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Courseware Catalog 2009



Courseware Listing

Crystal Reports			
Title	Version	Student Guide SKU	Instructor Guide SKU
Crystal Reports Designer 1 Workshop	2008	VISI100070S	VISI100070T
Crystal Reports Designer 2 Workshop	2008	VISI100071S	VISI100071T
Crystal Reports Designer 3 Workshop	2008	VISI100072S	VISI100072T
Crystal Reports Designer 1 Workshop	XI	VISI100060S	VISI100060T
Crystal Reports Designer 2 Workshop	XI	VISI100061S	VISI100061T
Crystal Reports Designer 3 Workshop	XI	VISI100062S	VISI100062T
Crystal Reports Quick Start Workshop	10	VISI100050S	VISI100050T
Crystal Reports Power User Workshop	10	VISI100051S	VISI100051T
Crystal Reports Quick Start Workshop	9.0	VISI100040S	VISI100040T
Crystal Reports Power User Workshop	9.0	VISI100041S	VISI100041T
Crystal Reports Quick Start Workshop	8.5	VISI100019S	NA
Crystal Reports Power User Workshop	8.5	VISI100020S	NA

Business Objects Enterprise			
Title	Version	Student Guide SKU	Instructor Guide SKU
BusinessObjects Enterprise Administrator Workshop	XI R2	VISI100066S	NA

Microsoft Reporting Services			
Title	Version	Student Guide SKU	Instructor Guide SKU
SSRS Developer 1 Workshop	2005	VISI100501S	NA

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Crystal Reports Courseware

Crystal Reports 2008 Designer 1 Workshop

Summary: This two day interactive workshop was designed for new users of Crystal Reports 2008. Some of the topics covered include a review of the software features, report design and the creation of presentation quality reports. The course incorporates a number of hands on exercises to reinforce the learning process.

Prerequisite: Working knowledge of Windows 2000/XP/Vista environment is required. Familiarity with relational database concepts (tables, fields and records) is strongly recommended

Basic Reporting

Creating a Report

- Starting the Crystal Reports Program
- Starting a New Report
- Choosing a Data Source
- The Main Components of the Design Window
- Exploring the Toolbars
- Managing Resources with Explorers
- Placing Fields on the Report
- Selecting and Sizing Objects
- Browsing Field Data
- Moving and Aligning Objects
- Using Guides and Guidelines to Move and Align Objects
- Creating Text Objects
- Saving the Report
- Auto-saving the Report
- Previewing the Report
- Refreshing the Data
- Using the Status Bar
- Getting Help
- Challenge Exercise - Creating a Basic Report

Formatting Features

- Quick Formatting with the Template Expert
- Using the Format Painter
- Formatting Objects
- Inserting Lines and Boxes
- Inserting Graphics
- Working with the Page Commands
- Changing Page Orientation

- Changing Margins
- Working with Text Objects
- Adding Fields into a Text Object
- Formatting Part or All of an Object
- Inserting Special Fields
- Challenge Exercise – Formatting Features

Database Filters

- Filtering Data with the Select Expert
- Selecting Records with Multiple Criteria
- Viewing and Editing the Select Formula
- Case Sensitive vs. Case Insensitive
- Record Selection Formula Templates
- Challenge Exercise - Selecting Specific Records
- Challenge Exercise - Selecting a Range of Values

Report Grouping

- When and Why to Group Records
- Creating a Group
- Group and Sort Direction
- Customize Group Name Field
- Modifying Groups
- Creating Multiple Groups in a Report
- Using the Group Tree to Navigate the Report

- Reordering Groups
- Using the Sort Control
- Summarizing Groups
- Additional Summary Options
- Grouping Data in Date/Time Intervals
- Calculating Percentages
- Ordering Groups Based on Their Subtotals Using the Group Sort Expert
- Challenge Exercise - Grouping, Sorting, Summarizing
- Challenge Exercise - Calculating Percentages

Adding Flexibility to Reports

Multiple Table Joins

- Understanding Tables, Records, and Fields
- Learning About Linking
- Adding Multiple Tables to a Report
- Challenge Exercise - Using the Database Expert to Link Tables

Creating Formulas

- Understanding Crystal Formula Syntax without Being a Programmer
- About the Formula Workshop
- Using the Formula Workshop
- Using the Formula Editor
- The Formula Editor Toolbar
- Performing Simple Number Calculations
- Manipulating Dates with Formulas
- Creating Boolean (True/False) Formulas
- Creating String Formulas
- Using Bookmarks to Navigate Through Formulas
- Challenge Exercise - Creating String Formulas
- Challenge Exercise – Creating String Formulas
- Challenge Exercise – Doing Calculations
- Challenge Exercise – Subtracting Dates
- Challenge Exercise – Using Nested If Statements
-

Conditional Formatting

- Formatting Sections
- Formatting Sections Conditionally
- Conditionally Formatting Fields
- Challenge Exercise - Section Formatting and Conditional Formatting

Summary Reports and Charts

- Creating a Summary Report
- Applying the Drill Down Feature
- Applying the DrillDown-GroupLevel
- Producing Charts
- Editing Charts
- Formatting Charts
- Using the Chart Options
- Modifying Individual Objects in the Chart
- Applying Chart Templates
- Challenge Exercise - Creating a Summary Report
- Challenge Exercise - Charting

Exporting Reports

- Understanding Export Formats and Destinations
- Using a PDF Format for Crystal Reports
- Exporting to Windows Applications
- Exporting to a Report Definition Format
-

Report Wizards

- What are the Report Wizards?
- Create a Report Using the Standard Report Creation Wizard
- The Data Dialog Box
- The Fields Dialog Box
- The Grouping Dialog Box
- The Summaries Dialog Box
- The Group Sorting Dialog Box
- The Chart Dialog Box
- The Record Selection Dialog Box
- The Template Dialog Box
- Challenge Exercise - Create a Report Using a Report Wizard

For After Class

APPENDIX A - Mapping

- Understanding Maps
- Map Layouts
- Map Types
- Formatting the Map
- Drilling Down on Maps
- Changing the Geographic Map
- Using the Map Navigator
- Changing Map Layers
- Resolving Data Mismatches

APPENDIX B – Before You Begin

- Defining the Purpose of the Report
- Determining the Layout of the Report
- Finding the Data
- Organizing the Data for the Report
- The Workbench

APPENDIX C – Setting Default and Report Options

- Setting the Default Layout for Design and Preview Views

APPENDIX D - Pre-Qualification Exercise for the Power User Workshop

- Why Should You Pre-qualify Yourself for the Power User Workshop?
- Pre-qualification Exercise

APPENDIX E – The Northwind 2008 Database

- A relational diagram of tables existing the Northwind 2008 database provided with the Designer 1 class files

APPENDIX F - Installation and System Requirements

- Review the necessary hardware and operating system requirements to make Crystal Reports operate correctly

APPENDIX G - Function and Operator Locations

- A complete listing of all the available Formula Functions and an explanation of the new Custom Functions

APPENDIX H – Glossary

- A complete glossary of terms used throughout the book

Crystal Reports 2008 Designer 2 Workshop

Summary: This two-day workshop is designed to enhance your basic report writing skills and move you into creating more complex reports. Time will be spent walking you through the tips and tricks of advanced report writing along with a good amount of hands on practice. In addition, you will cover professional design, techniques, sub-reporting and advanced formulas. This course incorporates a number of hands on exercises that reinforce the learning process.

Prerequisite: Successful completion of either the Designer 1 Workshop or the Pre-qualification exercise is strongly recommended.

Power Formatting and Formulas

Refresher Exercise

- Review of Planning a Report
- Creating the Report
- Placing Fields on the Report
- Creating the Formulas
- Advanced Grouping
- Selecting Certain Records
- Helpful Hints for Formatting the Report
- Adding and Working with Text Objects
- Hiding and Suppressing Sections
- Guidelines

Power Formatting with Multiple Sections

- Using Multiple Sections in Reports
- Using the Section Expert to Work with Sections
- Conditionally Formatting Multiple Sections
- Challenge Exercise - Formatting with Multiple Sections
- Challenge Exercise - Conditionally Formatting Using DrillDownGroupLevel

Using the Running Totals

Feature

- Understanding Running Totals
- Creating Running Totals for a List of Numbers
- Conditional Running Totals
- Challenge Exercise - Creating a Conditional Running Total

Prompting with Parameters

- Parameter Field Considerations
- Creating a Parameter Field
- Using a Parameter to Select Records
- Using a Parameter Field
- Using the Parameter Panel
- Creating a Dynamic Value List for Parameter Values
- Importing a Pick List
- Adding Parameter Values to Text Objects
- Allowing Multiple Values in Parameters
- Using Multiple Parameter Fields in Reports
- Specifying and Limiting a Range
- Using Parameters in Conditional Formatting
- Using an Edit Mask to Limit String Parameters
- Sorting with a Parameter
- Using a parameter to set N in a Top N Report

