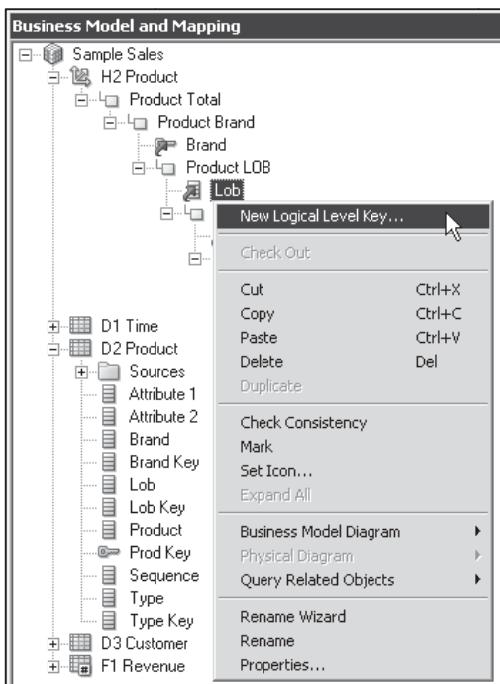
17. Set Brand as the Primary key.



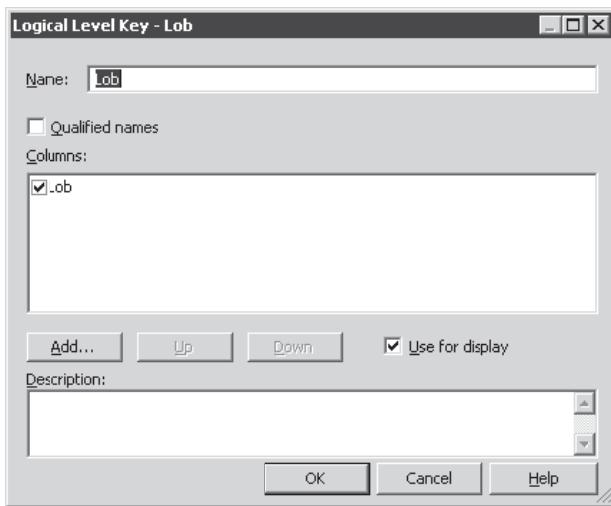
18. Click OK to close the Logical Level dialog box. The icon changes for Brand to show that it is the key for the Product Brand level.



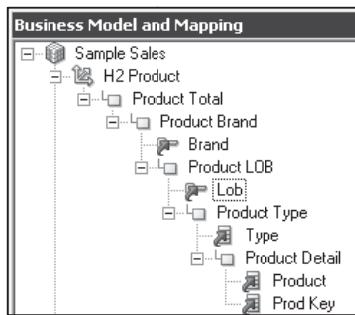
19. Use a different technique to create a logical level key: Right-click Lob for the Product LOB level and select New Logical Level Key to open the Logical Level Key dialog box.



20. In the Logical Level Key dialog box, accept the defaults and click OK.



- 21 . The icon changes for Lob to show that it is the key for the Product LOB level.



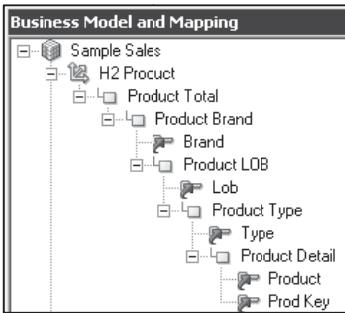
- 22 . Use either method to set the remaining keys for the H2 Product logical dimension:

| Logical Level | Logical Level Key | Use for Display |
|---------------|-------------------|-----------------|
| Product Type  | Type              | Yes             |

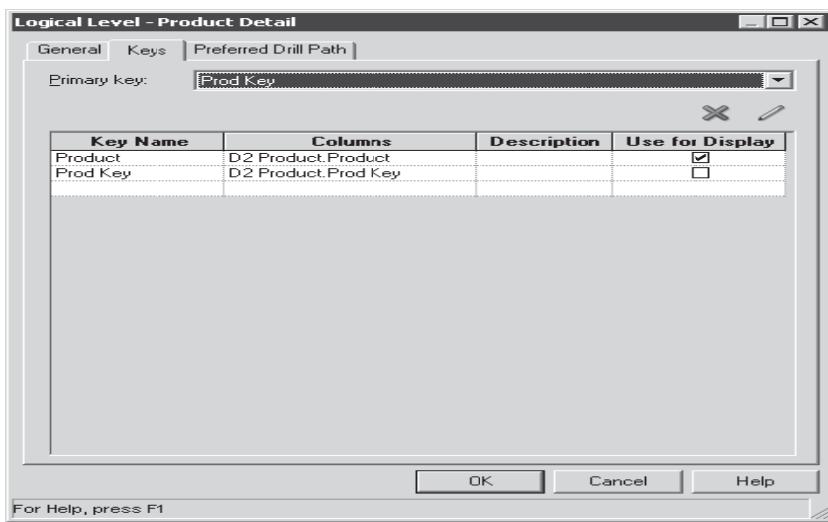
---

|                |          |     |
|----------------|----------|-----|
| Product Detail | Product  | Yes |
| Product Detail | Prod Key | No  |

Your results should look similar to the screenshot:

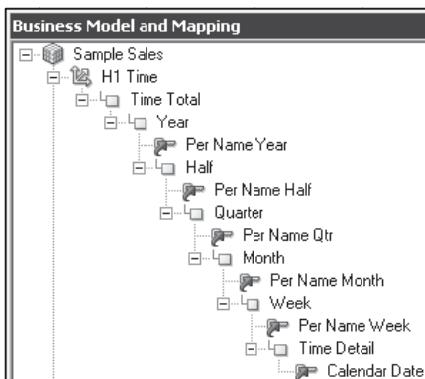


- 
23. Set Prod Key as the primary key for the Product Detail level. Hint: Double-click the level and select the Keys tab  
And drag dimension H2 Product to Product in Presentation layer



24. Similarly create Logical Dimension for Time and drag it to Time in Presentation layer

| Logical Level | Level Key      | Use for Display |
|---------------|----------------|-----------------|
| Year          | Per Name Year  | Yes             |
| Half          | Per Name Half  | Yes             |
| Quarter       | Per Name Qtr   | Yes             |
| Month         | Per Name Month | Yes             |
| Week          | Per Name Week  | Yes             |
| Day           | Calendar Date  | Yes             |



25. Drag and drop D3 Address of Physical layer to BMM D3 Customer's sources

26. Similarly Create a Logical Dimension for Customer

Use either technique to create a level-based logical dimension named **H3 Customer** for the D3 Customer logical table with the following levels, columns, and keys:

