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## COGNOS BI Reporting

### Course description

The IBM Cognos BI training course is designed to provide knowledge and skills to become a successful Business Analyst. The course starts with fundamental concepts like Cognos Architecture, Cognos Services, Troubleshooting the server environment and covers advanced topics like Analysis & Query Studio, Advanced & Interactive Reporting, Cognos Administration and a technical deep dive into the DMR Package in Cognos etc. You will also get an opportunity to explore Dynamic Cubes, how to style OLAP queries, thereby helping you to get an end-to-end experience on how to use the Cognos Tool effectively for business.

### Student Take away

- Study Material
- Learning stuff
- Sample project for practice

### COGNOS BI Reporting Online Training Curriculum

- Overview of Data Warehousing
- Overview of Cognos BI Architecture

### Learning Objective

In this module, you will be introduced to business intelligence, data warehousing concepts like the architecture, its characteristics. You will learn how to design Framework Manager and DMR

### Topics

- Study 3-Tier platform architecture
- Explore the IBM Cognos Dispatcher
- Identify features of the IBM Cognos BI architecture and components
- Perform a single server or distributed installation

### Data warehousing characteristics

- Subject Oriented
- Integrated
- Time-variant and Non-volatile
- Types of OLAP
- ROLAP
- MOLAP
- HOLAP
- Dimensions and facts
- Introduction to ETL Concepts using Informatica
- Design Framework Manager and DMR

- **IBM Cognos Framework Manager**
- Relational Metadata Modelling

### **Learning Objectives**

In this module, you will be introduced to IBM Cognos Framework Manager and you will understand the workflow process. You will also learn how to write SQL queries and set relationships, perform calculations, apply filters and create star schema among the various query subjects.

### **Topics**

- Define business and reporting requirements
- What is Framework Manager?
- Framework Manager
- Workflow processes
- Create a baseline project
- Identify facts and dimensions
- Identify key differences amongst type data source, model, and stored procedure query subjects
- Identify the effects on generated SQL when modifying query subjects
- SQL settings and relationships
- Examine relationships and cardinality
- Use calculations to create calculated query items
- Use embedded and model filters to reduce the data set
- Merge query subjects to create as view behaviour
- Create star schema groupings to provide authors with logical groupings of query subjects
- Create a consolidated modeling layer for presentation purposes
- Identify the conformed dimensions
- Use tools to analyze the model
- Create and publish a package
- Use macros, parameters map and session parameters
- Use determinants to specify multiple levels of granularity and prevent double-counting

- **IBM Cognos Framework Manager**

### **Multi-Dimensional Metadata Modelling**

#### **Learning Objectives**

In this module, you will learn the dimensional and rational database features in Cognos, the definition of the keywords used along with a related example. You will be introduced to the DMR package in Cognos and learn how it is used for analysis. You will also be given a heads up to execute the SQL queries dynamically in the Dynamic Query Mode.

#### **Topics**

- Apply dimensional information to relational Metadata to enable OLAP-style queries
- Define regular dimension
- Measure dimension
- Define members and member unique names
- Identify changes that impact a MUN

### Topics continue...

- Create analysis objects such as dimension, level, hierarchies and measures
- Create multiple hierarchies
- Learn and apply scope
- Publishing the DMR package and using it over Analysis
- Examine the IBM Cognos BI security environment
- Restrict access to packages
- Create and apply security filters
- Restrict access to objects in the model
- Data level security
- Identify and implement techniques to optimize and tune your Framework Manager models
- Achieve Minimized SQL
- Governors Setting in Framework Manager
- Overview Dynamic Query Mode in Framework Manager
- Work in a Multi-Modeler Environment
- Segment and link a project
- Branch a project and merge results

### ➤ Basic Report Authoring

#### Learning Objective

In this module, you will learn to create different types of reports using Query and Report Studio and the various activities like applying filters, using parameters and prompts to focus data. You will also learn how to format charts and the various tools available to do this.

