

## Northcentral Technical College

10-152-335 Database Reporting

# Course Design

### Course Information

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| --- | --- | --- |
|  | Description | Introduces database querying and reporting using leading tools and frameworks. Learners will design, create and publish reports that access both relational and XML datasets using a variety of tools including Crystal Reports and Microsoft SQL Reporting Services. Additional topics include SQL, report distribution, data security and ethical handling of sensitive data. |
|  | Instructional Level | 10 Associate Degree |
|  | Total Credits | 3.00 |
|  | Total Hours | 72.00 |

Types of Instruction

|  |  |
| --- | --- |
| Instruction Type | Credits/Hours |
| Lab | 1/36 |
| Lecture | 2/36 |

Pre/Corequisites

|  |  |
| --- | --- |
| Prerequisite | Prerequisite: 10-152-331 DATABASE CONCEPTS |

Textbooks

|  |
| --- |
| Microsoft SQL Server 2012 Reporting Services, Publisher WROX ISBN:978-1-118-10111-7 |

### Soft Skills

|  |  |
| --- | --- |
| 1. | Act responsibly |
| 2. | Communicate effectively |
| 3. | Demonstrate integrity |
| 4. | Develop global awareness |
| 5. | Think critically and creatively |
| 6. | Work cooperatively |
| 7. | Work productively |

### Course Competencies

|  |  |
| --- | --- |
| 1. | Differentitate between normalized and denormalized data |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully compare a normalized and denormalized dataset |
|  | learners can successfully explain the differences between a normalized and denormalized dataset |
|  | learners can successfully clarify whether datasets are normalized or denormalized |
|  | Learning Objectives |
|  | Compare a normalized and denormalized dataset |
|  | Explain the differences between a normalized and denormalized dataset |
|  | Determine whether datasets are normalized or denormalized |
| 2. | Generate reports using database reporting toolsets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create database reports using tool set |
|  | learners can successfully demonstrate the steps required to create a database report |
|  | learners can successfully select data from non-relational datasets to construct reports |
|  | learners can successfully structure non-relational datasets to create reports |
|  | Learning Objectives |
|  | Create database reports using toolset |
|  | Demonstrate the steps required to create a database report |
|  | Select data from non-relational datasets to construct reports |
|  | Structure non-relational datasets to create reports |
| 3. | Create normalized and denormalized datasets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create a normalized dataset |
|  | learners can successfully create a denormalized dataset |
|  | learners can successfully identify type of datasets needed based on requirements |
|  | Learning Objectives |
|  | Create a normalized dataset using T-SQL |
|  | Create a denormalized dataset using T-SQL |
|  | Identify type of datasets needed based on requirements |
| 4. | Query statements to retrieve data |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully query data from a normalized dataset |
|  | learners can successfully query data from a denormalized dataset |
|  | learners can successfully query data from a flat file |
|  | Learning Objectives |
|  | Query data from a normalized dataset using T-SQL |
|  | Query data from a denormalized dataset using T-SQL |
|  | Query data from a flat file |
| 5. | Transform data in preparation for reporting |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully manipulate data for readability |
|  | learners can successfully tabulate data totals using aggregate commands |
|  | learners can successfully modify data to meet requirements |
|  | learners can successfully customize data to clarify result set |
|  | Learning Objectives |
|  | Manipulate data for readability |
|  | Tabulate data totals using aggregate commands |
|  | Modify data to meet requirements |
|  | Customize data to clarify result set |
| 6. | Design reports for readability and usability |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully proofread report results for accuracy |
|  | learners can successfully design professionally formatted reports |
|  | learners can successfully manipulate columns and row data for usability |
|  | learners can successfully classify and group data per subject |
|  | Learning Objectives |
|  | Proofread report results for accuracy |
|  | Design professionally formatted reports |
|  | Manipulate columns and row data for usability |
|  | Classify and group data per subject |
| 7. | Format data for presentation |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully format data based on localization |
|  | learners can successfully format to make data clear and concise |
|  | Learning Objectives |
|  | Format data based on localization |
|  | Format to make data clear and concise |
|  | Format data using the principles of usability |
| 8. | Apply security to database reports |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully configure security on database reports |
|  | learners can successfully identify where security is applicable |
|  | learners can successfully locate data that should be restricted |
|  | Learning Objectives |
|  | Configure security on database reports |
|  | Identify where security is applicable |
|  | Determine what data that should be restricted |
| 9. | Distribute reports using a variety of technologies and platforms |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully publish reports for accessibility |
|  | learners can successfully subscribe to reports |
|  | learners can successfully distribute reports electronically |
|  | learners can successfully distribute reports in multiple file formats |
|  | learners can successfully distribute reports via email |
|  | Learning Objectives |
|  | Publish reports for accessibility |
|  | Subscribe to reports |
|  | Distribute reports electronically |
|  | Distribute reports in multiple file formats |
|  | Distribute reports via email |