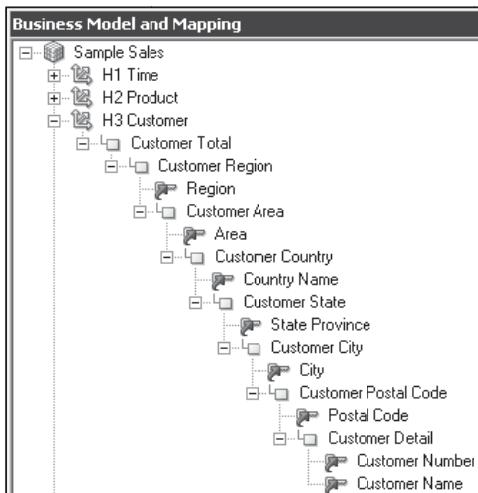
| Level                | Column         | Key            | Use for Display |
|----------------------|----------------|----------------|-----------------|
| Customer Total       | <none>         | <none>         | <none>          |
| Customer Region      | Region         | Region         | Yes             |
| Customer Area        | Area           | Area           | Yes             |
| Customer Country     | Country Name   | Country Name   | Yes             |
| Customer State       | State Province | State Province | Yes             |
| Customer City        | City           | City           | Yes             |
| Customer Postal Code | Postal Code    | Postal Code    | Yes             |

|                 |                 |                 |     |
|-----------------|-----------------|-----------------|-----|
| Customer Detail | Customer Name   | Customer Name   | Yes |
|                 | Customer Number | Customer Number | No  |

Set **Customer Total** as the grand total level.

Set **Customer Number** as the primary key for the Customer Detail level.

Your results should look similar to the screenshot:



- 27 . Save the repository and check global consistency. Fix any errors or warnings before proceeding. Notice that you did not have to make any changes to the Presentation layer.
- 28 . Close the repository.

## Lab 4.5 Create a Logical Dimension with Parent-Child Hierarchy

|              |                                                                |
|--------------|----------------------------------------------------------------|
| <b>Goals</b> | • Building the Physical Layer of a Repository (Create Aliases) |
| <b>Time</b>  | 40 minutes                                                     |

### Solution:

1. In the Select Metadata Objects screen, in the data source view, expand **testBISAMPLE** and select the following tables for import:

**SAMP\_EMPL\_D\_VH**  
**SAMP\_EMPL\_PARENT\_CHILD\_MAP**  
**SAMP\_EMPL\_POSTN\_D**

2. Right-click above tables and select **View Data**.  
 3. Create the following aliases for the tables:

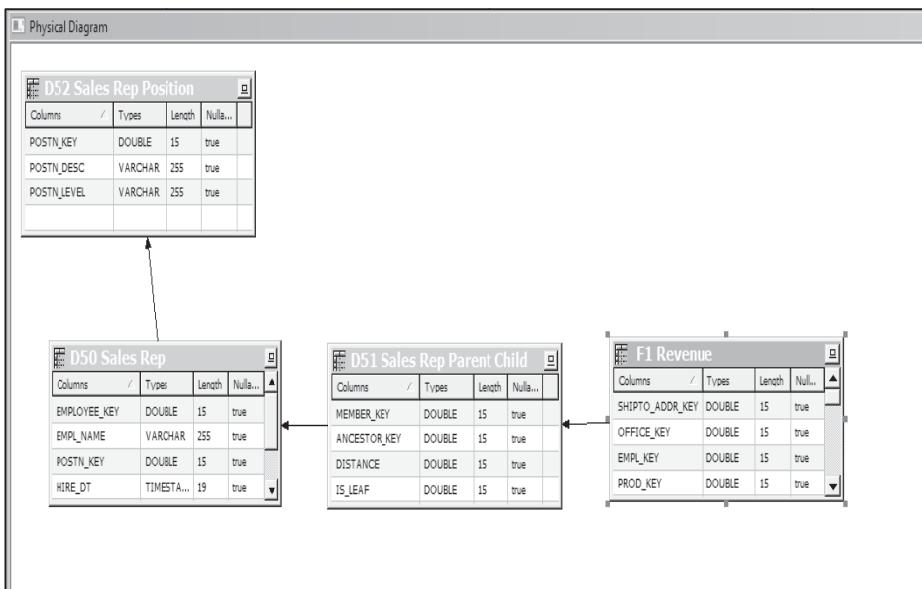
| Table                      | Alias                      |
|----------------------------|----------------------------|
| SAMP_EMPL_D_VH             | D50 Sales Rep              |
| SAMP_EMPL_PARENT_CHILD_MAP | D51 Sales Rep Parent Child |
| SAMP_EMPL_POSTN_D          | D52 Sales Rep Position     |

4. Use the Physical Diagram to create the following physical joins for the alias tables:

"testBISAMPLE"."D:\BI track\OBIEE11g\BISAMPLE.xls".""."D52 Sales Rep Position"."POSTN\_KEY" =  
 "testBISAMPLE" ."D:\BI track\OBIEE11g\BISAMPLE.xls" .""."D50 Sales Rep" ."POSTN\_KEY"

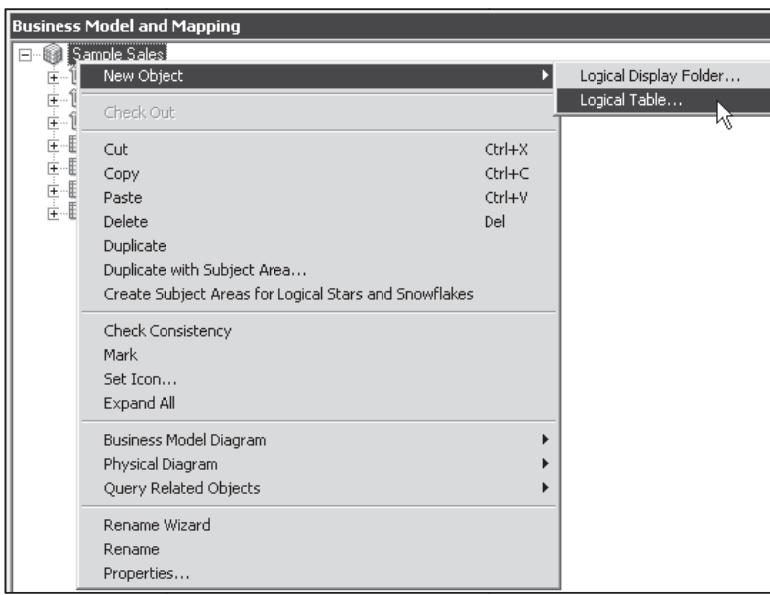
"testBISAMPLE"."D:\BI track\OBIEE11g\BISAMPLE.xls" .""."D50 Sales Rep" ."EMPLOYEE\_KEY" =  
 "testBISAMPLE" ."D:\BI track\OBIEE11g\BISAMPLE.xls" .""."D51 Sales Rep Parent Child" ."ANCESTOR\_KEY"

