DATA ANALYTICS USING POWER BI

COURSE OVERVIEW

Data Analysts enable businesses to maximize the value of their data assets by using Microsoft Power BI. As a subject matter expert, Data Analysts are responsible for designing and building scalable data models, cleaning and transforming data, and enabling advanced analytic capabilities that provide meaningful business value through easy-to-comprehend data visualizations.

This course is design in-line with Microsoft Power BI exam PL-300 objectives. It will cover 4 main modules, in each module, we will practice the skills required using hands on practical workshops led by certified Microsoft instructor. We will provide study guide, exercises and practice tests to get you ready to pass the exam.

TARGET COMPETENCIES

- Data Collection & Connectivity
- Data cleansing
- Data ANalysis
- Model the data
- Visualize and analyze the data
- Deploy and maintain assets

TARGET AUDIENCE

The audience for this course are data professionals and business intelligence professionals who want to learn how to accurately perform data analysis using Power BI. It is targeting also professionals who want to earn Microsoft certificate as a Power BI data analyst associate.

COURSE OBJECTIVES

By completely attending this course, participants will be able to:

- Importing data from various data sources
- Cleansing and preparing data using power query tools
- Modeling data and creating relationship between data tables
- Creating measures using Data Analysis Expressions (DAX)
- Perform data analysis
- Use data visualization to interpret data and present results in the form of dashboard
- Optimize and improve data model performance
- Publish reports to Power BI service (online) for sharing and collaboration
- Maintain and manage data source connectivity using gateways and other Power BI service features

NOTE

This course requires the use of laptop running on windows operating system with Microsoft Power BI desktop version installed.

COURSE METHODOLOGY

This is a hands-on course with about 20% on design and structure and 80% uses Power BI as a commanding tool to consume and transform data, Model and visualize data, Configure dashboards, reports, and apps in the Power BI Service. Individuals will be required to complete exercises, case studies, and projects on a daily basis.

COURSE OUTLINE

PREPARE THE DATA

GET DATA FROM DATA SOURCES

- Identify and connect to a data source.
- Change data source settings, including credentials, privacy levels, and data source locations.
- Select a shared dataset, or create a local dataset.
- Choose between DirectQuery, Import, and Dual mode.
- Change the value in a parameter.

CLEAN THE DATA

- Evaluate data, including data statistics and column properties.
- Resolve inconsistencies, unexpected or null values, and data quality issues and Resolve data import errors.

TRANSFORM AND LOAD THE DATA

- Select appropriate column data types.
- Create and transform columns and query.
- Design a star schema that contains facts and dimensions.
- Identify when to use reference or duplicate queries and the resulting impact.
- Merge and append queries.
- Identify and create appropriate keys for relationships.
- Configure data loading for queries.

MODEL THE DATA

DESIGN AND IMPLEMENT A DATA MODEL

- Configure table and column properties.
- Implement role-playing dimensions.
- Define a relationship's cardinality and cross-filter direction.
- Create a common date table.
- Implement row-level security roles.

CREATE MODEL CALCULATIONS BY USING DAX

- Create single aggregation measures.
- Use CALCULATE to manipulate filters.
- Implement time intelligence measures.
- Identify implicit measures and replace with explicit measures.
- Use basic statistical functions.
- Create semi-additive measures.
- Create a measure by using quick measures.

OPTIMIZE MODEL PERFORMANCE

- Improve performance by identifying and removing unnecessary rows and columns.
- Identify poorly performing measures, relationships, and visuals by using Performance Analyzer
- Improve performance by choosing optimal data types.
- Improve performance by summarizing data.

DEPLOY AND MAINTAIN ASSETS

CREATE AND MANAGE WORKSPACES AND ASSETS

- Create and configure a workspace.
- Assign workspace roles.
- