## Contents

Introduction to Oracle BI Enterprise Edition (OBIEE) ........................................................................................................... 1

Starting OBIEE on the Web: Presentation Services .................................................................................................................. 2

Dimensions and Hierarchical Levels ......................................................................................................................................... 4

Lesson 1: Creating and formatting an Answers analysis .................................................................................................... 5

Exercise 1a: Creating an Answers Analysis .......................................................................................................................... 5

Exercise 1b: Creating and saving simple filters ..................................................................................................................... 9

Exercise 1c: Creating subtotals and grand totals .................................................................................................................. 19

Exercise 1d: Formatting table data .................................................................................................................................... 22

Exercise 1e: Sorting the rows of the query ........................................................................................................................ 24

Exercise 1f: Creating custom formulas ........................................................................................................................... 28

Lesson 2: Filters ........................................................................................................................................................................... 36

Exercise 2a: Filtering using Repository Variables – part 1 ................................................................................................. 36

Exercise 2b: Filtering using Repository Variables – part 2 ............................................................................................... 38

Exercise 2c: Creating Top/Bottom filters ........................................................................................................................... 39

Exercise 2d: Grouping filters using AND/OR conditions ................................................................................................... 42

Exercise 2e: Filtering using SQL ........................................................................................................................................ 44

Exercise 2f: Filtering based on a saved Answers analysis ................................................................................................. 47

Lesson 3: Pivot Tables ................................................................................................................................................................. 60

Exercise 3a: Creating a pivot table .................................................................................................................................... 60

Exercise 3b: Adding pivot table calculations ..................................................................................................................... 64

Exercise 3c: Adding pivot table totals ............................................................................................................................ 69

Exercise 3d: Formatting pivot tables ................................................................................................................................ 70

Exercise 3e: Creating pivot table calculated items ........................................................................................................ 71

Lesson 4: Graphs ........................................................................................................................................................................ 73

Exercise 4a: Line graphs ......................................................................................................................................................... 73

Exercise 4b: Vertical Bar graphs ........................................................................................................................................ 84

Exercise 4c: Renaming Views ............................................................................................................................................ 94

Exercise 4d: Axis Labels, Scaling, Scale Markers ............................................................................................................ 95

Exercise 4e: Line Bar graphs .............................................................................................................................................100

Lesson 5: Compound Layouts ..................................................................................................................................................110

Exercise 5a: Modifying compound layouts ......................................................................................................................110

Exercise 5b: Using Dashboard Preview mode ..................................................................................................................114

Lesson 6: Additional Views .......................................................................................................................................................115

Exercise 6a: Narratives .........................................................................................................................................................115

Exercise 6b: No Results message ......................................................................................................................................119

Exercise 6c: Column Selectors .........................................................................................................................................121

Exercise 6d: View Selectors ............................................................................................................................................124

Lesson 7: Variables and Dashboard Prompts ......................................................................................................................125

Exercise 7a: Variables .........................................................................................................................................................126

Exercise 7b: Filtering using Presentation Variables .....................................................................................................128

Exercise 7c: Filtering for a combined X% of a group ......................................................................................................143
Overview of the Training Data Used In This Manual

This OBIEE ad hoc Answers manual utilizes data from an internal Cornell Training database that contains information about employees in several organizational units, and the number of work hours they spent doing a variety of activities. All names have been “anonymized” so there is no way to identify any individual, and Organizations were assigned randomly. To give context to the types of Hours used, note the following:

Corrected Hours = Applied Hours (charged to Projects) + Unbilled Hours (Leave, Holiday, Overhead)

These inserts indicate a Tip or Helpful Hint or Decision about how to create or use a certain feature or set of functionality.
**Introduction to Oracle BI Enterprise Edition (OBIEE)**

Several years ago, Oracle took a look at the state of the Business Intelligence industry in terms of the different processes and applications that were required to create, use and maintain a Business Intelligence environment.