"testBISAMPLE"."D:\BI track\OBIEE11g\BISAMPLE.xls" .""."D51 Sales Rep Parent Child" ."MEMBER\_KEY" =  
 "testBISAMPLE" ."D:\BI track\OBIEE11g\BISAMPLE.xls" .""." F1 Revenue" ."EMPL\_KEY"

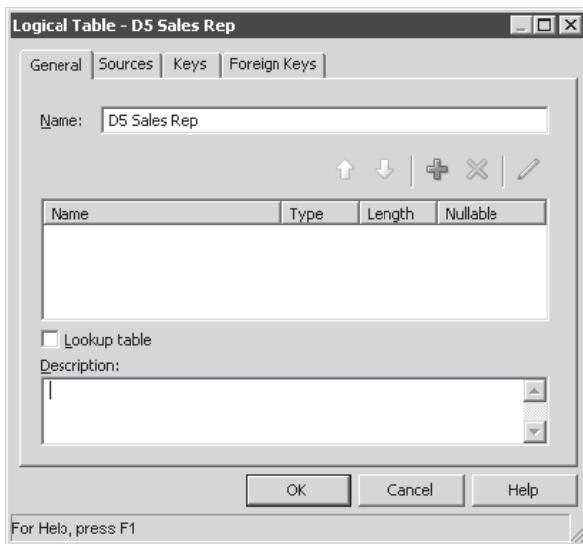


## 5. Create Logical Table and Logical Columns

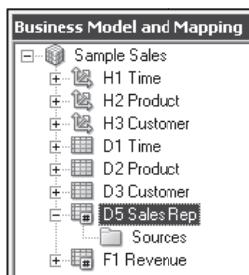
In the BMM layer, right-click the **Sample Sales** business model and select **New Object > Logical Table** to open the Logical Table dialog box.



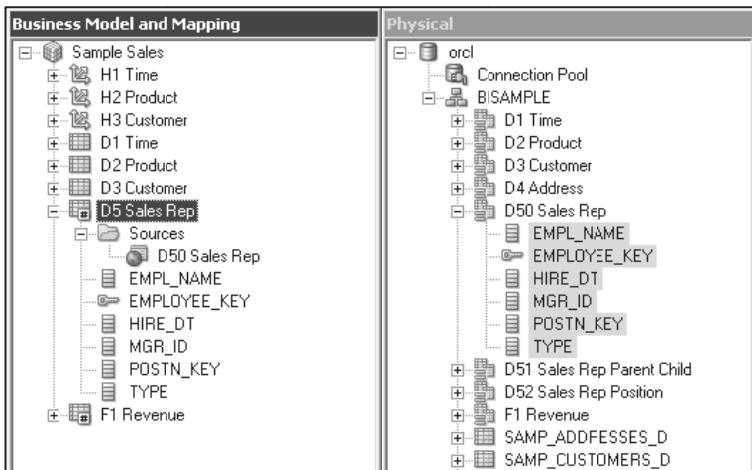
6. On the **General** tab, name the logical table **D5 Sales Rep**.



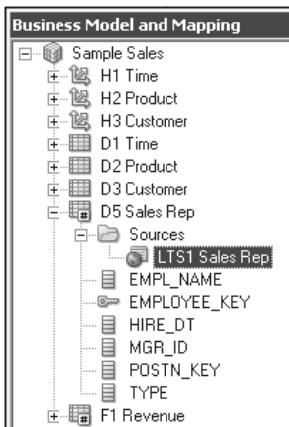
7. Click **OK** to add the logical table to the business model.



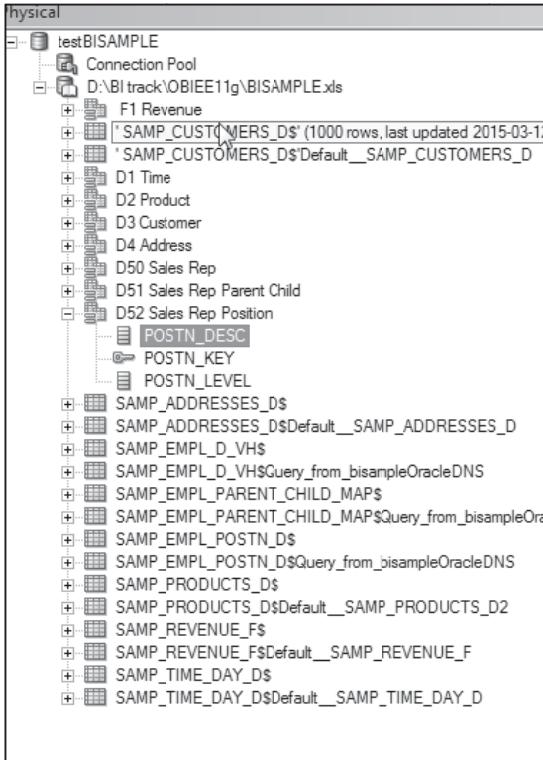
8. Drag all six columns from **D50 Sales Rep** in the Physical layer to **D5 Sales Rep** in the BMM layer. This action creates logical columns and adds a D50 Sales Rep logical table source to D5 Sales Rep.



9. Rename the D50 Sales Rep logical table source to **LTS1 Sales Rep**.



10. In the Physical layer, expand **D52 Sales Rep Position**.

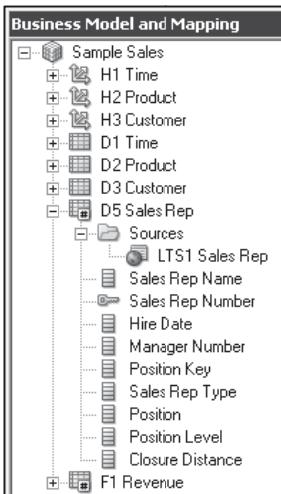


11. Drag **POSTN\_DESC** and **POSTN\_LEVEL** from **D52 Sales Rep Position** to **LTS1 Sales Rep**. Note that you are dragging the columns to the logical table source, not the logical table. Dragging to the logical table would create a second logical table source.

12. Drag **DISTANCE** from **D51 Sales Rep Parent Child** to **LTS1 Sales Rep**. Again, you drag the column to the logical table source, not the logical table.