- Cascading Parameters
- Challenge Exercise - Using and Displaying Parameters

Using Advanced Formula Features

- Understanding How Crystal Reports Processes the Data
- What Is a Pass?
- Using Evaluation Time Functions
- Working with Variables
- Declaring a Variable
- Assigning a Value to a Variable
- Using a Variable in a Formula
- Variable Scope
- Separating Statements in Complex Formulas
- Working with Arrays
- Understanding the Evaluation Time Debugger
- Challenge Exercise - Understand and Set Up the YTD Comparison Report

Using Power Tools for Advanced Reports

Using Sub reporting as a Workaround Solution

- Understanding Sub reports
- Unlinked versus Linked Subreports
- Creating an Unlinked Sub report
- Linking a Subreport
- Database Links versus Subreports in One-to-Many Situations
- Formatting the Subreport
- Passing Data from the Main Report into a Subreport
- Creating On-Demand Subreports
- Creating Hyperlinks
- Using Subreports to Link "Unlinkable" Data
- Challenge Exercise - Creating Reports with Linked Subreports

Creating Powerful Groups

- Creating Custom Groups
- Customizing Group Sort Order
- Using Group Selection to Filter the Records in the Report
- Grouping on a Formula Field
- Grouping Hierarchically
- Challenge Exercise – Create Customized Grouping
- Challenge Exercise - Using Group Selection
- Challenge Exercise - Creating a Group Using a Formula

Working with Cross-Tab Reports

- Understanding How Cross-Tabs Affect Your Data
- Creating a Cross-Tab Report
- Creating a Cross-Tab with Multiple Rows or Columns
- Applying a Formatting Style to the Cross-Tab
- Customizing the Cross-Tab Format
- Changing Background Colors
- Formatting Individual Cells
- Changing the Summary Operation
- Suppressing Rows, Columns or Totals
- Repeating Row Heading for Multi-Page Cross-Tabs
- Using Alias Names for Column and Row Headings
- Charting Cross-Tabs
- Customizing Cross-Tab-Group Names
- Using the CurrentFieldValue Function
- Challenge Exercise - Cross-Tab Reports

Report Alerts

- What are Report Alerts
- Creating Report Alerts
- Basing Report Formulas or Conditional Formatting on Report Alerts
- Creative Usage for Report Alerts
- Challenge Exercise - Using Report Alerts with Parameter

For After Class

APPENDIX A – Report Templates

- A self-paced tutorial teaching the methods used to create report templates to be applied to unformatted reports

APPENDIX B - The Northwind 2008 Sample Database

- A relational diagram of tables existing in the Northwind 2008 sample database provided in the Crystal Reports 2008 class files

APPENDIX C – Installation and System Requirements

- A complete listing of operating system and hardware requirements
- APPENDIX D – Setup Instructions for Crystal Reports 2008

APPENDIX E - Function and Operator Locations

- A complete listing of all the available Formula Functions and an explanation of the new Custom Functions

APPENDIX F - Glossary

- A complete glossary of terms used throughout the book

Crystal Reports 2008 Designer 3 Workshop

Summary: This two-day workshop is designed to expand your working knowledge of Crystal Reports and move you into creating more complex reports. Time will be spent walking you through the tips and tricks of advanced report writing along with a good amount of hands on practice. In addition, you will cover custom functions, advanced formulas and report efficiencies techniques. This course incorporates a number of hands on exercises that reinforce the learning process.

Prerequisite: Successful completion of the Designer 1 and 2 Workshops is strongly recommended.

Advanced Topics and Formulas

Refresher Exercise

- Review of Planning a Report
- Creating the Report
- Placing Fields on the Report
- Advanced Grouping
- Selecting Certain Records
- Group Sorting
- Group Charting

Advanced Database Concepts

- What is SQL?
- Native Database Driver
- ODBC
- OLE DB
- ODBC, OLE DB or Native
- Using the Database Expert for Linking
- Adding a table Multiple Times
- Changing Join Types
- Database Changes
- Database Verification
- Set Data Source Location
- Re-mapping Database Fields
- Views
- Stored Procedures
- SQL Commands
- Creating an SQL Command

Using the Advanced Formula Features

- Select Case Statement
- For Loop Control Structure
- While... Do Loops
- Do... While Loops
- Building Arrays
- The Split Function
- Array Sizing Limitations

Custom Functions

- What is a Custom Function
- Function Arguments
- When to use a Custom Function
- Using the Custom Function Editor
- Using Crystal Syntax
- Using Basic Syntax
- Custom Function Properties
- Using the Formula Expert and Custom Functions
- Using the Formula Extractor
- Custom Function Limitations

Running Reports Efficiently

- Understanding What Crystal Sends to the Database
- Strategies for Efficient Report Performance
- Using the SQL Statement
- Record Selection and Performance
- Performance Information
- Report Definition
- Saved Data
- Processing
- Latest Report Changes
- Performance Timing
- Server Based Grouping
- Select Distinct Command

Tips, Tricks and Special Features

Advanced Cross-Tab Design

- Dissecting a Cross-Tab Grid
- Cross-Tab Parts Listing
- Row and Column Indexes
- Summary Indexes
- Grid Value Functions
- Embedded Summaries
- Conditionally Formatting Embedded Summaries
- Calculated Members

Tips and Tricks

- Manual Cross-Tabs
- Formatting Subreports
- Parameter Tricks
- Using Unique Fonts in the Report

For After Class

Appendix A: Setup Instructions for Crystal Reports 2008

- Crystal Reports 2008 application installation instructions
- Installing required class files

Appendix B: Setup Instructions for SQL Server 2005 Express Edition

- Installing SQL Server 2005 Express Edition
- SQL Server 2005 Express Edition installation instructions
- Installing the AdventureWorks database
- Attaching the AdventureWorks database

Appendix C: The AdventureWorks Database

Crystal Reports XI Designer 1 Workshop

Summary: This two day interactive workshop was designed for new users of Crystal Reports XI. Some of the topics covered include a review of the software features, report design and the creation of presentation quality reports. The course incorporates a number of hands on exercises to reinforce the learning process.

Prerequisite: Working knowledge of Windows 2000/XP environment is required. Familiarity with relational database concepts (tables, fields and records) is strongly recommended.

Basic Reporting

Before You Begin

- Defining the Purpose of the Report
- Determining the Layout of the Report
- Finding the Data
- Organizing the Data for the Report

Creating a Report

- Starting the Crystal Reports Program
- Starting a New Report
- Choosing a Data Source
- The Main Components of the Design Window
- Exploring the Toolbars
- Managing Resources with Explorers
- Placing Fields on the Report
- Selecting and Sizing Objects
- Browsing Field Data
- Moving and Aligning Objects
- Using Guides and Guidelines to Move and Align Objects
- Creating Text Objects
- Saving the Report
- Auto-saving the Report
- Previewing the Report
- Refreshing the Data
- Getting Help
- Challenge Exercise - Creating a Basic Report

Formatting Features

- Quick Formatting with the Template Expert
- Using the Format Painter
- Formatting Objects
- Inserting Lines and Boxes
- Drawing a Line
- Drawing a Box
- Inserting Graphics
- Working with the Page Commands
- Changing Page Orientation
- Changing Margins
- Working with Text Objects
- Adding Fields into a Text Object
- Formatting Part or All of an Object
- Inserting Special Fields

Database Filters

- Filtering Data with the Select Expert
- Selecting Records with Multiple Criteria
- Viewing and Editing the Select Formula
- Case Sensitive vs. Case Insensitive
- Record Selection Formula Templates
- Challenge Exercise - Selecting Specific Records
- Challenge Exercise - Selecting a Range of Values

Report Grouping

- When and Why to Group Records
- Creating a Group
- Group and Sort Direction
- Customize Group Name Field
- Modifying Groups
- Creating Multiple Groups in a Report
- Using the Group Tree to Navigate the Report
- Reordering Groups
- Summarizing Groups
- Additional Summary Options
- Grouping Data in Date/Time Intervals
- Calculating Percentages
- Ordering Groups Based on Their Subtotals Using the Group Sort Expert
- Challenge Exercise - Grouping, Sorting, Summarizing
- Challenge Exercise - Calculating Percentages

Adding Flexibility to Reports

Multiple Table Joins

- Understanding Tables, Records, and Fields
- Learning About Linking
- Adding Multiple Tables to a Report
- Challenge Exercise - Using the Database Expert to Link Tables

Creating Formulas

- Understanding Crystal Formula Syntax without Being a Programmer
- About the Formula Workshop
- Using the Formula Workshop
- Using the Formula Editor
- The Formula Editor Toolbar
- Performing Simple Number Calculations
- Manipulating Dates with Formulas
- Creating Boolean (True/False) Formulas
- Creating String Formulas
- Using Bookmarks to Navigate Through Formulas
- Challenge Exercise - Creating String Formulas
- Challenge Exercise - Doing Calculations
- Challenge Exercise - Subtracting Dates
- Challenge Exercise - Using Nested If Statements

