Business Intelligence Analyst

(Classroom)

Career path description

The Business Intelligence Analyst career path prepares students to understand report building techniques using relational data models. They will also learn how to enhance, customize, and manage professional reports and will then further be explained about Active reports content and functionality.

ibm.com/training

General information

Delivery method

20% web-based and 80% instructor led

Version

2018

Product

IBM Cognos Analytics

Audience

Undergraduate senior students from IT related academic programs i.e. information systems, computer science, software engineering and similar others.

Learning objectives

After completing this course, you should be able to:
- The importance of analytics and how its transforming the world today
- Understand how analytics provided a solution to industries using real case studies
- Explain what is analytics, the various types of analytics, and how to apply it
- Understand how a business analysis software works, and its architecture
- Describe a reporting application, its interface, and the different report types
- Create different types of advanced reports
- Understand Active Reports and how to create them

Prerequisite Skills
- English proficiency
- Microsoft Windows operating system basic experience
- Basic Internet and web browser usage experience
- Knowledge of an organization's business intelligence and reporting needs
- Basic database background is preferred
- Basic knowledge of XML is preferred
- Exposure to the IBM Skills Academy portal learning environment
- Exposure to the IBM Skills Academy cloud hands-on labs platform

Duration

35 hours

Skill level

Basic – Intermediate

Hardware requirements

Classroom (ILT) setup requirements	
Processor	Intel Core i7 CPU @ 2.7 GHz
GB RAM	6 GB
GB free disk space	35 GB
Network requirements	No
Other requirements	IBM ID

Notes

The following unit and exercise durations are estimates and might not reflect every class experience. If the course is customized or abbreviated, the duration of unchanged units will probably increase.

Course Agenda

MODULE I – ANALYTICS OVERVIEW

Course I – Business Analytics Overview

Duration: 1 hour

Course introduction
Duration: 5 minutes

Unit 1. Analytics overview
Duration: 10 minutes

Overview	This unit provides an understanding of the importance of business analytics in our world, society, and life.
Learning objectives	After completing this unit, you should be able to: • Understand how analytics is transforming the world • Understand the profound impact of analytics in business decisions • Understand what is analytics and how it works • Understand why business analytics has become important in various industries

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Unit 2. Analytics trends: Past, present & future
Duration: 15 minutes

Overview	This unit explains how analytics has evolved over time.
Learning objectives	After completing this unit, you should be able to: • Understand the history of analytics and how it has changed today • Understand how to analyze unstructured data • Understand how analytics is making the world smarter • Understand where the future of analytics lies

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Unit 3. Towards a predictive enterprise
Duration: 5 minutes

Overview	This unit explains the effects of business analytics in the corporate world that has led to its global adoption across geographies and industries.
Learning objectives	After completing this unit, you should be able to: • Explain why successful enterprises need business analytics • Understand how business analytics can help turn data into insight

Unit 4. Analytics: Industry domains
Duration: 5 minutes

Overview	This unit highlights the application of analytics across major industries.
Learning objectives	After completing this unit, you should be able to: • Understand how predictive analytics is transforming all types of organizations • Explain how analytics supports retail companies • Understand how analytics can reduce crime rates and accidents • Explain the use of analytics in law enforcement and insurance companies • Understand how analytics can affect the future of education

Unit 5. Case studies and solutions
Duration: 15 minutes

Overview	This unit covers real case studies and solutions of the adoption of business analytics across the world.
Learning objectives	After completing this unit, you should be able to: • Understand the importance of business analytics • Comprehend how big data and analytics can help in understanding consumer/customer behavior • Explain how analytics can help manage assets • Understand how analytics can help combat fraud • Explain how analytics can help us to understand social sentiments

Course II – Business Intelligence and Analytics 101

Duration: 1 hour

Course introduction
Duration: 5 minutes

Business Intelligence and Analytics 101
Duration: 1 hour

Overview	This course provides a collection of resources designed for participants to become familiar with business intelligence (BI) and analytics concepts. Participants will review materials to introduce themselves to terminology and practical business use cases for a high level understanding of BI and analytics. The course includes a pre-assessment for participants to measure their understanding of the content before taking the course, and a post-assessment for participants to gauge their learning after reviewing the materials.
Learning objectives	After completing this course, you should be able to: • Explain what is analytics • Define various types of analytics • Demonstrate how to apply analytics • Describe business intelligence • Demonstrate how to apply business intelligence