### Grading Information

Course Grading Information Letter % or Points needed to achieve grade  
Grade \*All competencies must be met to earn a C or above  
A >= 92% and has met all course competencies  
A- >= 90% and has met all course competencies  
B+ >= 87% and has met all course competencies  
B >= 83% and has met all course competencies  
B- >= 80% and has met all course competencies  
C+ >= 77% and has met all course competencies  
C >= 70% and has met all course competencies  
D >= 60% and/or has not met all course competencies  
F < 60% and has not met all course competencies  
  
Late Work  
A critical component of success in the IT is the ability to meet deadlines. Therefore, we will model this component in this course. Missing/late work will incur the following penalties:  
-    Failure to submit all required work on time during the first two weeks of the course will result in your removal from the course with a grade of "NS" (no-show).  
-    20% will be deducted if work is submitted up to two weeks late.  
-    Work submitted more than two weeks late will not receive any credit.  
-    Late work during the last two weeks of class will not receive any credit.  
-    No late quizzes will be accepted.  
-    No late tests will be accepted except in extreme circumstances or having made prior arrangements.  
-    Tests which do not initially receive a passing grade must be retaken until a passing grade is achieved.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Assessment Type | Quantity | Required to Pass\* | Points | Weight |
| Lab Activities | 14 | 50% | 210 | 17% |
| Assignments | 14 | 50% | 420 | 33% |
| Quizzes | 2 | 100% | 125 | 10% |
| Assessments | 2 | 100% | 200 | 16% |
| Discussion Boards | 5 | 100% | 300 | 24% |
| Total | 1255 |  | 620 | 100% |

\* Note: Even if your raw score would otherwise yield a grade of "C" or better, you must complete the listed percentages of assessment activities in each category to receive a passing grade in this course.

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| --- |
| Metadata Tags |
| XML datasets, Crystal Reports, Microsoft SQL, Report distribution, data security,database querying |

### Course Learning Plans and Performance Assessment Tasks

Data, Data Sources & Datasets

Overview/Purpose

The purpose of this learning plan is to introduce data, data sources & data sets.

Target Competencies

|  |  |
| --- | --- |
| 1. | Differentitate between normalized and denormalized data |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully compare a normalized and denormalized dataset |
|  | learners can successfully explain the differences between a normalized and denormalized dataset |
|  | learners can successfully clarify whether datasets are normalized or denormalized |
|  | Learning Objectives |
|  | Compare a normalized and denormalized dataset |
|  | Explain the differences between a normalized and denormalized dataset |
|  | Determine whether datasets are normalized or denormalized |
| 2. | Generate reports using database reporting toolsets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create database reports using tool set |
|  | learners can successfully demonstrate the steps required to create a database report |
|  | learners can successfully select data from non-relational datasets to construct reports |
|  | learners can successfully structure non-relational datasets to create reports |
|  | Learning Objectives |
|  | Create database reports using toolset |
|  | Demonstrate the steps required to create a database report |
|  | Select data from non-relational datasets to construct reports |
|  | Structure non-relational datasets to create reports |
| 3. | Create normalized and denormalized datasets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create a normalized dataset |
|  | learners can successfully create a denormalized dataset |
|  | learners can successfully identify type of datasets needed based on requirements |
|  | Learning Objectives |
|  | Create a normalized dataset using T-SQL |
|  | Create a denormalized dataset using T-SQL |
|  | Identify type of datasets needed based on requirements |