Conditional Formatting

- The Highlighting Expert
- Setting Highlighting Priorities
- Formatting Sections
- Formatting Sections Conditionally
- Conditionally Formatting Fields
- Challenge Exercise - Section Formatting and Conditional Formatting

Summary Reports and Charts

- Creating a Summary Report
- Applying the Drill Down Feature
- Applying the DrillDown-GroupLevel
- Producing Charts
- Editing Charts
- Formatting Charts
- Using the General Chart Options
- Modifying Individual Objects in the Chart
- Using Auto-Arrange Chart
- Applying Chart Templates
- Challenge Exercise - Creating a Summary Report
- Challenge Exercise - Charting

Exporting Reports

- Understanding Export Formats and Destinations
- Using an HTML Format for Crystal Reports
- Exporting to Windows Applications
- Exporting to a Report Definition Format

Default Options

- Setting the Default Layout for Design and Preview Views

Report Wizards

- What are the Report Wizards?
- Create a Report Using the Standard Report Creation Wizard
- The Data Dialog Box
- The Fields Dialog Box
- The Grouping Dialog Box
- The Summaries Dialog Box
- The Group Sorting Dialog Box
- The Chart Dialog Box
- The Record Selection Dialog Box
- The Template Dialog Box
- Challenge Exercise - Create a Report Using a Report Wizard

For After Class

APPENDIX A - Mapping

- Understanding Maps
- Map Layouts
- Map Types
- Formatting the Map
- Drilling Down on Maps
- Using the Analyzer Tab for Advanced Mapping
- Changing the Geographic Map
- Using the Map Navigator
- Changing Map Layers
- Resolving Data Mismatches

APPENDIX B – Creating an ODBC Data Source to Attach to a Database

- Creating an ODBC Data Source to Attach to a Database
- Creating an ODBC Connection to Any Database

APPENDIX C - Pre-Qualification Exercise for the Power User Workshop

- Why Should You Pre-qualify Yourself for the Power User Workshop?
- Pre-qualification Exercise

APPENDIX D – The Xtreme Sample Database

- A relational diagram of tables existing the Xtreme Sample Database provided on the Crystal Reports Installation CD

APPENDIX E - Installation and System Requirements

- Review the necessary hardware and operating system requirements to make Crystal Reports operate correctly

APPENDIX F - Function and Operator Locations

- A complete listing of all the available Formula Functions and an explanation of the new Custom Functions

APPENDIX G – Glossary

- A complete glossary of terms used throughout the book

Crystal Reports XI Designer 2 Workshop

Summary: This two-day workshop is designed to enhance your basic report writing skills and move you into creating more complex reports. Time will be spent walking you through the tips and tricks of advanced report writing along with a good amount of hands on practice. In addition, you will cover professional design, techniques, sub-reporting and advanced formulas. This course incorporates a number of hands on exercises that reinforce the learning process.

Prerequisite: Successful completion of either the Designer 1 Workshop or the Pre-qualification exercise is strongly recommended.

Power Formatting and Formulas

Refresher Exercise

- Review of Planning a Report
- Creating the Report
- Placing Fields on the Report
- Creating the Formulas
- Advanced Grouping
- Selecting Certain Records
- Helpful Hints for Formatting the Report
- Adding and Working with Text Objects
- Hiding and Suppressing Sections
- Guidelines

Power Formatting with Multiple Sections

- Using Multiple Sections in Reports
- Using the Section Expert to Work with Sections
- Conditionally Formatting Multiple Sections
- Advanced Drill Down Group Level
- Challenge Exercise - Formatting with Multiple Sections
- Challenge Exercise - Conditionally Formatting Multiple Sections

Using the Running Totals Feature

- Understanding Running Totals
- Creating Running Totals for a List of Numbers
- Conditional Running Totals
- Challenge Exercise - Creating Running Totals
- Challenge Exercise - Creating a Conditional Running Total

Prompting with Parameters

- Parameter Field Considerations
- Creating a Parameter Field
- Using a Parameter to Select Records
- Using a Parameter Field
- Creating a Dynamic Value List for Parameter Values
- Importing a Pick List
- Adding Parameter Values to Text Objects
- Allowing Multiple Values in Parameters
- Using Multiple Parameter Fields in Reports
- Specifying and Limiting a Range for a Parameter
- Using Parameters in Conditional Formatting
- Using an Edit Mask to Limit String Parameters
- Sorting with a Parameter

- Using a parameter to set N in a Top N Report
- Cascading Parameters
- Challenge Exercise - Using Parameters

Using Advanced Formula Features

- Understanding How Crystal Reports Processes the Data
- What Is a Pass?
- Using Evaluation Time Functions
- Working with Variables
- Declaring a Variable
- Assigning a Value to a Variable
- Using a Variable in a Formula
- Variable Scope
- Separating Statements in Complex Formulas
- Working with Arrays
- Challenge Exercise - Understand and Set Up the YTD Comparison Report
- Challenge Exercise - Declare Variables and Conditionally Assign Values to Them

Using Power Tools for Advanced Reports

Using Sub reporting as a Workaround Solution

- Understanding Sub reports
- Unlinked versus Linked Subreports
- Creating an Unlinked Sub report
- Linking a Subreport
- Database Links versus Subreports in One-to-Many Situations
- Creating On-Demand Sub-reports
- Creating Hyperlinks
- Using Subreports to Link "Unlinkable" Data
- Challenge Exercise - Creating Reports with Linked Subreports

Creating Powerful Groups

- Using the Group Expert
- Using a Field Name to Customize the Group Name
- Using a Formula to Customize the Group Name Field
- Creating Custom Groups
- Grouping on a Formula Field
- Using Group Selection to Filter the Records in the Report
- Grouping Hierarchically
- Create Customized Grouping
- Brain Teaser - Using Group Selection
- Challenge Exercise - Creating a Group Using a Formula

Working with Cross-Tab Reports

- Understanding
- How Cross-Tabs Affect Your Data
- Creating a Cross-Tab Report
- Creating a Cross-Tab with Multiple Rows or Columns
- Applying a Formatting Style to the Cross-Tab
- Customizing the Cross-Tab Format
- Changing Background Colors
- Formatting Individual Cells
- Changing the Summary Operation
- Suppressing Rows, Columns or Totals
- Repeating Row Heading for Multi-Page Cross-Tabs
- Using Alias Names for Column and Row Headings
- Charting Cross-Tabs
- Challenge Exercise - Cross-Tab Reports

Report Alerts

- What are Report Alerts
- Creating Report Alerts
- Challenge Exercise - Using Report Alerts with Parameter

Report Templates

- What is a Report template
- Standard Report Creation Wizard and Templates
- The Template Expert
- Applying a Template and the consequences
- Template Considerations
- Creating Your Own Templates
- Inserting Template Fields
- Formatting Template Fields
- Giving Template Fields a Value

For After Class

APPENDIX A - The Xtreme Sample Database

- A relational diagram of tables existing the Xtreme Sample Database 11 provided on the Crystal Reports Installation CD

APPENDIX B – Installation and System Requirements

- A complete listing of operating system and hardware requirements

APPENDIX C - Function and Operator Locations

- A complete listing of all the available Formula Functions and an explanation of the new Custom Functions

APPENDIX D - Glossary

- A complete glossary of terms used throughout the book

Crystal Reports XI Designer 3 Workshop

Summary: This two-day workshop is designed to expand your working knowledge of Crystal Reports and move you into creating more complex reports. Time will be spent walking you through the tips and tricks of advanced report writing along with a good amount of hands on practice. In addition, you will cover custom function, advanced formulas and report efficiencies techniques. This course incorporates a number of hands on exercises that reinforce the learning process.

Prerequisite: Successful completion of the Designer 1 and 2 Workshops is strongly recommended.