MODULE II – BUSINESS ANALYTICS FOUNDATIONS

Course I – IBM Cognos Analytics for Consumers

Duration: 1.5 hours

Course introduction
Duration: 5 minutes

Business analysis solution for consumers
Duration: 2 hours

Overview	IBM Cognos Analytics for Consumers (v11.0) will teach IBM Cognos Analytics consumers how to access content, use reports, create dashboards, and personalize the appearance of IBM Cognos Analytics portal.
Learning objectives	After completing this course, you should be able to: • Learn how to access content, use reports, and create dashboards • Learn how personalize the IBM Cognos Analytics portal

MODULE III – BUSINESS INTELLIGENCE ANALYST

Course I – IBM Cognos Analytics: Author Reports Fundamentals

Duration: 17.5 hours

Unit 1. Introduction to IBM Cognos Analytics
Duration: 30 minutes

Overview	In this unit, you will learn about IBM Cognos Analytics, different report types, how to create reports and examine personal data sources and modules.
Learning objectives	After completing this unit, you should be able to: • Examine IBM Cognos Analytics • Explore different report types • Create reports in preview or design mode • Create a simple, sorted, formatted report • Examine dimensionally modelled and dimensional data sources • Explore how data items are added queries • Examine personal data sources and data modules

Unit 2. Create list reports
Duration: 120 minutes

Overview	In this unit you will learn about how to create list reports.
Learning objectives	After completing this unit, you should be able to: • Group, format, and sort list reports • Describe the various options for aggregating data • Create a multi-fact query • Create a report with repeated data

Unit 3. Focus reports using filters
Duration: 120 minutes

Overview	In this unit you will learn about how to focus reports using filters.
Learning objectives	After completing this unit, you should be able to: • Create filters to narrow the focus of reports • Examine detail filters and summary filters • Determine when to apply filters on aggregate data

Unit 4. Create crosstab reports
Duration: 60 minutes

Overview	In this unit you will learn about how to create crosstab reports
Learning objectives	After completing this unit, you should be able to: • Format and sort crosstab reports • Create complex crosstab reports using drag and drop functionality • Create crosstab reports using unrelated data items

Unit 5. Present data graphically
Duration: 180 minutes

Overview	In this unit you will learn about how present data graphically.
Learning objectives	After completing this unit, you should be able to: • Create charts containing peer and nested columns • Present data using different chart type options • Add context to charts • Create and reuse custom chart palettes • Introduction to visualization • Present key data in a single dashboard report

Unit 6. Focus reports using prompts
Duration: 90 minutes

Overview	In this unit you will learn how to focus reports using prompts.
Learning objectives	After completing this unit, you should be able to: • Identify various prompt types • Use parameters and prompts to focus data • Search for prompt types • Navigate between pages

Unit 7. Extend reports using calculations
Duration: 60 minutes

Overview	In this unit you will learn how to extend reports using calculations.
Learning objectives	After completing this unit, you should be able to: • Create calculations based on the data in the data source • Add run-time information to the reports • Create expressions using functions

Unit 8. Use additional report building techniques
Duration: 60 minutes

Overview	In this unit, you will learn how to use additional report building techniques.
Learning objectives	After completing this unit, you should be able to: • Enhance report design with report objects • Reuse objects within the same report • Share layout components among separate reports • Discuss report templates • Choose options to handle reports with no available data

Unit 9. Customize reports with conditional formatting
Duration: 90 minutes

Overview	In this unit you will learn how to customize reports using conditional formatting.
Learning objectives	After completing this unit, you should be able to: • Create multi-lingual reports • Highlight exceptional data • Show and hide data • Conditionally render objects in reports • Conditionally format one crosstab measure based on another

Unit 10. Drill-through definitions
Duration: 120 minutes

Overview	In this unit you will learn how to drill-through from one report to another.
Learning objectives	After completing this unit, you should be able to: • Know how to let users navigate from a specific report to a target report • Pass parameter values to filter the data in drill-through targets • Navigate through multiple reports

Unit 11. Enhance report layout
Duration: 60 minutes

Overview	In this unit you will learn how to force page breaks in report, modify existing reports, apply formatting and format data and report objects.
Learning objectives	After completing this unit, you should be able to: • Force page breaks in reports • Modify existing report structures • Apply horizontal formatting • Specify print options for PDF reports • Format data and report objects

Appendix A. Overview of IBM Cognos Analytics
Duration: 60 minutes

Overview	In this appendix you will be introduced to IBM Cognos Analytics
Learning objectives	After completing this unit, you should be able to: • Describe IBM Cognos Analytics and its position within an analytics solution • Describe IBM Cognos Analytics components • Describe IBM Cognos Analytics at a high level • Describe IBM Cognos Analytics security at a high level • Explain how to extend IBM Cognos Analytics