### Learning Activities

|  |  |
| --- | --- |
| 1. | Listen to course lectures. |
| 2. | Participate in course discussions. |
| 3. | Review websites as referred to in course lectures. |
| 4. | Read the textbook and complete activities as specified. Chapter 1 - Introducing Reporting Services, Chapter 2 - Reporting Services Installation & Architecture, and Chapter 4 - Basic Report Design |
| 5. | Review and provide feedback on peer projects/assignments. |
| 6. | Answer spontaneous questions to demonstrate an understanding of content. |
| 7. | Mentor/coach peers through the completion of assigned projects. |
| 8. | Participate in discussion boards beyond scope required by assignments. |
| 9. | Answer the question, "What concept or skill remains the least clear to you?" |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete lab activities as outlined.   1. In an Excel worksheet, create a denormalized dataset with at least 25 column headers for a local ticketed event.  Include ticket, statistic information, date, and 10 data samples for these columns and format the columns with the appropriate data type. 2. Install SQL Server Reporting Services. 3. Follow the step by step tutorial and exercises for Chapter 4. Let's Get Started pages 97-106, Manual Report Design pages 113-120, Running and Saving a Report page 120 |
| 2. | Complete discussion board as outlined. In your own words, discuss and answer the following question.   What is the reporting life cycle?  Describe the activities that happen in each phase. |
| 3. | Complete assignments as outlined.   1. Answer the questions in short answer format. &nbsp;What is denormalization? &nbsp;How are denormalized datasets used? 2. Answer the questions in short answer format.  What is normalization?  How are normalized datasets used? 3. Create a "How to Normalize data in 3rd normal form" document using visualizations, written support, and examples. 4. In Microsoft Visio using the Crow's Foot Database Notation, demonstrate the previously created normalized data and include SQL data types, primary and foreign keys and relationship connectors. 5. Create a SQL database named DRTopicNameInitials (e.g. DRComputerClubJC) on your local SQL Server, then add the objects (including data) from the Visio diagram. Create a database diagram and change the tables to the *standard*view. 6. Answer the following questions in short answer format.  What is the difference between a dataset and data source? |

Data Queries

Overview/Purpose

The purpose of this learning plan is to introduce data queries.

Target Competencies

|  |  |
| --- | --- |
| 1. | Generate reports using database reporting toolsets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create database reports using tool set |
|  | learners can successfully demonstrate the steps required to create a database report |
|  | learners can successfully select data from non-relational datasets to construct reports |
|  | learners can successfully structure non-relational datasets to create reports |
|  | Learning Objectives |
|  | Create database reports using toolset |
|  | Demonstrate the steps required to create a database report |
|  | Select data from non-relational datasets to construct reports |
|  | Structure non-relational datasets to create reports |
| 2. | Create normalized and denormalized datasets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create a normalized dataset |
|  | learners can successfully create a denormalized dataset |
|  | learners can successfully identify type of datasets needed based on requirements |
|  | Learning Objectives |
|  | Create a normalized dataset using T-SQL |
|  | Create a denormalized dataset using T-SQL |
|  | Identify type of datasets needed based on requirements |
| 3. | Query statements to retrieve data |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully query data from a normalized dataset |
|  | learners can successfully query data from a denormalized dataset |
|  | learners can successfully query data from a flat file |
|  | Learning Objectives |
|  | Query data from a normalized dataset using T-SQL |
|  | Query data from a denormalized dataset using T-SQL |
|  | Query data from a flat file |
| 4. | Transform data in preparation for reporting |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully manipulate data for readability |
|  | learners can successfully tabulate data totals using aggregate commands |
|  | learners can successfully modify data to meet requirements |
|  | learners can successfully customize data to clarify result set |
|  | Learning Objectives |
|  | Manipulate data for readability |
|  | Tabulate data totals using aggregate commands |
|  | Modify data to meet requirements |
|  | Customize data to clarify result set |
| 5. | Design reports for readability and usability |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully proofread report results for accuracy |
|  | learners can successfully design professionally formatted reports |
|  | learners can successfully manipulate columns and row data for usability |
|  | learners can successfully classify and group data per subject |
|  | Learning Objectives |
|  | Proofread report results for accuracy |
|  | Design professionally formatted reports |
|  | Manipulate columns and row data for usability |
|  | Classify and group data per subject |