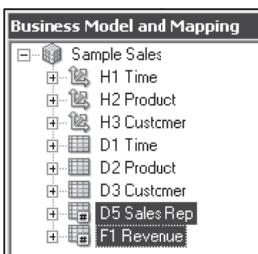
13. Rename the logical columns:

| Old Name     | New Name         |
|--------------|------------------|
| POSTN_KEY    | Position Key     |
| TYPE         | Sales Rep Type   |
| EMPL_NAME    | Sales Rep Name   |
| EMPLOYEE_KEY | Sales Rep Number |
| HIRE_DT      | Hire Date        |
| MGR_ID       | Manager Number   |
| POSTN_DESC   | Position         |
| POSTN_LEVEL  | Position Level   |
| DISTANCE     | Closure Distance |

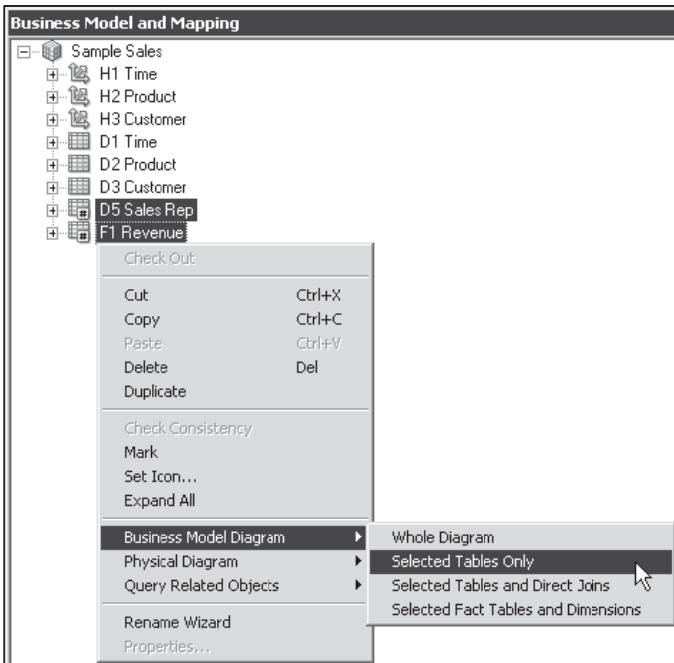


#### 14. Create a Logical Join

In the BMM layer, select **D5 Sales Rep** and **F1 Revenue**.

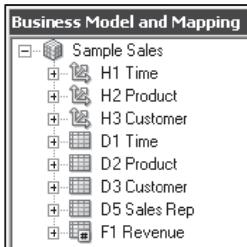


15. Right-click either highlighted table and select **Business Model Diagram > Selected Tables Only** to open the Business Model Diagram.



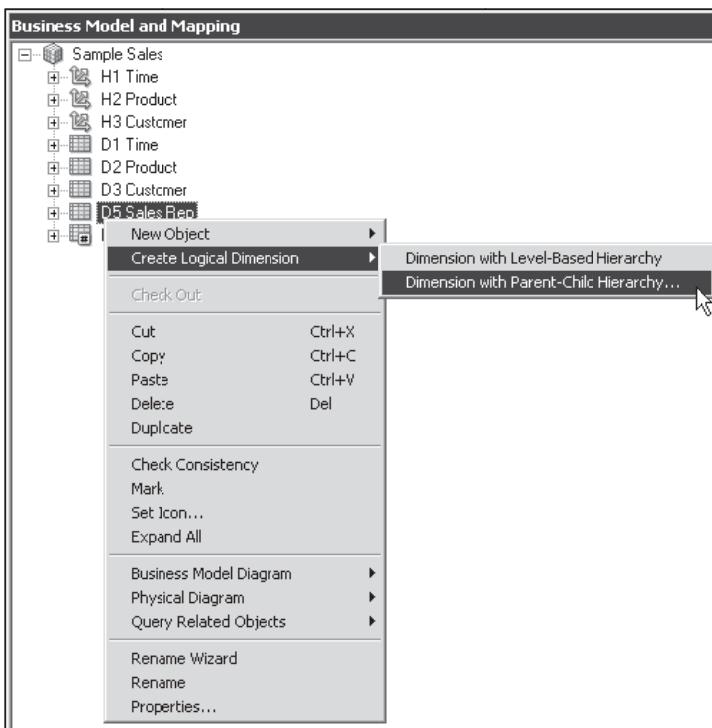
16. Create a logical join between **D5 Sales Rep** and **F1 Revenue**.

17. Close the Business Model Diagram. Notice that the icon has changed for the D5 Sales Rep table.

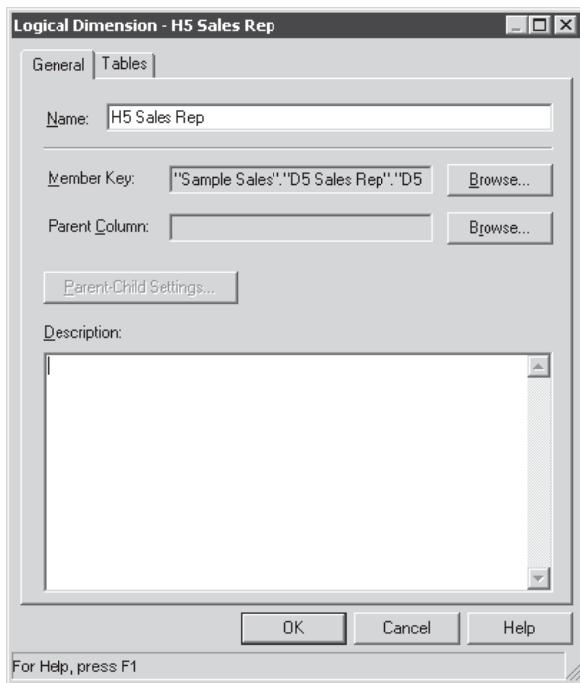


18. Create a Parent-Child Logical Dimension

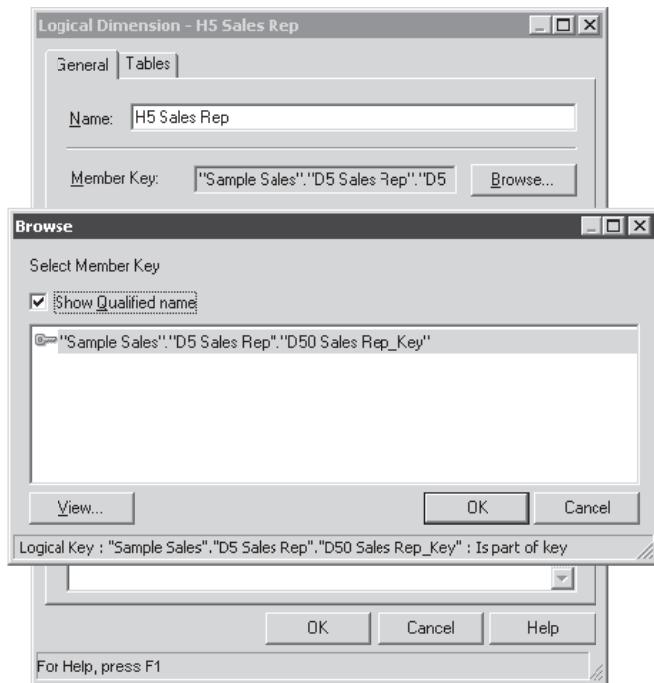
Right-click the D5 Sales Rep logical table and select Create Logical Dimension > Dimension with Parent-Child Hierarchy.