Advanced Topics and Formulas

Refresher Exercise

- Review of Planning a Report
- Creating the Report
- Placing Fields on the Report
- Advanced Grouping
- Selecting Certain Records
- Group Sorting
- Group Charting

Custom Functions

- What is a Custom Function
- Function Arguments
- When to use a Custom Function
- Using the Custom Function Editor
- Using Crystal Syntax
- Using Basic Syntax
- Custom Function Properties
- Using the Formula Expert and Custom Functions
- Using the Formula Extractor
- Custom Function Limitations

Using the Advanced Formula Features

- Advanced Formula Syntax
- Review If...Else...Then Expressions
- Select Case
- Immediate IF (IIF)
- For Loops
- Exit For
- Join Function
- Split Function
- Array Sizing Limitations

Crystal Reports, Data Access and SQL

- What is SQL
- Direct Database Drivers
- ODBC
- OLE DB
- Viewing the SQL
- SQL Commands
- Creating an SQL Command
- Adding Parameters to the SQL Command
- SQL Expressions
- Creating an SQL Command

Advanced Database Concepts

- Using the Database Expert for Linking
- Order Links Dialog
- Index Legend Dialog
- Link Options Dialog
- Adding and removing Databases/Tables
- Adding a table Multiple Times
- Changing Join Types
- Database Changes
- Database Verification
- Set Data Source Location
- Re-mapping Database Fields
- Views
- Stored Procedures
- Non-ODBC Connection Types

Tips, Tricks and Special Features

Running Reports Efficiently

- Understanding What Crystal Sends to the Database
- Strategies for Efficient Report Performance
- Using the SQL Statement
- Record Selection and Performance
- Performance Information
- Report Definition
- Saved Data
- Processing
- Latest Report Changes
- Performance Timing
- Server Based Grouping
- Select Distinct Command

Manual Cross-Tab Reports

- What is a Manual Cross-Tab
- Creating a Cross-Tab Object
- Creating a Cross-Tab without the Expert

Tips and Tricks

- Formatting Subreports
- Parameter Tricks
- Conditional Formatting
- Formatting Page Headers
- Using Unique Fonts in the Report
- String Fields and Dates
- Dates Activity

OLAP Reporting

- OLAP Explanation
- OLAP Servers
- Creating an OLAP Report
- Formatting and OLAP Report

Crystal Reports 10 Quick Start Workshop

Summary: This two day interactive workshop was designed for new users of Crystal Reports 10. Some of the topics covered include a review of the software features, report design and the creation of presentation quality reports. The course incorporates a number of hands on exercises to reinforce the learning process.

Prerequisite: Working knowledge of Windows 9x-2000 environment is required. Familiarity with relational database concepts (tables, fields and records) is strongly recommended.

Basic Reporting

Before You Begin

- Defining the Purpose of the Report
- Determining the Layout of the Report
- Finding the Data
- Organizing the Data for the Report

Creating a Simple Report

- Starting the Crystal Reports Program
- Starting a New Report
- Choosing a Data Source
- The Main Components of the Design Window
- Exploring the Toolbars
- Managing Resources with Explorers
- Placing Fields on the Report
- Selecting and Sizing Objects
- Browsing Field Data
- Moving and Aligning Objects
- Using Guides and Guidelines to Move and Align Objects
- Creating Text Objects
- Saving the Report
- Auto-saving the Report
- Previewing the Report
- Refreshing the Data
- Getting Help
- Challenge Exercise - Creating a Basic Report

Formatting Features

- Quick Formatting with the Template Expert
- Using the Format Painter
- Formatting Objects
- Inserting Lines and Boxes
- Drawing a Line
- Drawing a Box
- Inserting Graphics
- Working with the Page Commands
- Changing Page Orientation
- Changing Margins
- Working with Text Objects
- Adding Fields into a Text Object
- Formatting Part or All of an Object
- Inserting Special Fields

Selecting Specific Records from the Database

- Filtering Data with the Select Expert
- Selecting Records with Multiple Criteria
- Viewing and Editing the Select Formula
- Case Sensitive vs. Case Insensitive
- Record Selection Formula Templates
- Challenge Exercise - Selecting Specific Records
- Challenge Exercise - Selecting a Range of Values

Grouping and Sorting Data for Summary Purposes

- When and Why to Group Records
- Creating a Group
- Group and Sort Direction
- Customize Group Name Field
- Modifying Groups
- Creating Multiple Groups in a Report
- Using the Group Tree to Navigate the Report
- Reordering Groups
- Summarizing Groups
- Additional Summary Options
- Grouping Data in Date/Time Intervals
- Calculating Percentages
- Ordering Groups Based on Their Subtotals Using the Group Sort Expert
- Challenge Exercise - Grouping, Sorting, Summarizing
- Challenge Exercise - Calculating Percentages

Adding Flexibility to Reports

Combining Multiple Tables

- Understanding Tables, Records, and Fields
- Learning About Linking
- Adding Multiple Tables to a Report
- Challenge Exercise - Using the Database Expert to Link Tables

Creating and Using Formulas

- Understanding Crystal Formula Syntax without Being a Programmer
- About the Formula Workshop
- Using the Formula Workshop
- Using the Formula Editor
- The Formula Editor Toolbar
- Performing Simple Number Calculations
- Manipulating Dates with Formulas
- Creating Boolean (True/False) Formulas
- Creating String Formulas
- Using Bookmarks to Navigate Through Formulas
- Challenge Exercise - Creating String Formulas
- Challenge
- Exercise - Doing Calculations
- Challenge Exercise - Subtracting Dates
- Challenge Exercise - Using Nested If Statements

Conditional Formatting

- The Highlighting Expert
- Setting Highlighting Priorities
- Formatting Sections
- Formatting Sections Conditionally
- Conditionally Formatting Fields
- Challenge Exercise - Section Formatting and Conditional Formatting

Creating Summary Reports and Charts

- Creating a Summary Report
- Applying the Drill Down Feature
- Applying the DrillDown-GroupLevel
- Producing Charts
- Editing Charts
- Formatting Charts
- Using the General Chart Options
- Modifying Individual Objects in the Chart
- Using Auto-Arrange Chart
- Applying Chart Templates
- Challenge Exercise - Creating a Summary Report
- Challenge Exercise - Charting

Exporting Report Results Within Your Organization

- Understanding Export Formats and Destinations
- Using an HTML Format for Crystal Reports
- Exporting to Windows Applications
- Exporting to a Report Definition Format

Setting Default and Report Options

- Setting the Default Layout for Design and Preview Views

Using the Report Wizards

- What are the Report Wizards?
- Create a Report Using the Standard Report Creation Wizard
- The Data Dialog Box
- The Fields Dialog Box
- The Grouping Dialog Box
- The Summaries Dialog Box
- The Group Sorting Dialog Box
- The Chart Dialog Box
- The Record Selection Dialog Box
- The Template Dialog Box
- Challenge Exercise - Create a Report Using a Report Wizard

For After Class

APPENDIX A - Mapping

- Understanding Maps
- Map Layouts
- Map Types
- Formatting the Map
- Drilling Down on Maps
- Using the Analyzer Tab for Advanced Mapping
- Changing the Geographic Map
- Using the Map Navigator
- Changing Map Layers
- Resolving Data Mismatches

APPENDIX B – Creating an ODBC Data Source to Attach to a Database

- Creating an ODBC Data Source to Attach to a Database
- Creating an ODBC Connection to Any Database

APPENDIX C - Pre-Qualification Exercise for the Power User Workshop

- Why Should You Pre-qualify Yourself for the Power User Workshop?
- Pre-qualification Exercise
-

APPENDIX D – The Xtreme Sample Database

- A relational diagram of tables existing the Xtreme Sample Database provided on the Crystal Reports Installation CD

APPENDIX E - Installation and System Requirements

- Review the necessary hardware and operating system requirements to make Crystal Reports operate correctly

APPENDIX F - Function and Operator Locations

- A complete listing of all the available Formula Functions and an explanation of the new Custom Functions

APPENDIX G – Glossary

- A complete glossary of terms used throughout the book

Crystal Reports 10 Power User Workshop

- Summary:** This two- to three-day workshop is designed to enhance your basic report writing skills and move you into creating more complex reports. Time will be spent walking you through the tips and tricks of advanced report writing along with a good amount of hands on practice. In addition, you will cover the Crystal Reports 10 Architecture, Custom Functions, Professional Design, Report Efficiency and Advanced Formulas. This course incorporates a number of hands on exercises that reinforce the learning process
- Prerequisite:** Successful Completion of either the Quick Start Workshop or the Pre-qualification exercise is strongly recommended.