### Learning Activities

|  |  |
| --- | --- |
| 1. | Listen to course lectures. |
| 2. | Participate in course discussions. |
| 3. | Review websites as referred to in course lectures. |
| 4. | Read the textbook and complete activities as specified. Chapter 5 - Report Layout & Formatting and Chapter 6 - Designing Data Access. |
| 5. | Review and provide feedback on peer projects/assignments. |
| 6. | Answer spontaneous questions to demonstrate an understanding of content. |
| 7. | Mentor/coach peers through the completion of assigned projects. |
| 8. | Participate in discussion boards beyond scope required by assignments. |
| 9. | Answer the question, "What concept or skill remains the least clear to you?" |

### Assessment Activities

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Complete lab activities as outlined. Following the text in Chapter 5, recreate Figure 5-1 through Figure 5-18. Using Microsoft Visio Crow's Foot Database Notation template normalize the data in the attached Excel document into 4 groups  which should include primary keys, 3 relationships and 3 foreign keys.  Use appropriate naming and data types for each column/field.  Save as JPEG.   Using T-SQL create the database using the diagram that was just created including relationships and keys.  Create a database diagram, take a snip it of the results and save. Insert data into the database using the INSERT statement.  Take a snip its of the successful INSERT into the (4) tables.  Execute the following statements against the database and take a snip it of the successful results WHERE clause against the (4) tables WHERE clause with operator An Aggregate function with GROUP BY INNER JOIN Follow the text in Chapter 6, recreate the figures and practice the exercises from pages 170-176. | | |
| 2. | Complete quiz as outlined. | | |
|  | Learning Materials | | |
|  | 2.2 Quiz | 2.2 Quiz.docx Hyperlink removed. Document is embargoed. |
| 3. | Complete assignments as outlined.   1. Create a Project 2. Specifiy Connection 3. Define Dataset, JOIN two tables, Use the WHERE Clause 4. Use Aggregrate function SUM and Group by 5. Create a Table Report 6. Format Report  * Date * Currency * Text Style * Column Widths * Grouping and Totals  1. Group data  * Add Totals * Add daily, monthly or yearly totals * Add Grand Total * Publish to localhost  1. Create a SSRS report with a parameter 2. Create a short video using [Jing](http://www.techsmith.com/jing.html) < 3 minutes how to use the report with parameters | | |
| 4. | Complete the assessment as outlined. | | |
| 5. | Complete the discussion board as indicated.  In your own words, discuss and answer the following question.   What is business intelligence reporting?  Who in an organization would use BI reports?  What is the difference between a BI report or a report that monitors daily business tasks? | | |

Formatting & Design

Overview/Purpose

The purpose of this learning plan is to introduce formatting & design.

Target Competencies

|  |  |
| --- | --- |
| 1. | Generate reports using database reporting toolsets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create database reports using tool set |
|  | learners can successfully demonstrate the steps required to create a database report |
|  | learners can successfully select data from non-relational datasets to construct reports |
|  | learners can successfully structure non-relational datasets to create reports |
|  | Learning Objectives |
|  | Create database reports using toolset |
|  | Demonstrate the steps required to create a database report |
|  | Select data from non-relational datasets to construct reports |
|  | Structure non-relational datasets to create reports |
| 2. | Transform data in preparation for reporting |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully manipulate data for readability |
|  | learners can successfully tabulate data totals using aggregate commands |
|  | learners can successfully modify data to meet requirements |
|  | learners can successfully customize data to clarify result set |
|  | Learning Objectives |
|  | Manipulate data for readability |
|  | Tabulate data totals using aggregate commands |
|  | Modify data to meet requirements |
|  | Customize data to clarify result set |
| 3. | Design reports for readability and usability |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully proofread report results for accuracy |
|  | learners can successfully design professionally formatted reports |
|  | learners can successfully manipulate columns and row data for usability |
|  | learners can successfully classify and group data per subject |
|  | Learning Objectives |
|  | Proofread report results for accuracy |
|  | Design professionally formatted reports |
|  | Manipulate columns and row data for usability |
|  | Classify and group data per subject |
| 4. | Format data for presentation |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully format data based on localization |
|  | learners can successfully format to make data clear and concise |
|  | Learning Objectives |
|  | Format data based on localization |
|  | Format to make data clear and concise |
|  | Format data using the principles of usability |