19. In the Logical Dimension dialog box, on the General tab, name the logical dimension H5 Sales Rep.



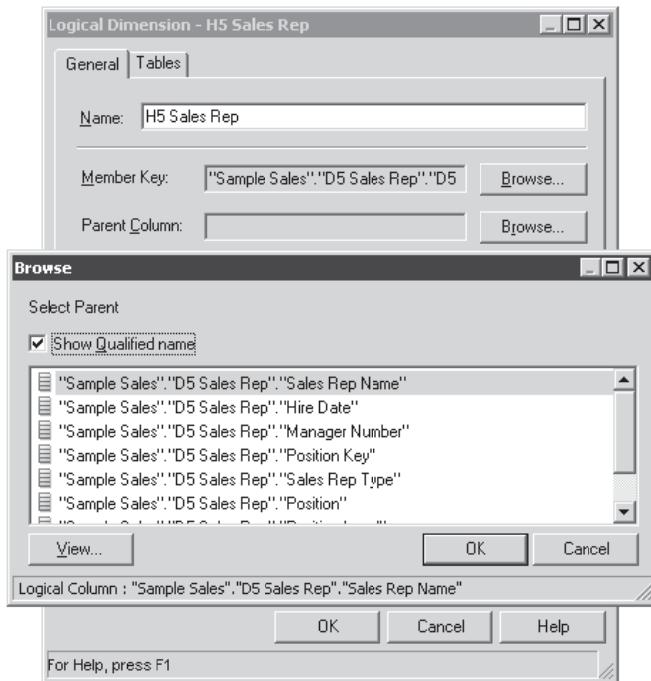
20. Click Browse next to Member Key. The Browse window shows the physical table and its corresponding key.



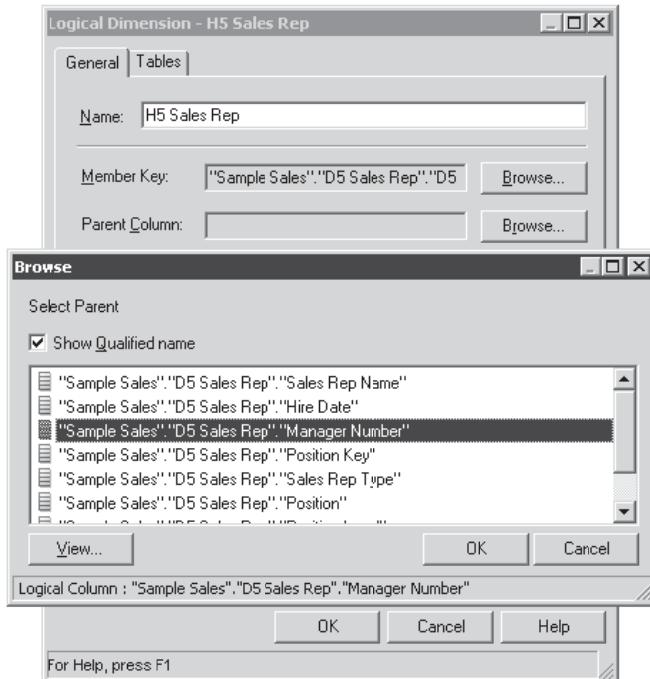
21. Click View to open the Logical Key dialog box. Confirm that the Sales Rep Number column is selected



22. Click Cancel to close the Logical Key dialog box.
23. Click OK to close the Browse window.
24. Click Browse next to Parent Column. The Browse window shows the columns other than the member key.

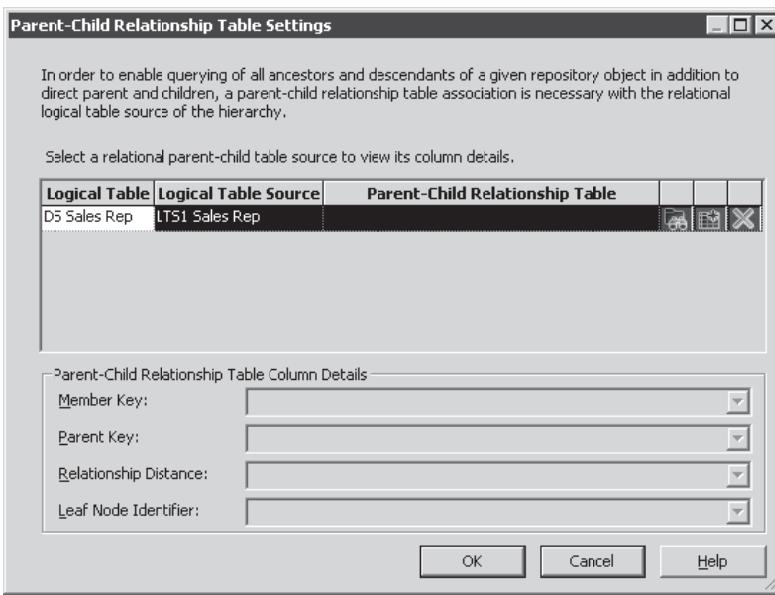


25. Select Manager Number as the parent column for the parent-child hierarchy.

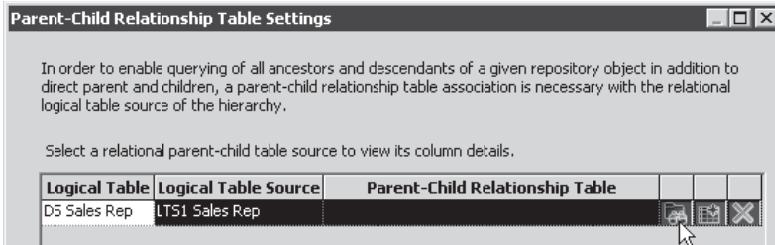


26. Click OK to close the Browse window, but do not close the Logical Dimension dialog box.
27. Define Parent-Child Settings

Click Parent-Child Settings to display the Parent-Child Relationship Table Settings dialog box. Note that at this point the Parent-Child Relationship Table is not defined.