Power Formatting and Formulas

Refresher Exercise

- Review of Planning a Report
- Creating the Report
- Placing Fields on the Report
- Creating the Formulas
- Advanced Grouping
- Selecting Certain Records
- Helpful Hints for Formatting the Report
- Adding and Working with Text Objects
- Hiding and Suppressing Sections
- Guidelines

Power Formatting with Multiple Sections

- Using Multiple Sections in Reports
- Using the Section Expert to Work with Sections
- Conditionally Formatting Multiple Sections
- Advanced Drill Down Group Level
- Challenge Exercise - Formatting with Multiple Sections
- Challenge Exercise - Conditionally Formatting Multiple Sections

Using the Running Totals Feature

- Understanding Running Totals
- Creating Running Totals for a List of Numbers
- Conditional Running Totals
- Challenge Exercise - Creating Running Totals
- Challenge Exercise - Creating a Conditional Running Total

Prompting with Parameters

- Parameter Field Considerations
- Creating a Parameter Field
- Using a Parameter to Select Records
- Using a Parameter Field
- Creating a Pick List for Parameter Values
- Importing a Pick List
- Adding Parameter Values to Text Objects
- Allowing Multiple Values in Parameters
- Using Multiple Parameter Fields in Reports
- Specifying and Limiting a Range for a Parameter
- Limiting the Range for a Parameter
- Using Parameters in Conditional Formatting
- Using an Edit Mask to Limit String Parameters

- Sorting with a Parameter
- Challenge Exercise - Using Parameters

Using Advanced Formula Features

- Understanding How Crystal Reports Processes the Data
- What Is a Pass?
- Using Evaluation Time Functions
- Working with Variables
- Declaring a Variable
- Assigning a Value to a Variable
- Using a Variable in a Formula
- Variable Scope
- Separating Statements in Complex Formulas
- Working with Arrays
- Challenge Exercise - Understand and Set Up the YTD Comparison Report
- Challenge Exercise - Declare Variables and Conditionally Assign Values to Them

Using Power Tools for Advanced Reports

Using Sub reporting as a Workaround Solution

- Understanding Sub reports
- Unlinked versus Linked Subreports
- Creating an Unlinked Sub report
- Linking a Subreport
- Database Links versus Subreports in One-to-Many Situations
- Creating On-Demand Subreports
- Creating Hyperlinks
- Using Subreports to Link "Unlinkable" Data
- Challenge Exercise - Creating Reports with Linked Subreports

Creating Powerful Groups

- Using the Group Expert
- Using a Field Name to Customize the Group Name
- Using a Formula to Customize the Group Name Field
- Creating Custom Groups
- Grouping on a Formula Field
- Using Group Selection to Filter the Records in the Report
- Grouping Hierarchically
- Create Customized Grouping
- Brain Teaser - Using Group Selection
- Challenge Exercise - Creating a Group Using a Formula

Working with Cross-Tab Reports

- Understanding How Cross-Tabs Affect Your Data
- Creating a Cross-Tab Report
- Creating a Cross-Tab with Multiple Rows or Columns
- Applying a Formatting Style to the Cross-Tab
- Customizing the Cross-Tab Format
- Changing Background Colors
- Formatting Individual Cells
- Changing the Summary Operation
- Suppressing Rows, Columns or Totals
- Repeating Row Heading for Multi-Page Cross-Tabs
- Using Alias Names for Column and Row Headings
- Charting Cross-Tabs
- Challenge Exercise - Cross-Tab Reports

Report Alerts

- What are Report Alerts
- Creating Report Alerts
- Challenge Exercise - Using Report Alerts with Parameter

Report Templates

- What is a Report template
- Standard Report Creation Wizard and Templates
- The Template Expert
- Applying a Template and the consequences
- Template Considerations
- Creating Your Own Templates
- Inserting Template Fields
- Formatting Template Fields
- Giving Template Fields a Value

Custom Functions

- Understanding Custom Functions
- Using a Custom Function
- Custom Function Arguments
- Basic modification of a Custom Function
- Sharing a Custom Function

Advanced Formula Syntax

- Select Case Statement
- For Loop
- While Do loop
- Join and Split
- Challenge Exercise - Using the above syntax in a report

Crystal Reports, Data Access and SQL

- What is SQL
- Direct Database
- Driver
- ODBC
- OLE DB
- Viewing the SQL
- SQL Commands
- Creating a SQL Command
- Adding a Parameter to the Command
- Creating a Report from a SQL Command
- SQL Expressions
- Creating a SQL Expression

Advanced Database Concepts

- Using the Database Expert
- Adding and Removing Databases from the Report
- Remapping Database Fields
- Set Database Location
- Using the Map Fields Dialog Box to Remap Fields
- Adding Tables to a Report Multiple Times
- Changing the Join Type for a Link

For After Class

APPENDIX A - Running Reports Efficiently

- Understanding What Crystal Can Pass to the Database and How That Affects Report Performance
- Strategies for Efficient Report Performance
- Interpreting the SQL Query
- Using an SQL Statement to Make a Report More Efficient
- Using the Switch Function to Pass a Conditional Statement to the Database
- Challenge Exercise - Using a Switch Function to Push Conditional Selection to the Database

APPENDIX B - Using the Excel and Access Add-Ins

- Understanding the Crystal Reports Add-Ins
- Installing the Microsoft Excel Add-In
- Installing the Microsoft Access Add-In
- Creating a Report in Excel
- Creating a Report in Access

APPENDIX C - The Xtreme Sample Database

- A relational diagram of tables existing the Xtreme Sample Database provided on the Crystal Reports Installation CD

APPENDIX D - Function and Operator Locations

- A complete listing of all the available Formula Functions and an explanation of the new Custom Functions

APPENDIX E - Glossary

- A complete glossary of terms used throughout the book

Crystal Reports 9.0 Quick Start Workshop

Summary: This two-day workshop is designed for beginning users with little or no exposure to Crystal Reports. The intent of the course is to familiarize the students with the Crystal Reports environment and get them up and reporting quickly. The workshop provides the basic steps for creating, modifying, saving and viewing reports to more flexible tasks such as basic formulas and the powerful automated features.

Prerequisite: Working knowledge of Windows 9x-2000 environment is required. Familiarity with relational database concepts (tables, fields and records) is strongly recommended.

Basic Reporting

Before You Begin

- Defining the Purpose of the Report
- Determining the Layout of the Report
- Finding the Data
- Organizing the Data for the Report

Creating a Simple Report

- Starting the Crystal Reports Program
- Starting a New Report
- Choosing a Data Source
- The Main Components of the Design Window
- Exploring the Toolbars
- Managing Resources with Explorers
- Placing Fields on the Report
- Selecting and Sizing Objects
- Browsing Field Data
- Moving and Aligning Objects
- Using Guides and Guidelines to Move and Align Objects
- Creating Text Objects
- Saving the Report
- Autosaving the Report
- Previewing the Report
- Refreshing the Data
- Getting Help
- Challenge Exercise - Creating a Basic Report

Formatting Features

- Quick Formatting with the Template Expert
- Formatting Objects
- Inserting Lines and Boxes
- Drawing a Line
- Drawing a Box
- Inserting Graphics
- Working with the Page Commands
- Changing Page Orientation
- Changing Margins
- Working with Text Objects
- Adding Fields into a Text Object
- Formatting Part or All of an Object
- Inserting Special Fields

Selecting Specific Records from the Database

- Filtering Data with the Select Expert
- Selecting Records with Multiple Criteria
- Viewing and Editing the Select Formula
- Case Sensitive vs. Case Insensitive
- Record Selection Formula Templates
- Challenge Exercise - Selecting Specific Records
- Challenge Exercise - Selecting a Range of Values

Grouping and Sorting Data for Summary Purposes

- When and Why to Group Records
- Creating a Group
- Group and Sort Direction
- Customize Group Name Field
- Modifying Groups
- Creating Multiple Groups in a Report
- Using the Group Tree to Navigate the Report
- Reordering Groups
- Summarizing Groups
- Additional Summary Options
- Grouping Data in Date/Time Intervals
- Calculating Percentages
- Ordering Groups Based on Their Subtotals Using the Group Sort Expert
- Challenge Exercise - Grouping, Sorting, Summarizing
- Challenge Exercise - Calculating Percentages

Adding Flexibility to Reports

Combining Multiple Tables

- Understanding Tables, Records, and Fields
- Learning About Linking
- Adding Multiple Tables to a Report
- Challenge Exercise - Using the Database Expert to Link Tables

Creating and Using Formulas

- Understanding Crystal Formula Syntax without Being a Programmer
- About the Formula Workshop
- Using the Formula Workshop
- Using the Formula Editor
- The Formula Editor Toolbar
- Performing Simple Number Calculations
- Manipulating Dates with Formulas
- Creating Boolean (True/False) Formulas
- Creating String Formulas
- Using Bookmarks to Navigate Through Formulas
- Challenge Exercise - Creating String Formulas
- Challenge Exercise - Doing Calculations
- Challenge Exercise - Subtracting Dates
- Challenge Exercise - Using Nested If Statements

Conditional Formatting

- The Highlighting Expert
- Setting Highlighting Priorities
- Formatting Sections
- Formatting Sections Conditionally
- Conditionally Formatting Fields
- Challenge Exercise - Section Formatting and Conditional Formatting

Creating Summary Reports and Charts

- Creating a Summary Report
- Applying the Drill Down Feature
- Applying the DrillDown-GroupLevel
- Producing Charts
- Editing Charts
- Formatting Charts
- Using the General Chart Options
- Modifying Individual Objects in the Chart
- Using Auto-Arrange Chart
- Applying Chart Templates
- Applying Chart Templates
- Challenge Exercise - Creating a Summary Report
- Challenge Exercise - Charting

Exporting Report Results Within Your Organization

- Understanding Export Formats and Destinations
- Using an HTML Format for Crystal Reports
- Exporting to Windows Applications
- Exporting to a Report Definition Format