Oracle found a hodgepodge of multi-vendor, non-integrated hardware and software that a corporate BI development team had to evaluate, test, find "Best of Breed", and then somehow try to make it all work together.

Oracle’s vision was to bring all of these disparate pieces from multiple vendors together into one suite of products, called the Oracle Business Intelligence suite.

The Oracle BI Server is the engine that takes information from just about any data source, converts it into a clean, query-ready format, and then makes it available to a suite of tools such as dashboards, ad-hoc analytics, BI Publisher, and even Excel.
Starting OBIEE on the Web: Presentation Services

- You use a browser to access the OBIEE server. There is no “plug-in” or other software to install.
  - Supported browsers for the currently installed OBIEE version 11.1.1.6 are:
    - Internet Explorer/IE7 or 8
    - Firefox 3.5 through 9 (not 10)
    - Most OBIEE features will work in Chrome, but it is not a supported platform.
  - Macintosh users can use IE 7 “natively”, again, with no plug-in to install. A future OBIEE version may be certified to work with Safari, but it currently will not function properly. There is no need for Virtual PC software, Crossover or Parallels.

- The website for the OBIEE server is: https://obieeXXX.cit.cornell.edu where XXX is one of the servers (DEV, TEST, or PROD) for which you have been authorized.

- When prompted, login on the CUWebLogin screen, using your Netid and password.
The OBIEE Answers interface will look like this screenshot when creating or editing an analysis:

Legend:
1. The **selection panel** (area #1) contains the list of all tables and columns that can be selected in an Answers analysis for the selected subject area.

2. As columns are selected, they will appear in the Criteria canvas in area #2.

3. Filter conditions will be shown in the Criteria canvas in area #3. The rows returned by an Answers analysis may be **filtered** based on one or more selection criteria.

4. The toolbar (area #4) contains links that allow you to (in order, from left to right):
   a. Home: Navigate to your OBIEE Home page.
   b. Catalog: Display the OBIEE catalog of stored objects (analyses, filters…).
   c. Favorites: Display a list of your personal favorites (Analyses, Dashboards).
   d. Dashboards: Navigate to a dashboard.
   e. New: Create a new analysis.
   f. Open: Open an existing OBIEE object (Analysis, Filter, etc…).
   g. The left save icon: Resave the current analysis with the existing name.
   h. The right save icon: Save the analysis with a new name.
Dimensions and Hierarchical Levels

The DataMart or Subject Area that you will query with OBIEE contains two types of tables: DIMENSION tables contain descriptive attributes; FACT tables contain Numbers or Dollars.

Dimensional HIERARCHIES are built by OBIEE Repository developers in conjunction with the owners of the data, to allow users to DRILL down into Dimensional data.

The dimensions and their hierarchical levels to be used in this class are shown below. Here is an example of what these hierarchies enable you to do:

Instead of selecting ALL time dimension columns for your query or Answers Analysis, you might simply select just the Fiscal Year column. When results are returned, you will see links on the Fiscal Year column values that, when selected, will enable you to drill down to Fiscal Quarter data then further down to Fiscal Month data, and finally to detail by Fiscal Week (There is no Daily level in the training database).

At any point, you can click the browser’s BACK button to drill back up to the previous level, or all the way back to the highest Fiscal Year level.

<table>
<thead>
<tr>
<th>Dimension Name</th>
<th>Project</th>
<th>Time</th>
<th>Org</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Projects</td>
<td>Fiscal Year</td>
<td>All Orgs</td>
<td></td>
</tr>
<tr>
<td>Work Type</td>
<td>Fiscal Quarter</td>
<td>Division</td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td>Fiscal Month</td>
<td>Department</td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>Fiscal Week</td>
<td>Staff Member</td>
<td></td>
</tr>
</tbody>
</table>

Scenario:

The President of Cornell University has requested an analysis of year-to-date project hours related to the Non Billable, Operational Improvement, and Operational Support Work Types, for the Arts & Sciences, Office of Human Resources, and Graduate School Divisions. You will use the various tools available in OBIEE to produce this analysis.