### Learning Activities

|  |  |
| --- | --- |
| 1. | Listen to course lectures. |
| 2. | Participate in course discussions. |
| 3. | Review websites as referred to in course lectures. |
| 4. | Read the textbook and complete activities as specified. Chapter 7 - Advanced Report Design, Chapter 8 - Chart Reports, and Chapter 12 - Tabular Models. |
| 5. | Review and provide feedback on peer projects/assignments. |
| 6. | Answer spontaneous questions to demonstrate an understanding of content. |
| 7. | Mentor/coach peers through the completion of assigned projects. |
| 8. | Participate in discussion boards beyond scope required by assignments. |
| 9. | Answer the question, "What concept or skill remains the least clear to you?" |

### Assessment Activities

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Complete lab activities as outlined.   Chapter 7 exercises pages 190-228 Chapter 8 exercises pages 240-245  Chapter 12 pages 355-372. Research user experience evaluation with a focus on report creation.   Provide (3) links that were located as part of the research | | |
| 2. | Complete quiz as outlined. | | |
|  | Learning Materials | | |
|  | 3.4 Quiz | 3.4 Quiz.docx Hyperlink removed. Document is embargoed. |
| 3. | Complete assignments as outlined. Create a matrix report, report template, subreport, report with document map, and drill-through report. Create a pie chart, line chart and publish.  Create a power pivot report with joins.  Update 3 previously created reports with the focus of user experience principles. | | |
| 4. | Complete the discussion board as outlined. User Experience is the same as Usability.  Debate. | | |

Report Security

Overview/Purpose

The purpose of this learning plan is to introduce report security.

Target Competencies

|  |  |
| --- | --- |
| 1. | Generate reports using database reporting toolsets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create database reports using tool set |
|  | learners can successfully demonstrate the steps required to create a database report |
|  | learners can successfully select data from non-relational datasets to construct reports |
|  | learners can successfully structure non-relational datasets to create reports |
|  | Learning Objectives |
|  | Create database reports using toolset |
|  | Demonstrate the steps required to create a database report |
|  | Select data from non-relational datasets to construct reports |
|  | Structure non-relational datasets to create reports |
| 2. | Apply security to database reports |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully configure security on database reports |
|  | learners can successfully identify where security is applicable |
|  | learners can successfully locate data that should be restricted |
|  | Learning Objectives |
|  | Configure security on database reports |
|  | Identify where security is applicable |
|  | Determine what data that should be restricted |

### Learning Activities

|  |  |
| --- | --- |
| 1. | Listen to course lectures. |
| 2. | Participate in course discussions. |
| 3. | Review websites as referred to in course lectures. |
| 4. | Read the textbook and complete activities as specified. Chapter 19 - Native Mode Server Administration. |
| 5. | Review and provide feedback on peer projects/assignments. |
| 6. | Answer spontaneous questions to demonstrate an understanding of content. |
| 7. | Mentor/coach peers through the completion of assigned projects. |
| 8. | Participate in discussion boards beyond scope required by assignments. |
| 9. | Answer the question, "What concept or skill remains the least clear to you?" |

### Assessment Activities

|  |  |
| --- | --- |
| 1. | Complete lab activities as outlined. Research SSRS security Provide (2) links that were found as part of the research. Research SQL database security Provide (2) links that were found as part of the research |
| 2. | Complete discussion board as outlined. You were just informed that a report in SSRS is blank.  What could have happened?  How can be done to prevent this from happening again? |
| 3. | Complete assignments as outlined. Secure 3 previously created reports both in SQL Server Management Studio and in SSRS. |

Report Distribution

Overview/Purpose

The purpose of this learning plan is to introduce report distribution.

Target Competencies

|  |  |
| --- | --- |
| 1. | Generate reports using database reporting toolsets |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully create database reports using tool set |
|  | learners can successfully demonstrate the steps required to create a database report |
|  | learners can successfully select data from non-relational datasets to construct reports |
|  | learners can successfully structure non-relational datasets to create reports |
|  | Learning Objectives |
|  | Create database reports using toolset |
|  | Demonstrate the steps required to create a database report |
|  | Select data from non-relational datasets to construct reports |
|  | Structure non-relational datasets to create reports |
| 2. | Distribute reports using a variety of technologies and platforms |
|  | Assessment Strategies |
|  | Lab Activity |
|  | Performance Assignment |
|  | Discussion Board |
|  | Objective Test |
|  | Criteria |
|  | learners can successfully publish reports for accessibility |
|  | learners can successfully subscribe to reports |
|  | learners can successfully distribute reports electronically |
|  | learners can successfully distribute reports in multiple file formats |
|  | learners can successfully distribute reports via email |
|  | Learning Objectives |
|  | Publish reports for accessibility |
|  | Subscribe to reports |
|  | Distribute reports electronically |
|  | Distribute reports in multiple file formats |
|  | Distribute reports via email |