Setting Default and Report Options

- Setting the Default Layout for Design and Preview Views

Using the Report Wizards

- What are the Report Wizards?
- Create a Report Using the Standard Report Creation Wizard
- The Data Dialog Box
- The Fields Dialog Box
- The Grouping Dialog Box
- The Summaries Dialog Box
- The Group Sorting Dialog Box
- The Chart Dialog Box
- The Record Selection Dialog Box

- The Template Dialog Box
- Challenge Exercise - Create a Report Using a Report Wizard

Mapping

- Understanding Maps
- Map Layouts
- Map Types
- Formatting the Map
- Drilling Down on Maps
- Using the Analyzer Tab for Advanced Mapping
- Changing the Geographic Map
- Using the Map Navigator
- Changing Map Layers
- Resolving Data Mismatches

Creating an ODBC Data Source to Attach to a Database

- Creating an ODBC Connection to Any Database

Pre-Qualification Exercise for the Power User Workshop

- Why Should You Pre-qualify Yourself for the Power User Workshop?
- Pre-qualification Exercise

The Xtreme Sample Database 9

Function and Operator Locations

Crystal Reports 9.0 Power User Workshop

Summary: This 2-day workshop is designed for experienced Crystal Report users. The intent of the course is to increase the design skills and expand into the expert features and powerful functionality of Crystal Reports. This workshop delves into the most complex techniques used for creating reports and solving reporting problems, as well as hands-on practice time with formula solutions.

Prerequisite: Working knowledge of Windows 9X-2000 environment and a thorough understanding of relational database (tables, fields and records) and reporting concepts are required. Successful Completion of either the Quick Start for Novice Users Workshop or the Pre-qualification exercise is strongly recommended.

Power Formatting and Formulas

Refresher Exercise

- Review of Planning a Report
- Creating the Report
- Placing Fields on the Report
- Creating the Formulas
- Advanced Grouping
- Selecting Certain Records
- Helpful Hints for Formatting the Report
- Adding and Working with Text Objects
- Hiding and Suppressing Sections
- Guidelines

Power Formatting with Multiple Sections

- Using Multiple Sections in Reports
- Using the Section Expert to Work with Sections
- Conditionally Formatting Multiple Sections
- Advanced Drill Down Group Level
- Challenge Exercise - Formatting with Multiple Sections
- Challenge Exercise - Conditionally Formatting Multiple Sections

Prompting with Parameters

- Lesson Objectives
- Parameter Fields Overview
- Parameter Field Considerations

- Creating a Parameter Field
- Using a Parameter to Select Records
- Creating a Pick List for Parameter Values
- Importing a Pick List
- Adding Parameter Values to Text Objects
- Allowing Multiple Values in Parameters
- Using Multiple Parameter Fields in Reports
- Specifying and Limiting a Range for a Parameter
- Limiting the Range for a Parameter
- Using Parameters in Conditional Formatting
- Using an Edit Mask to Limit String Parameters
- Sorting with a Parameter
- Challenge Exercise - Using Parameters

Subreports

- Understanding Subreports
- Unlinked versus Linked Subreports
- Creating an Unlinked Subreport
- Linking a Subreport
- Database Links versus Subreports in One-to-Many Situations
- Creating On-Demand Subreports

- Creating Hyperlinks
- Using Subreports to Link "Unlinkable" Data
- Challenge Exercise - Creating Reports with Linked Subreports

Creating Powerful Groups

- Using the Group Expert
- Using a Field Name to Customize the Group Name
- Using a Formula to Customize the Group Name Field
- Creating Custom Groups
- Grouping on a Formula Field
- Using Group Selection to Filter the Records in the Report
- Grouping Hierarchically
- Additional Practice Exercise - Create Customized Grouping
- Brain Teaser - Using Group Selection
- Challenge Exercise - Creating a Group Using a Formula

Using Power Tools for Advanced Reports

Using Advanced Formula Features

- Understanding How Crystal Reports Processes the Data
- What Is a Pass?
- Using Evaluation Time Functions
- Working with Variables
- Declaring a Variable
- Assigning a Value to a Variable
- Using a Variable in a Formula
- Variable Scope
- Separating Statements in Complex Formulas
- Working with Arrays
- Challenge Exercise - Understand and Set Up the YTD Comparison Report
- Challenge Exercise - Declare Variables and Conditionally Assign Values to Them

Running Totals

- Understanding Running Totals
- Creating Running Totals for a List of Numbers
- Conditional Running Totals
- Challenge Exercise - Creating Running Totals
- Challenge Exercise - Creating a Conditional Running Total

Working with Cross-Tab Reports

- Understanding How Cross-Tabs Affect Your Data
- Creating a Cross-Tab Report
- Creating a Cross-Tab with Multiple Rows or Column
- Applying a Formatting Style to the Cross-Tab
- Customizing the Cross-Tab Format
- Changing Background Colors
- Formatting Individual Cells
- Changing the Summary Operation

- Suppressing Rows, Columns or Totals
- Repeating Row Heading for Multi-Page Cross-Tabs
- Using Alias Names for Column and Row Headings
- Charting Cross-Tabs
- Challenge Exercise - Cross-Tab Reports

The Repository

- Understanding the Repository
- Getting to know the Crystal Repository
- Creating your own Repository
- Repository and Text Objects/Images
- Repository and SQL Commands
- Repository and Custom Functions
- Challenge Exercise - Creating a Report using the Crystal Repository

Report Templates

- Understanding Report Templates
- Applying Report Templates
- Creating your own Report Template
- Rules for Report Templates
- Challenge Exercise - Creating a Report Template and Applying it.

Custom Functions

- Understanding Custom Functions
- Using a Custom Function
- Basic modification of a Custom Function
- Sharing a Custom Function

Advanced Formula Syntax

- Select Case Statement
- For Loop
- While Do loop
- Join and Split
- Challenge Exercise - Using the above syntax in a report

SQL Commands

- Understanding SQL and ODBC Why Use a Command?
- Writing a Report Against the Command

Advanced Linking

- Using the Database Expert
- Adding and Removing Databases from the Report
- Remapping Database Fields
- Using the Map Fields Dialog Box to Remap Fields
- Adding Tables to a Report Multiple Times
- Changing the Join Type for a Link

For After Class

Appendix A - Creating Report Alerts

- What are Report Alerts
- Creating Report Alerts
- Challenge Exercise - Using Report Alerts with Parameter

Appendix B - Running Reports Efficiently

- Understanding What Crystal Can Pass to the Database and How That Affects Report Performance
- Strategies for Efficient Report Performance
- Interpreting the SQL Query
- Using an SQL Statement to Make a Report More Efficient
- Using the Switch Function to Pass a Conditional Statement to the Database
- Challenge Exercise - Using a Switch Function to Push Conditional Selection to the Database

Appendix C - Creating an ODBC Data Source to Attach to a Database

- Creating an ODBC Connection to Any Database

Appendix D- Using the Excel and Access Add-Ins

- Understanding the Crystal Reports Add-Ins
- Installing the Microsoft Excel Add-In
- Installing the Microsoft Access Add-In
- Creating a Report in Excel
- Creating a Report in Access

Appendix E - The Xtreme Sample Database 9

Appendix F- Function and Operator Locations

Appendix G - Glossary

Crystal Reports 8.0/8.5 Quick Start Workshop

Summary: This two-day workshop is designed for beginning users with little or no exposure to Crystal Reports. The intent of the course is to familiarize the students with the Crystal Reports environment and get them up and reporting quickly. The workshop provides the basic steps for creating, modifying, saving and viewing reports to more flexible tasks such as basic formulas and the powerful automated features.

Prerequisite: Working knowledge of Windows 9x-2000 environment is required. Familiarity with relational database concepts (tables, fields and records) is strongly recommended.