Course II – IBM Cognos Analytics: Author Reports Advanced

Duration: 10 hours

Course introduction
Duration: 5 minutes

Unit 1. Create query models
Duration: 60 minutes

Overview	In this unit you will learn about creating query models and how to filter query data.
Learning objectives	After completing this unit, you should be able to: • Build query models and connect them to the report layout • Edit an SQL statement to author custom queries • Add filters and prompts to a report using the query model

Unit 2. Create reports based on query relationships
Duration: 60 minutes

Overview	In this unit, you will learn about query relationships and how to combine different queries to generate reports.
Learning objectives	After completing this unit, you should be able to: • Create reports by merging query results • Create reports by joining queries • Combine data containers based on relationships from different queries

Unit 3. Create advanced dynamic reports
Duration: 90 minutes

Overview	In this unit, you will learn how to create advanced dynamic reports.
Learning objectives	After completing this unit, you should be able to: • Filter reports on session parameter values • Navigate a briefing book using a table of contents • Create dynamic headers and titles that reflect report data • Let users navigate to specific locations in reports • Create a customer invoice report

Unit 4. Design effective prompts
Duration: 90 minutes

Overview	In this unit, you will learn how to design effective prompts to create more efficient reports.
Learning objectives	After completing this unit, you should be able to: • Control report displays using prompts • Specify conditional formatting values using prompts • Specify conditional rendering of objects based on prompt selection • Create sorted and filtered reports based on prompt selection

Unit 5. Create additional advanced reports
Duration: 60 minutes

Overview	In this unit, you will learn how to create additional advanced reports.
Learning objectives	After completing this unit, you should be able to: • Create a report that displays summarized data before detailed data • Highlight alternate rows in a list report • Create a report using an external data file • Use single data items to summarize report information

Unit 6. Examine the report specification
Duration: 60 minutes

Overview	In this unit, you will learn how to examine and modify report specification.
Learning objectives	After completing this unit, you should be able to: • Examine the report specification structure • Modify a report specification • Add custom toolbox objects and custom template options

Unit 7. Distribute reports through bursting
Duration: 120 minutes

Overview	In this unit, you will learn how to distribute reports through bursting and how to use burst tables
Learning objectives	After completing this unit, you should be able to: • Distribute reports using bursting • Create burst keys • Identify report recipients and data items using burst tables • Distribute reports using email and the Business Analysis Solution Connection

Unit 8. Enhance user interaction with HTML
Duration: 60 minutes

Overview	In this unit, you will learn how to create interacting reports using HTML.
Learning objectives	After completing this unit, you should be able to: • Create tooltips that clarify report data • Send emails using links in a report

Course III – IBM Cognos Analytics: Author Active Reports

Duration: 4 hours

Course introduction
Duration: 5 minutes

Unit 1. Introduction to IBM Cognos Active Reports
Duration: 90 minutes

Overview	In this unit, you will learn about creating query models and how to filter query data.
Learning objectives	After completing this unit, you should be able to: • Describe Active Reports, and their value • Save Active Reports • Create Active Reports as prompt pages • Convert existing reports to Active Reports • Explain security considerations in Active Reports • Debug Active Report behavior

Unit 2. Use Active Report connections
Duration: 60 minutes

Overview	In this unit, you will use active report connections
Learning objectives	After completing this unit, you should be able to: • Describe active report connections • Filter and select active report controls • Modify the interactive behavior of report controls • Identify active report controls and variables • Use variables to control multiple controls independently • Control multiple controls from a single variable • Author and optimize active reports for mobile consumption

Unit 3. Active Report charts, visualizations, and decks
Duration: 90 minutes

Overview	In this unit, you will learn about active report charts, visualizations, and decks.
Learning objectives	After completing this unit, you should be able to: • Describe characteristics of traditional charts in Active Reports • Control data display using decks and data decks • Use decks and data decks to display traditional charts • Optimize decks for performance • Describe characteristics of RAVE visualizations

IBM Official Badges and Associated Job Roles

IBM Official Badges	Business Intelligence Analyst: Explorer / Mastery Award
Associated Job Roles	• Predictive Analytics Modeler • Big Data Developer • Data Warehouse Developer

For more information

To learn more about this career path and others, see **ibm.biz/ibmskillsacademy**

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