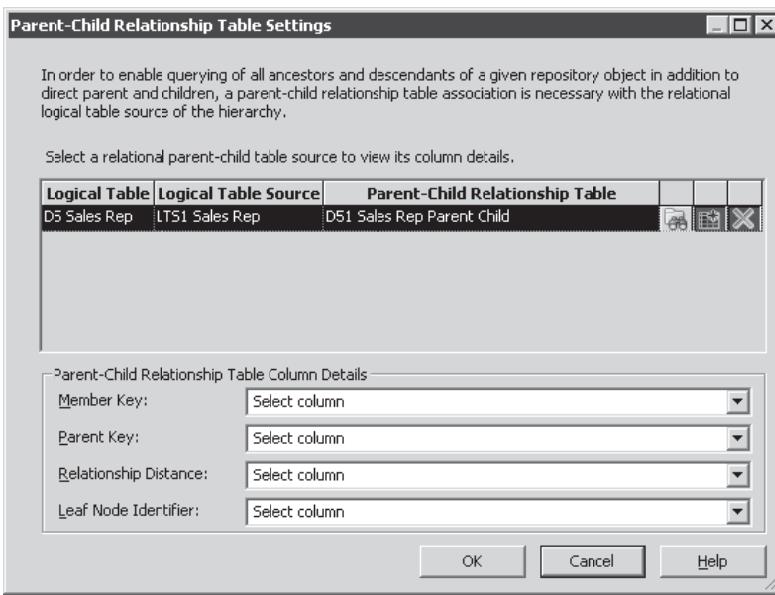


28. Click the Select Parent-Child Relationship Table button to open the Select Physical Table dialog box.



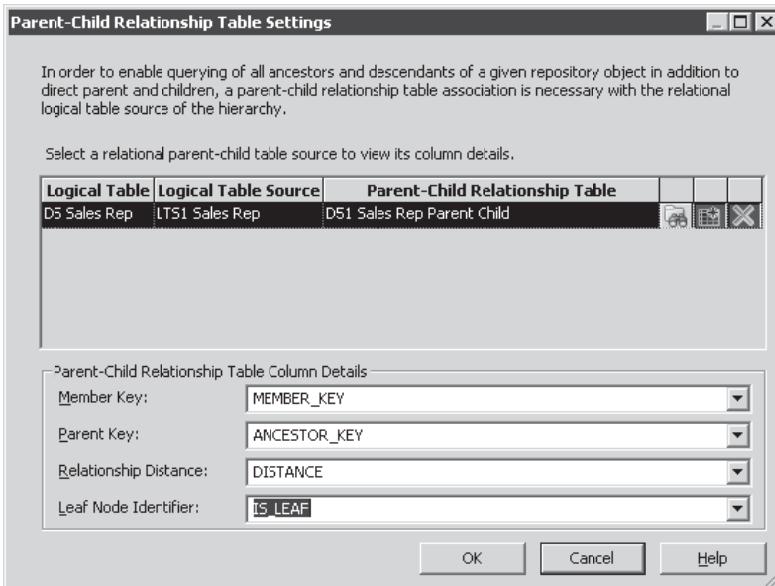
29. In the Select Physical Table dialog box, select the D51 Sales Rep Parent Child alias you created.

30. The D51 Sales Rep Parent Child alias is now displayed in the Parent-Child Relationship Table column.



31. In the Parent-Child Table Relationship Column Details section, set the appropriate columns:

|                              |              |
|------------------------------|--------------|
| <b>Member Key</b>            | MEMBER_KEY   |
| <b>Parent Key</b>            | ANCESTOR_KEY |
| <b>Relationship Distance</b> | DISTANCE     |
| <b>Leaf Node Identifier</b>  | IS_LEAF      |



Explanation:

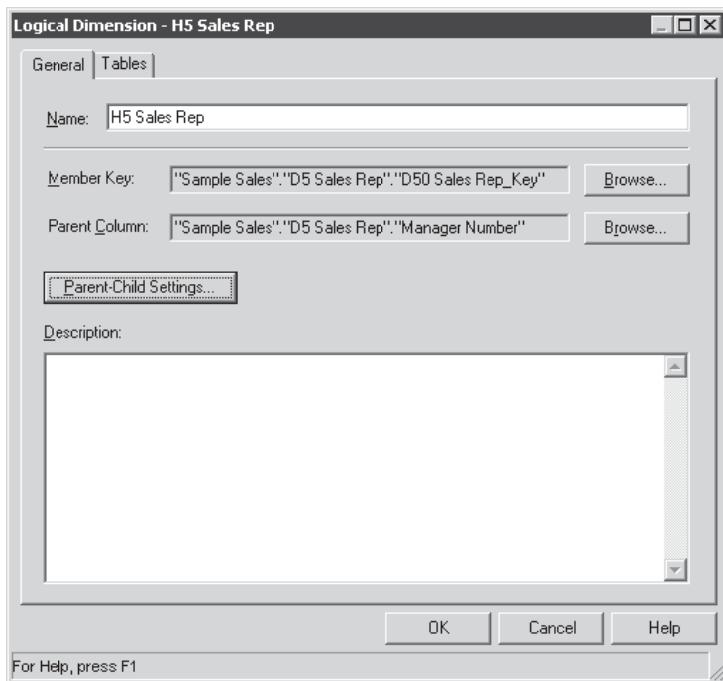
Member Key identifies the member.

Parent Key identifies an ancestor of the member. The ancestor may be the parent of the member, or a higher-level ancestor.

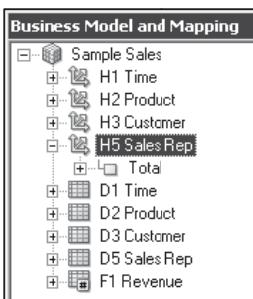
Relationship Distance specifies the number of parent-child hierarchical levels from the member to the ancestor.

Leaf Node Identifier indicates if the member is a leaf member (1=Yes, 0=No).

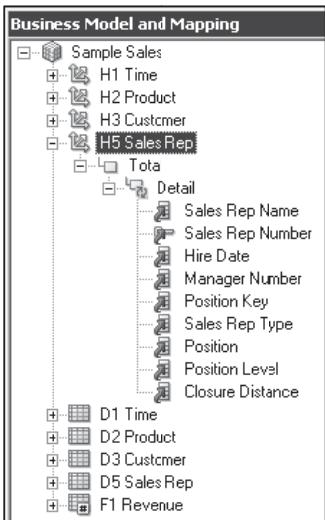
32. Click OK to close the Parent-Child Relationship Table Settings dialog box.



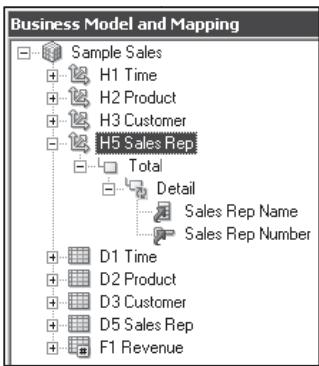
33. Click OK to close the Logical Dimension dialog box.