### Learning Activities

|  |  |
| --- | --- |
| 1. | Listen to course lectures. |
| 2. | Participate in course discussions. |
| 3. | Review websites as referred to in course lectures. |
| 4. | Read the textbook and complete activities as specified. Chapter 17 - Content Management. |
| 5. | Review and provide feedback on peer projects/assignments. |
| 6. | Answer spontaneous questions to demonstrate an understanding of content. |
| 7. | Mentor/coach peers through the completion of assigned projects. |
| 8. | Participate in discussion boards beyond scope required by assignments. |
| 9. | Answer the question, "What concept or skill remains the least clear to you?" |

### Assessment Activities

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Complete lab activities as outlined. Recreate the figures 17.1 through 17.15. | | |
| 2. | Complete the discussion board as outlined. In your own words, answer the following question.   How will the reporting skill set you gained through this course be applied to your potential or current information technology positions? | | |
| 3. | Complete assignments as outlined. Using SSRS email (2) reports, send (2) reports to a network share and create a report snapshot. | | |
| 4. | Complete the assessment as outlined. | | |
|  | Learning Materials | | |
|  | 4.1 Assessment | 4.1 Assessment.docx Hyperlink removed. Document is embargoed. |

Lab Activity

Directions

Complete the lab assignment by following along with the instructor-lead, in-class activities. Submit the resulting files via Blackboard before 11:59 PM on the date due.

Note: The criteria that will apply to this assessment are determined by the competencies being assessed. By the end of this course, you will have been assessed on all of the criteria which are included in the scoring guide.

Target Course Competencies

|  |  |
| --- | --- |
| 1. | Differentitate between normalized and denormalized data |
| 2. | Generate reports using database reporting toolsets |
| 3. | Create normalized and denormalized datasets |
| 4. | Query statements to retrieve data |
| 5. | Transform data in preparation for reporting |
| 6. | Design reports for readability and usability |
| 7. | Format data for presentation |
| 8. | Apply security to database reports |
| 9. | Distribute reports using a variety of technologies and platforms |

### Scoring

Rating Scale

|  |  |
| --- | --- |
| Value | Description |
| 5 | Masterful |
| 4 | Skilled |
| 3 | Able |
| 2 | Developing |
| 1 | Novice |
| 0 | Unskilled |

Scoring Standard

You must earn a minimum rating of "3" on each criterion to successfully complete this assessment.

### Scoring Guide

|  |  |  |
| --- | --- | --- |
|  | Criteria | Ratings |
| 1. | learners can successfully compare a normalized and denormalized dataset | 5 4 3 2 1 0 |
| 2. | learners can successfully explain the differences between a normalized and denormalized dataset | 5 4 3 2 1 0 |
| 3. | learners can successfully clarify whether datasets are normalized or denormalized | 5 4 3 2 1 0 |
| 4. | learners can successfully create database reports using tool set | 5 4 3 2 1 0 |
| 5. | learners can successfully demonstrate the steps required to create a database report | 5 4 3 2 1 0 |
| 6. | learners can successfully select data from non-relational datasets to construct reports | 5 4 3 2 1 0 |
| 7. | learners can successfully structure non-relational datasets to create reports | 5 4 3 2 1 0 |
| 8. | learners can successfully create a normalized dataset | 5 4 3 2 1 0 |
| 9. | learners can successfully create a denormalized dataset | 5 4 3 2 1 0 |
| 10. | learners can successfully identify type of datasets needed based on requirements | 5 4 3 2 1 0 |
| 11. | learners can successfully query data from a normalized dataset | 5 4 3 2 1 0 |
| 12. | learners can successfully query data from a denormalized dataset | 5 4 3 2 1 0 |
| 13. | learners can successfully query data from a flat file | 5 4 3 2 1 0 |
| 14. | learners can successfully manipulate data for readability | 5 4 3 2 1 0 |
| 15. | learners can successfully tabulate data totals using aggregate commands | 5 4 3 2 1 0 |
| 16. | learners can successfully modify data to meet requirements | 5 4 3 2 1 0 |
| 17. | learners can successfully customize data to clarify result set | 5 4 3 2 1 0 |
| 18. | learners can successfully proofread report results for accuracy | 5 4 3 2 1 0 |
| 19. | learners can successfully design professionally formatted reports | 5 4 3 2 1 0 |
| 20. | learners can successfully manipulate columns and row data for usability | 5 4 3 2 1 0 |
| 21. | learners can successfully classify and group data per subject | 5 4 3 2 1 0 |
| 22. | learners can successfully format data based on localization | 5 4 3 2 1 0 |
| 23. | learners can successfully format to make data clear and concise | 5 4 3 2 1 0 |
| 24. | learners can successfully configure security on database reports | 5 4 3 2 1 0 |
| 25. | learners can successfully identify where security is applicable | 5 4 3 2 1 0 |
| 26. | learners can successfully locate data that should be restricted | 5 4 3 2 1 0 |
| 27. | learners can successfully publish reports for accessibility | 5 4 3 2 1 0 |
| 28. | learners can successfully subscribe to reports | 5 4 3 2 1 0 |
| 29. | learners can successfully distribute reports electronically | 5 4 3 2 1 0 |
| 30. | learners can successfully distribute reports in multiple file formats | 5 4 3 2 1 0 |
| 31. | learners can successfully distribute reports via email | 5 4 3 2 1 0 |