Basic Reporting

Before You Begin

- Defining the Purpose of the Report
- Determining the Layout of the Report
- Finding the Data
- Organizing the Data for the Report

Creating A Simple Report

- Starting the Crystal Reports Program
- Starting a New Report
- Choosing a Data Source
- The Main Components of the Design Window
- Exploring the Toolbars
- Using the Field Explorer
- Placing Fields on the Report
- Selecting and Sizing Objects
- Browsing Field Data
- Moving and Aligning Objects
- Using Guides and Guidelines to Move and Align Objects
- Creating Text Objects
- Saving the Report
- Autosaving the Report
- Previewing the Report
- Refreshing the Data
- Getting Help
- Challenge Exercise - Creating a Basic Report

Formatting Features

- Quick Formatting with the Report Style Expert
- Formatting Objects
- Inserting Lines and Boxes
- Drawing a Line
- Drawing a Box
- Inserting Graphics
- Auto-Arranging the Report
- Working with the Page Commands
- Changing Page Orientation
- Changing Margins
- Working with Text Objects
- Adding Fields into a Text Object
- Placing Multi-Line Text Objects
- Formatting Part or All of an Object
- Inserting Special Fields
- Challenge Exercise - Formatting Features

Selecting Specific Records From the Database

- Filtering Data with the Select Expert
- Selecting Records with Multiple Criteria
- Viewing and Editing the Select Formula
- Case Sensitive vs. Case Insensitive
- Record Selection Formula Templates

- Challenge Exercise - Selecting Specific Records
- Challenge Exercise - Selecting a Range of Values

Grouping and Sorting Data

- When and Why to Group Records
- Creating a Group
- Group and Sort Direction
- Customize Group Name Field
- Modifying Groups
- Creating Multiple Groups
- Using the Group Tree to Navigate the Report
- Reordering Groups
- Sorting Records Within a Group
- Summarizing Groups
- Additional Summary Options
- Adding a Grand Total to Reports
- Grouping Data in Date/Time Intervals
- Calculating Percentages
- Ordering Groups Based on Their Subtotals Using the Top N Expert
- Challenge Exercise - Grouping, Sorting, Summarizing
- Challenge Exercise - Calculating Percentages

Adding Flexibility to Reports

Combining Tables Using The Visual Linking Expert

- Understanding Tables, Records, and Fields
- Learning About Linking
- Adding Multiple Tables to a Report
- Challenge Exercise - Using the Visual Linking Expert to Link Tables

Creating and Using Formulas

- Understanding Crystal Formula Syntax Without Being a Programmer
- Using the Formula Editor
- Performing Simple Number Calculations
- Manipulating Dates with Formulas
- Creating Boolean (True/False) Formulas
- Creating String Formulas
- Using Bookmarks to Navigate Through Formulas
- Challenge Exercise - Creating String Formulas
- Challenge Exercise - Doing Calculations
- Challenge Exercise - Subtracting Dates
- Challenge Exercise - Using Nested If Statements

Conditional Formatting

- The Highlighting Expert
- Setting Highlighting Priorities
- Formatting Sections
- Formatting Sections Conditionally
- Conditionally Formatting Fields

- Challenge Exercise - Section Formatting and Conditional Formatting

Creating Summary Reports and Graphs

- Creating a Summary Report
- Applying the Drill Down Feature
- Producing Graphs
- Editing Charts
- Formatting Charts
- Applying Chart Templates
- Editing the Titles
- Using the General Chart Options
- Analyzing Charts
- Challenge Exercise - Creating a Summary Report
- Challenge Exercise - Charting

Exporting Reports

- Understanding Export Formats and Destinations
- Using an HTML Format for Crystal Reports
- Exporting to an Application
- Exporting to a Report Definition Format

Setting Default Options

- Setting the Default Layout for Design and Preview Views
- Setting the Database File Location
- Setting the Database and Reporting Options
- Setting Field Defaults
- Setting the Default Font

Using the Report Experts

- What are the Report Experts?
- Create a Report Using the Standard Report Expert
- Modifying a Report Using the Report Expert
- Challenge Exercise - Create a Report Using a Report Expert

Appendix A - Mapping

- Understanding Maps
- Map Layouts
- Map Types
- Formatting the Map
- Drilling Down on Maps
- Using the Analyzer Tab for Advanced Mapping
- Changing the Geographic Map
- Using the Map Navigator
- Changing Map Layers
- Resolving Data Mismatches

Appendix B - Creating an ODBC Data Source to Attach to a Database

- Creating an ODBC Connection to Any Database

Appendix C - Pre-Qualification Exercise for the Power User Workshop

- Why Should You Pre-qualify Yourself for the Power User Workshop?
- Pre-qualification Exercise

Crystal Reports 8.0/8.5 Power User Workshop

Summary: This 2-day workshop is designed for experienced Crystal Report users. The intent of the course is to increase the design skills and expand into the expert features and powerful functionality of Crystal Reports. This workshop delves into the most complex techniques used for creating reports and solving reporting problems, as well as hands-on practice time with formula solutions.

Prerequisite: Working knowledge of Windows 9X-2000 environment and a thorough understanding of relational database (tables, fields and records) and reporting concepts are required. Successful Completion of either the Quick Start for Novice Users Workshop or the Pre-qualification exercise is strongly recommended.

Power Formatting and Formulas

Refresher Exercise

- Review of Planning a Report
- Creating the Report
- Placing Fields on the Report
- Creating the Formulas
- Advanced Grouping
- Selecting Certain Records
- Helpful Hints for Formatting the Report
- Adding and Working with Text Objects
- Hiding and Suppressing Sections
- Guidelines

Using the Excel and Access Add-Ins Using

- Understanding the Crystal Reports Add-Ins
- Installing the Microsoft Excel Add-In
- Installing the Microsoft Access Add-In
- Creating a Report in Excel
- Creating a Report in Access

Power Formatting with Multiple Sections

- Using Multiple Sections in Reports
- Using the Section Expert to Work with Sections
- Conditionally Formatting Multiple Sections
-

- Challenge Exercise - Formatting with Multiple Sections
- Challenge Exercise - Conditionally Formatting Multiple Sections

Working with Cross-Tab Reports

- Understanding How Cross-Tabs Affect Your Data
- Creating a Cross-Tab Report
- Creating a Cross-Tab with Multiple Rows or Columns
- Applying a Formatting Style to the Cross-Tab
- Customizing the Cross-Tab Format
- Changing Background Colors
- Formatting Individual Cells
- Changing the Summary Operation
- Suppressing Rows, Columns or Totals
- Repeating Row Heading for Multi-Page Cross-Tabs
- Using Alias Names for Column and Row Headings
- Charting Cross-Tabs
- Challenge Exercise - Cross-Tab Reports

Using the Running Totals Feature

- Understanding Running Totals
- Creating Running Totals for a List of Numbers
- Conditional Running Totals
- Challenge Exercise - Creating Running Totals
- Challenge Exercise - Creating a Conditional Running Total

Prompting with Parameters

- Parameter Field Considerations
- Creating a Parameter Field
- Using a Parameter to Select Records
- Creating a Pick List
- Importing a Pick List
- Adding Parameters to Text Objects
- Allowing Multiple Values
- Multiple Parameter Fields
- Specifying and Limiting a Range for a Parameter
- Using Parameters in Conditional Formatting
- Using an Edit Mask to Limit String Parameters
- Sorting with a Parameter
- Challenge Exercise - Using Parameters

Using Power Tools for Advanced Reports

Advanced Formula Features

- Understanding How Crystal Reports Processes the Data
- What Is a Pass?
- Using Evaluation Time Functions
- Working with Variables
- Declaring a Variable
- Assigning a Value to a Variable
- Using a Variable in a Formula
- Variable Scope
- Separating Statements in Complex Formulas
- Working with Arrays
- Challenge Exercise - Understand and Set Up the YTD Comparison Report
- Challenge Exercise - Declare Variables and Conditionally Assign Values to Them

Using Subreporting as a Workaround Solution

- Understanding Subreports
- Unlinked versus Linked Subreports
- Creating an Unlinked Subreport
- Linking a Subreport
- Database Links versus Subreports in One-to-Many Situations
- Creating On-Demand Subreports
- Creating Hyperlinks
- Using Subreports to Link "Unlinkable" Data
- Challenge Exercise - Creating Reports with Linked Subreports

SQL and the SQL Designer

- Understanding SQL and ODBC
- Why Use a Query?
- Using the SQL Designer
- Editing the SQL Statement for a Query
- Writing a Report Against the Query

Create Report Alerts

- What are Report Alerts
- Creating Report Alerts
- Challenge Exercise - Using Report Alerts with Parameters

Appendix A - Advanced Linking

- Using the Visual Linking Expert
- Adding and Removing Databases from the Report
- Adding Tables to a Report Multiple Times
- Changing the Join Type for a Link

Appendix B - Creating Powerful Groups

- Using a Field Name to Customize the Group Name
- Using a Formula to Customize the Group Name Field
- Creating Custom Groups
- Grouping on a Formula Field
- Using Group Selection to Filter the Records in the Report
- Grouping Hierarchically
- Additional Practice Exercise - Create Customized Grouping
- Brain Teaser - Using Group Selection
- Challenge Exercise - Creating a Group Using a Formula

Appendix C - Using Version 8.0 Control Structures

- Review of If...then...else... Expressions
- Simplifying Conditional Formulas with Select Expressions

Appendix D - Running Reports Efficiently

- Understanding What Crystal Can Pass to the Database and How That Affects Report Performance
- Strategies for Efficient Report Performance
- Interpreting the SQL Query
- Using an SQL Statement to Make a Report More Efficient
- Using the Switch Function to Pass a Conditional Statement to the Database
- Challenge Exercise - Using a Switch Function to Push Conditional Selection to the Database

Appendix E - Working with Crystal Dictionaries

- Understanding Crystal Dictionaries
- Creating a New Dictionary
- Linking the Tables
- Customizing the View
- Adding Graphics Images to a Dictionary
- Including Sample Data
- Creating a Report from a Dictionary