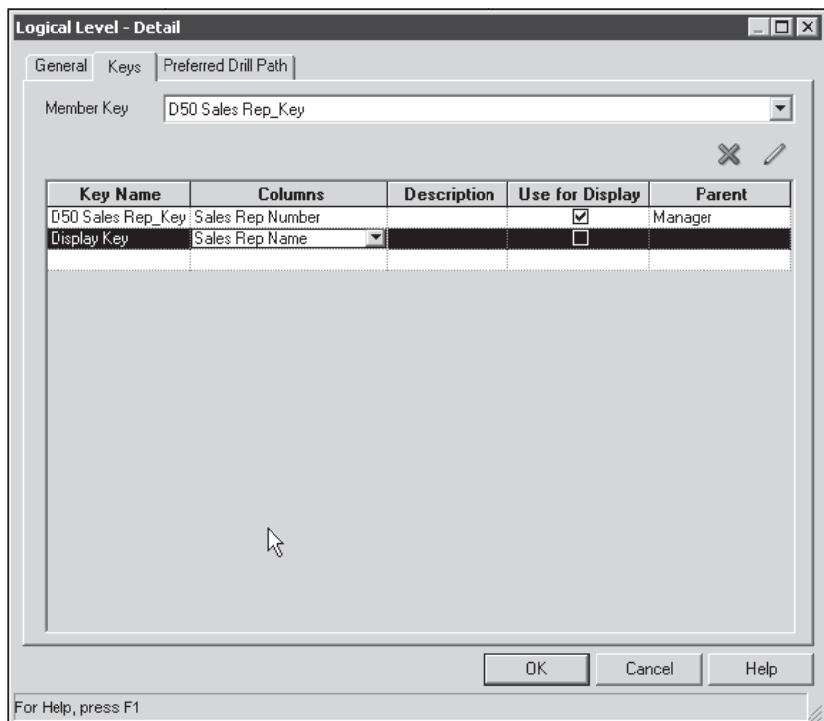
34. Right-click H5 Sales Rep and select Expand All. Note that a parent-child logical dimension has only two levels.



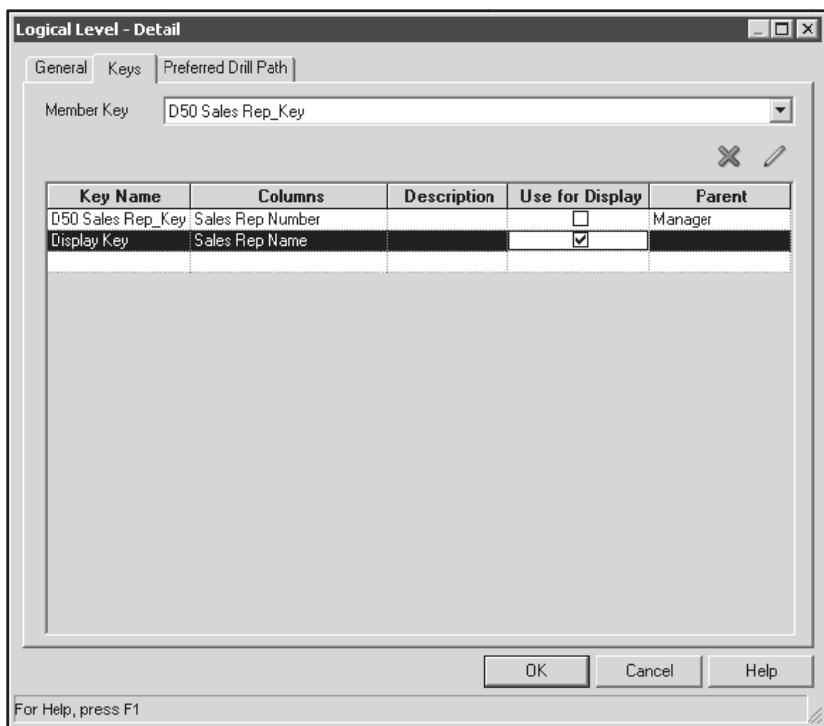
35. Delete all columns from the Detail level except for Sales Rep Name and Sales Rep Number.



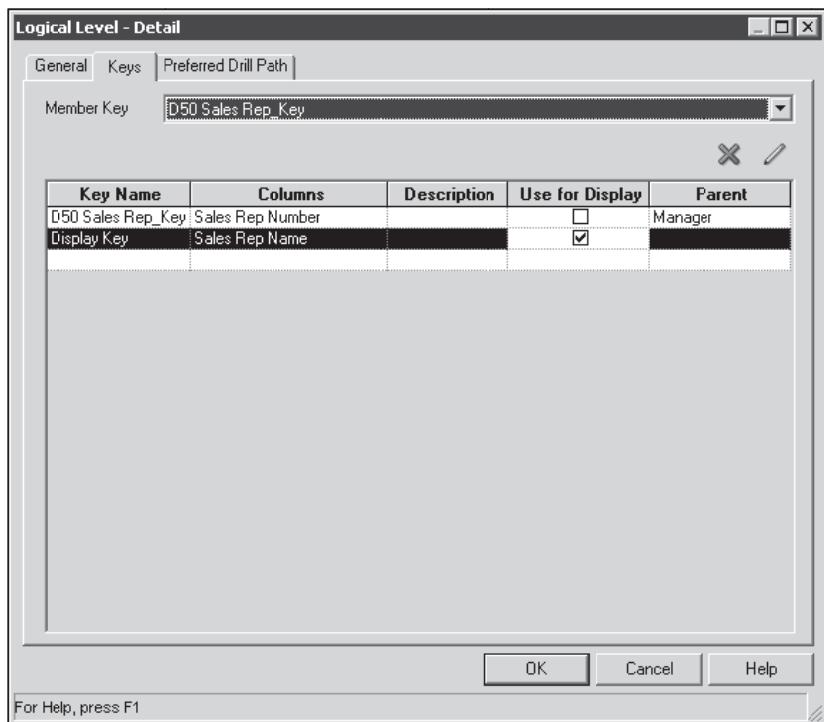
36. Double-click the Detail level to open the Logical Level dialog box.
37. On the Keys tab, create a new key named Display Key that maps to the Sales Rep Name column.



38. Deselect Use for Display for the Sales Rep Number column and select Use for Display for the Sales Rep Name column.



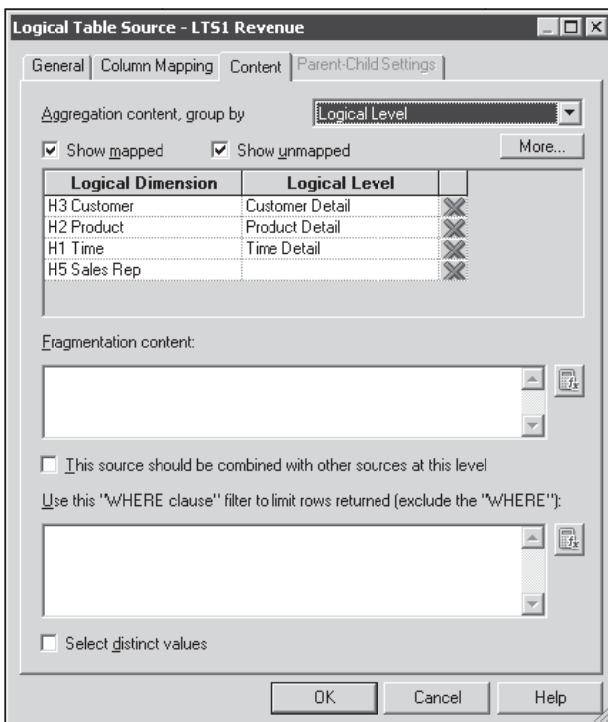
39. Make sure that Member Key is still set to D50 Sales Rep\_Key.