Performance Assignment

Directions

Complete the assignment by following along with the instructor-lead, in-class activities. Submit the resulting files via Blackboard before 11:59 PM on the date due.

Note: The criteria that will apply to this assessment are determined by the competencies being assessed. By the end of this course, you will have been assessed on all of the criteria which are included in the scoring guide.

Target Course Competencies

|  |  |
| --- | --- |
| 1. | Differentitate between normalized and denormalized data |
| 2. | Generate reports using database reporting toolsets |
| 3. | Create normalized and denormalized datasets |
| 4. | Query statements to retrieve data |
| 5. | Transform data in preparation for reporting |
| 6. | Design reports for readability and usability |
| 7. | Format data for presentation |
| 8. | Apply security to database reports |
| 9. | Distribute reports using a variety of technologies and platforms |

Rating Scale

|  |  |
| --- | --- |
| Value | Description |
| 5 | Masterful |
| 4 | Skilled |
| 3 | Able |
| 2 | Developing |
| 1 | Novice |
| 0 | Unskilled |

Scoring Standard

You must earn a minimum rating of "3" on each criterion to successfully complete this assessment.

### Scoring Guide

|  |  |  |
| --- | --- | --- |
|  | Criteria | Ratings |
| 1. | learners can successfully compare a normalized and denormalized dataset | 5 4 3 2 1 0 |
| 2. | learners can successfully explain the differences between a normalized and denormalized dataset | 5 4 3 2 1 0 |
| 3. | learners can successfully clarify whether datasets are normalized or denormalized | 5 4 3 2 1 0 |
| 4. | learners can successfully create database reports using tool set | 5 4 3 2 1 0 |
| 5. | learners can successfully demonstrate the steps required to create a database report | 5 4 3 2 1 0 |
| 6. | learners can successfully select data from non-relational datasets to construct reports | 5 4 3 2 1 0 |
| 7. | learners can successfully structure non-relational datasets to create reports | 5 4 3 2 1 0 |
| 8. | learners can successfully create a normalized dataset | 5 4 3 2 1 0 |
| 9. | learners can successfully create a denormalized dataset | 5 4 3 2 1 0 |
| 10. | learners can successfully identify type of datasets needed based on requirements | 5 4 3 2 1 0 |
| 11. | learners can successfully query data from a normalized dataset | 5 4 3 2 1 0 |
| 12. | learners can successfully query data from a denormalized dataset | 5 4 3 2 1 0 |
| 13. | learners can successfully query data from a flat file | 5 4 3 2 1 0 |
| 14. | learners can successfully manipulate data for readability | 5 4 3 2 1 0 |
| 15. | learners can successfully tabulate data totals using aggregate commands | 5 4 3 2 1 0 |
| 16. | learners can successfully modify data to meet requirements | 5 4 3 2 1 0 |
| 17. | learners can successfully customize data to clarify result set | 5 4 3 2 1 0 |
| 18. | learners can successfully proofread report results for accuracy | 5 4 3 2 1 0 |
| 19. | learners can successfully design professionally formatted reports | 5 4 3 2 1 0 |
| 20. | learners can successfully manipulate columns and row data for usability | 5 4 3 2 1 0 |
| 21. | learners can successfully classify and group data per subject | 5 4 3 2 1 0 |
| 22. | learners can successfully format data based on localization | 5 4 3 2 1 0 |
| 23. | learners can successfully format to make data clear and concise | 5 4 3 2 1 0 |
| 24. | learners can successfully configure security on database reports | 5 4 3 2 1 0 |
| 25. | learners can successfully identify where security is applicable | 5 4 3 2 1 0 |
| 26. | learners can successfully locate data that should be restricted | 5 4 3 2 1 0 |
| 27. | learners can successfully publish reports for accessibility | 5 4 3 2 1 0 |
| 28. | learners can successfully subscribe to reports | 5 4 3 2 1 0 |
| 29. | learners can successfully distribute reports electronically | 5 4 3 2 1 0 |
| 30. | learners can successfully distribute reports in multiple file formats | 5 4 3 2 1 0 |
| 31. | learners can successfully distribute reports via email | 5 4 3 2 1 0 |