Appendix F - Remapping Database Fields

- Using the Map Fields Dialog Box to Remap Fields

Appendix G - Creating an ODBC Data Source to Attach to a Database

- Creating an ODBC Connection to Any Database

Appendix H - The Xtreme Sample Database

Appendix I - Function and Operator Locations

For After Class

Appendix A - Creating Report Alerts

- What are Report Alerts
- Creating Report Alerts
- Challenge Exercise - Using Report Alerts with Parameter

Appendix B - Running Reports Efficiently

- Understanding What Crystal Can Pass to the Database and How That Affects Report Performance
- Strategies for Efficient Report Performance
- Interpreting the SQL Query
- Using an SQL Statement to Make a Report More Efficient
- Using the Switch Function to Pass a Conditional Statement to the Database
- Challenge Exercise - Using a Switch Function to Push Conditional Selection to the Database

Appendix C - Creating an ODBC Data Source to Attach to a Database

- Creating an ODBC Connection to Any Database

Appendix D- Using the Excel and Access Add-Ins

- Understanding the Crystal Reports Add-Ins
- Installing the Microsoft Excel Add-In
- Installing the Microsoft Access Add-In
- Creating a Report in Excel
- Creating a Report in Access

Appendix E - The Xtreme Sample Database 9

Appendix F- Function and Operator Locations

Appendix G - Glossary

Business Objects Enterprise Courseware

Business Objects Enterprise XI R2 Administrator Workshop

Summary: This three day interactive workshop was designed for Administrators who need to deploy and manage BusinessObjects Enterprise XI R2 or Crystal Server XI R2. Some of the topics covered include an overview of the system architecture, how to use the InfoView and how to manage users and security. The course incorporates a number of hands on exercises to reinforce the learning process.

Prerequisite: Working knowledge of Windows 2000/2003 Server or XP environment is required.

Administrative Tasks

Architecture and Installation

- Understanding the Enterprise Components
- Client Tier
- Application Tier
- Intelligence Tier
- Processing Tier
- Data Tier
- Report Viewers
- Information Flow
- Installing Enterprise on Windows
- System Requirements

BusinessObjects Launchpad

- Java Launchpad
- .NET Launchpad
- Administration Launchpad
- Central Management Console
- Administrative Tools
- InfoView Overview
- InfoAreas
- Reports History
- Scheduling Reports

Account Management

- What is Account Management
- Central Management Console
- Manage Users
- Create User Accounts
- Creating Groups
- Manage Groups
- Creating Profiles
- Managing Profiles

Folder Management

- What is Folder Management
- Creating Folders
- Deleting Folders
- Copying and Moving Folders
- Adding an Object to a Folder
- Folder Limits
- User Folders
- Creating Categories
- Personal Categories

Managing User Access

- Enterprise Object Security Model
- Access Levels and Rights
- Group and Folder Inheritance
- Access Levels and Rights
- Setting Advanced Object Rights
- The Root Folder
- Security Models

Publishing Wizard

- What is Publishing
- Using the Publishing Wizard

Managing Objects

- What are Objects
- Managing Report Objects
- Adding New Objects
- Copy, Move and Shortcuts
- Searching for a Report
- Managing Report Instances
- Object Packages

Scheduling Reports

- What is Scheduling
- Time-based Scheduling

Managing Events

- Events Overview
- Create a File-based Event
- Create a Schedule-based Event
- Create a Custom-based Event

Administrative Tasks

Managing and Configuring Servers

- Server Administrative Tools
- Crystal Management Console (CMC)
- Crystal Configuration Manager (CCM)
- Start, Stop and Restarting Servers
- Viewing Metrics
- Server Metrics
- Managing the Crystal Management Server
- Configuring the Audit Database
- Clustering Crystal Management Servers
- Managing the File Repository Servers
- Managing the Cache Server
- Managing the Event Server
- Managing the Web Component Server
- Managing the page Server
- Managing the Report Job Server

Business Views

- The Business View Manager
- Data Connections
- Dynamic Data Connections
- Data Foundations
- Business Elements
- Business Views
- List of Values Views
- Object Rights
- Row and Column Security

The Repository

- Crystal Repository Migration Wizard
- Repository Explorer
- Renaming and Deleting Folders
- Adding Text Objects and Images
- Reattaching Text Objects or Images
- Adding SQL Commands
- Adding Custom Functions
- Editing SQL Commands
- Editing Custom Functions
- Update Report Objects Linked to Repository

Universes

- Understanding Universes
- Using Universe Designer
- Universe Parameters
- Classes and Objects
- Generate a Universe
- Modify a Universe
- Universe Connections
- Adding a Universe to Enterprise
- Crystal reports and Universes

Desktop Intelligence

- Drill
- Report Formatting
- Saving Documents
- Printing
- Break
- Slice and Dice
- Manage Categories
- Publication Scheduling

Crystal Reports Explorer

- Business View Source
- Data
- Design
- Report

Web Intelligence

- Create New Document
- Add Fields
- Add Filters
- Publish Document

Security Concepts

- Security Overview
- Authentication and Authorization
- Authentication Types
- The Primary Authentication Process
- Managing Authentication
- Enterprise Authentication
- LDAP Authentication
- Windows AD Security
- Windows NT Security
- Default Account
- NT Single Sign On
- Secondary Authorization
- Web Component Server Log

APPENDIX A – Performance Options

- Live Data versus Saved Data
- Increasing Live Data Viewing Capacity
- Improving web Response
- Scheduled Report Capacity
- Some Common Implementation Designs
- One Machine Setup
- Three Machine Setup
- Six Machine Setup

APPENDIX B – Platform Support

- Minimum Hardware Requirements for Crystal Enterprise XI R2
- Supported Platforms for Crystal Enterprise

APPENDIX C – Import Wizard

- Import Scenario
- Licensing Considerations

**Microsoft SQL Server
Reporting Services 2005
Courseware**

SQL Server 2005 Reporting Services Developer 1 Workshop

Summary: This two-day interactive workshop is designed for new users of Microsoft SQL Server 2005 Reporting Services. Some of the topics covered include a review of the software features, administration, report design and the creation of presentation quality reports. The course incorporates a number of hands on exercises to reinforce the learning process.

Prerequisite: Familiarity with Visual Studio 2005 is helpful, but not required

Administration and Development

The Big Picture

- SQL Reporting Services Key Features
- Report Design Options
- Data Extensions
- Deployment Options
- Distribution Options
- Rendering Extensions

The Report Wizard

- Using Development Studio
- Using the Report Wizard
- Viewing Reports
- Publishing Reports
- Accessing Reports via the Report Manager
- Printing and Exporting Reports

Creating a Basic Report

- The Main Components of the Design Environment
- Creating a Data Source and a Dataset
- Report Items
- Table Data Region
- Inserting Data Fields
- Inserting Text
- Previewing the Report
- Working with the Textbox Report Item
- Adding, Resizing and Removing Columns and Rows
- Sorting
- Inserting Calculations
- Page Numbers and the Globals Collection
- Summary Calculations
- Grouping Data
- Saving Reports

Query and Report Parameters

- Query vs. Report Parameters
- Create a Report Parameter
- Add Report Parameter to Dataset
- Specifying Query Parameters
- Parameter Properties
- Displaying Parameter Values in a Report
- Multiple Value Parameters
- Using Dynamic Parameters

Formatting Reports

- Quick Formatting using the Toolbar and Menu Options
- Textbox Style Properties
- Table Style Properties
- Table Grouping and Sorting Properties
- Margins and other Report Layout Properties
- Report Header, Footer and Body Areas
- Page Breaks
- Lines and Boxes

Administration

- Using the Report Manager to configure Reporting Services
- Using the SQL Management Studio to Configure Reporting Services
- Using the Reporting Services Configuration Tool
- Creating Folders
- Uploading and Updating Reports
- Modifying Report Properties
- Managing Parameters
- Linked Reports

Administration and Development

Subscriptions, Snapshots and Caching

- Understanding Report Caching and Snapshots
- Data Source Credentials
- Creating Snapshots
- Scheduling Snapshots
- File Share Subscriptions
- Email Subscriptions
- Shared Schedules

Security

- Security Model Concepts
- Roles and Tasks
- Creating New Roles
- Adding Groups and Users
- Securing Folders
- Site Settings
- Row Level Security
- Deploying Audit Management Reports

Building Report Models

- Report Model Architecture
- Create a Report Model Project
- Create a Data Source
- Create a Data Source View
- Modify Data Source View
- The Model Designer

Using Report Builder

- Launching report Builder
- Designer Layout
- Building a Table Report
- Report Filters
- Clickthrough Reports
- Building a Matrix Report
- Creating Formulas
- Creating a Chart Report

Appendix A – System Requirements

Appendix B – Installation Instructions

Appendix C – Expression Functions for Development Studio

Appendix D – Formula Functions for Report Builder