#### Topics

- Examine Query Studio and its Work Area interface
- Create ad hoc reports and charts in Query Studio
- Sorting, Grouping and filtering Query Studio Reports
- Examine Report Studio and its Work Area interface
- Explore different report types
- Create simple list report
- Explore how data items are added to queries
- Create filters to narrow the focus of reports
- Examine detail and summary filters
- Determine when to apply filters on aggregate data
- Create crosstab reports
- Convert a list to a crosstab
- Create charts
- Use parameters and prompts to focus data
- Identify various prompt types
- Add run-time information to the reports
- Create calculated query items and calculations using functions
- Apply formatting
- Create Sections
- Share layout components among separate reports

**Topics** continue...

- Discuss report templates
- Page breaks in reports
- Other objects in Toolbox

➤ **Advanced Report Authoring**

**Learning Objectives**

This module is a deep-dive into report authoring, linking two reports and displaying one report layer based on others using prompts. You will be given an opportunity to edit an SQL statement and use union, intersection and join operations. You will acquire knowledge on how to distribute one report contents to various recipients.

**Topics**

- Create Drill through Report
- Create Master-Detail Report
- Create Boolean
- Language and String Variables for conditional formatting
- Conditional Blocks and Conditional Rendering
- Edit an SQL statement to author custom queries
- Filter Reports using Query Macros
- Use union
- Intersect and Join Queries
- Create Table of contents for a report book and add bookmark for navigation
- Create a report using an external data file
- Enhance User Interaction with HTML items and Java Scripts
- Distribute reports using bursting
- Configure IBM Cognos BI to perform Bursting
- Burst a report to IBM Cognos Connection Using a Burst Table and Performance Tuning of Reports

➤ **Report Authoring - Multi-Dimensional**

**Learning Objective**

Here, you will learn how to combine data and layout in a single file using Active Reports. You will learn the workspace of Analysis Studio and Event Studio using which we will create reports for relational and dimensional data. You will also do administrative activities to manage and schedule events.

**Topics**

- Introduction
- Active Reports
- Create active report templates
- Describe active report connections
- Apply Filter and Select behaviour to active report controls
- Modify the interactive behaviour of report controls
- Identify active report controls and variables in a report
- Use variables to control multiple controls independently

## **Workspace & Workspace Advanced**

- Identify the user interface components of IBM Cognos Workspace Advanced
- Create a Report using Relational Data
- Create a Report using Dimensional Data
- Understand suppression options
- Explore filtering data
- Examine the use of external data in reports
- Even Studio
- Create agents
- Use parameters and calculations
- Add tasks
- Manage task execution rules

### ➤ **Other Report Authoring Tools**

#### **Learning Objective**

In this module you will learn the various dimensional concepts and compare it with the relational concepts. You will perform various actions on the dimensional data and create reports and dashboards based on the result generated. You will also learn how to create hyperlinks in the report.

#### **Topics**

Introduction to Dimensional Concepts

Compare dimensional and relational model types

Examine dimensional data structure

Examine dimensional functions for members, sets, and tuples

Compare relational and dimensional queries

Identify dimensional style filtering techniques

Filter non-null data

Calculations and few important Dimensional Functions

Functions for Navigating Dimensional Hierarchies

Use functions to traverse the dimensional hierarchies

Create reports with children (), ancestor (), and descendants () functions

#### **Relative Functions**

- Review basic drilling up and drilling down
- Set Up Drill-Through Reports
- Drill through from one report to another
- Drill through from dimensional data to relational data
- Create a single report with data from multiple sources

### ➤ **IBM Cognos Administration overview**

#### **Learning Objective**

In this module, you will be given an overview of all the administration tasks that revolve around the Cognos Tool. It gives you an insight of how to move the data from the previous version to Cognos 10.1. You will learn how to audit and manage the Cognos Environment.

## Topics

- IBM Cognos Administration Overview
- How to use various administrative features
- Enhanced search
- Restricting the scheduling options
- Managing the Cognos environment
- Auditing

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