Discussion Board

Directions

Complete the discussion board by following along with the instructor-lead, in-class activities. Submit the resulting files via Blackboard before 11:59 PM on the date due.

Note: The criteria that will apply to this assessment are determined by the competencies being assessed. By the end of this course, you will have been assessed on all of the criteria which are included in the scoring guide.

Target Course Competencies

|  |  |
| --- | --- |
| 1. | Differentitate between normalized and denormalized data |
| 2. | Generate reports using database reporting toolsets |
| 3. | Create normalized and denormalized datasets |
| 4. | Query statements to retrieve data |
| 5. | Transform data in preparation for reporting |
| 6. | Design reports for readability and usability |
| 7. | Format data for presentation |
| 8. | Apply security to database reports |
| 9. | Distribute reports using a variety of technologies and platforms |

Rating Scale

|  |  |
| --- | --- |
| Value | Description |
| 5 | Masterful |
| 4 | Skilled |
| 3 | Able |
| 2 | Developing |
| 1 | Novice |
| 0 | Unskilled |

Scoring Standard

You must earn a minimum rating of "3" on each criterion to successfully complete this assessment.

### Scoring Guide

|  |  |  |
| --- | --- | --- |
|  | Criteria | Ratings |
| 1. | learners can successfully compare a normalized and denormalized dataset | 5 4 3 2 1 0 |
| 2. | learners can successfully explain the differences between a normalized and denormalized dataset | 5 4 3 2 1 0 |
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| 7. | learners can successfully structure non-relational datasets to create reports | 5 4 3 2 1 0 |
| 8. | learners can successfully create a normalized dataset | 5 4 3 2 1 0 |
| 9. | learners can successfully create a denormalized dataset | 5 4 3 2 1 0 |
| 10. | learners can successfully identify type of datasets needed based on requirements | 5 4 3 2 1 0 |
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| 15. | learners can successfully tabulate data totals using aggregate commands | 5 4 3 2 1 0 |
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| 17. | learners can successfully customize data to clarify result set | 5 4 3 2 1 0 |
| 18. | learners can successfully proofread report results for accuracy | 5 4 3 2 1 0 |
| 19. | learners can successfully design professionally formatted reports | 5 4 3 2 1 0 |
| 20. | learners can successfully manipulate columns and row data for usability | 5 4 3 2 1 0 |
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| 22. | learners can successfully format data based on localization | 5 4 3 2 1 0 |
| 23. | learners can successfully format to make data clear and concise | 5 4 3 2 1 0 |
| 24. | learners can successfully configure security on database reports | 5 4 3 2 1 0 |
| 25. | learners can successfully identify where security is applicable | 5 4 3 2 1 0 |
| 26. | learners can successfully locate data that should be restricted | 5 4 3 2 1 0 |
| 27. | learners can successfully publish reports for accessibility | 5 4 3 2 1 0 |
| 28. | learners can successfully subscribe to reports | 5 4 3 2 1 0 |
| 29. | learners can successfully distribute reports electronically | 5 4 3 2 1 0 |
| 30. | learners can successfully distribute reports in multiple file formats | 5 4 3 2 1 0 |
| 31. | learners can successfully distribute reports via email | 5 4 3 2 1 0 |

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