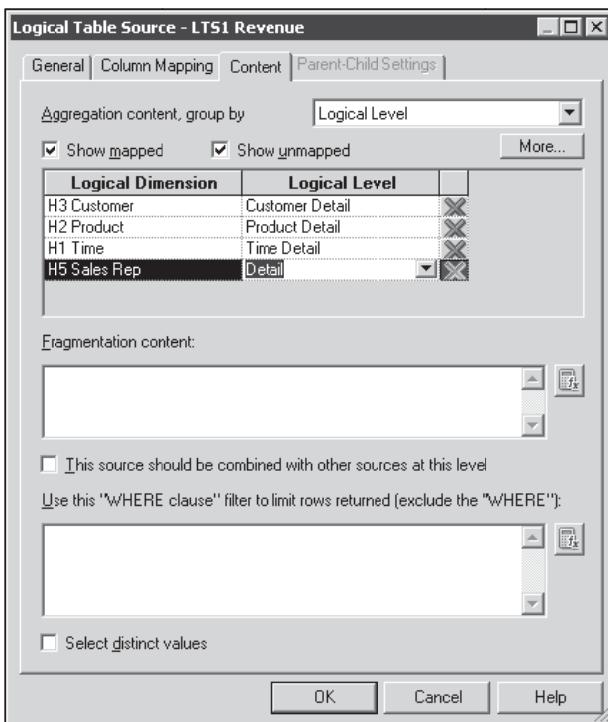
40. Click OK to close the Logical Level dialog box.



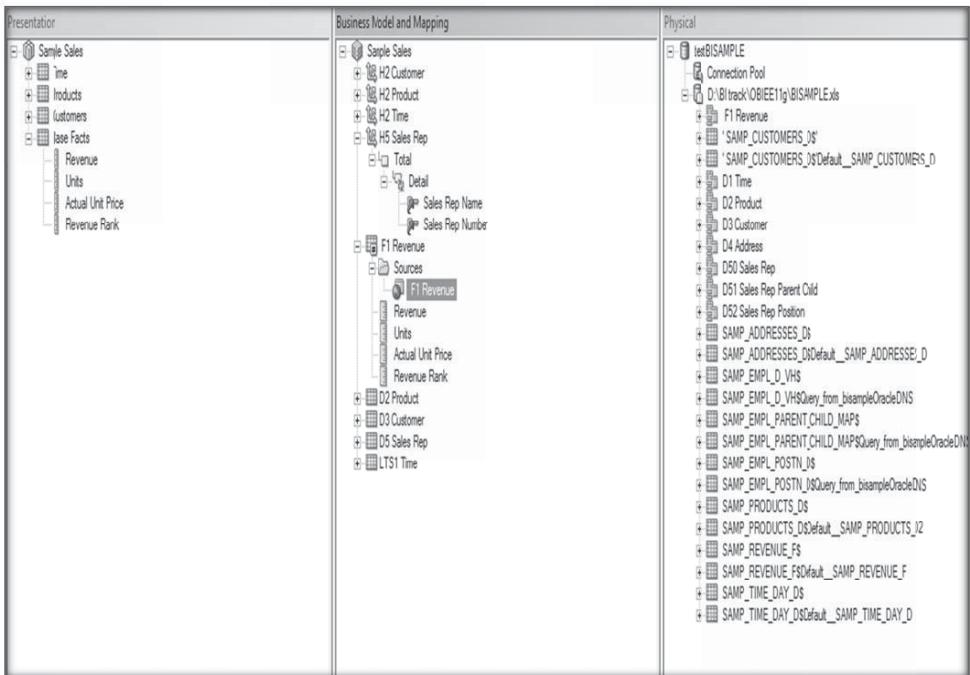
41. Expand F1 Revenue > Sources and double-click F1 Revenue to open the Logical Table Source dialog box and in content click on more then on Get Levels



42. On the Content tab, set the logical level to Detail for the H5 Sales Rep logical dimension.



43. Click OK to close the Logical Table Source dialog box.



#### 44. Create Presentation Layer Objects by

Dragging the **D5 Sales Rep** logical table from the BMM layer to the **Sample Sales** subject area in the Presentation layer.

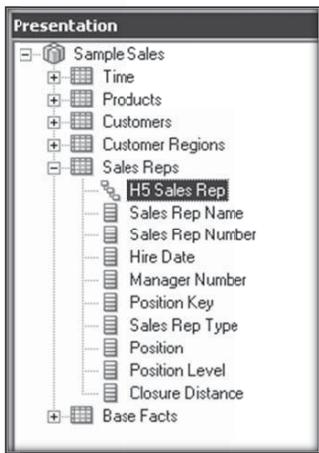
45 . Rename the D5 Sales Rep presentation table to **Sales Reps**.



- 46 . Move the **Sales Reps** presentation table above the **Base Facts** table by Right clicking Sample Sales >properties then Presentations table tab

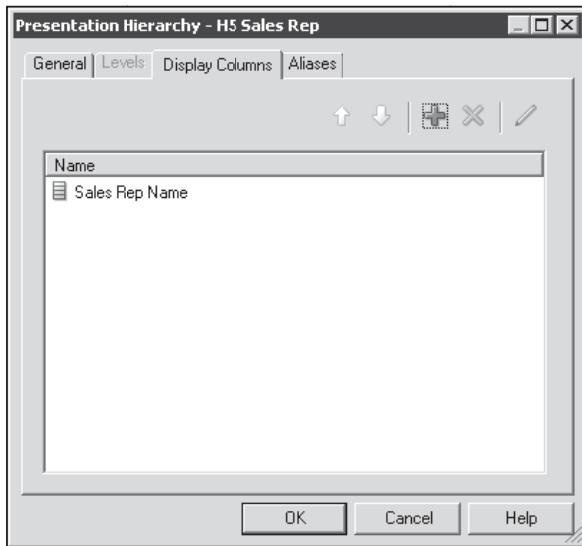


- 47 . Expand the **Sales Reps** presentation table and notice that the H5 Sales Rep parent-child logical dimension is automatically included as a presentation hierarchy.



48. Double-click the **H5 Sales Rep** presentation hierarchy to open the Presentation Hierarchy dialog box.

49 . On the **Display Columns** tab, confirm that **Sales Rep Name** is set as the display column.



50. Click **OK** to close the Presentation Hierarchy dialog box.
51. Save the repository and check consistency. Fix any errors or warnings before proceeding.
52. Close the repository.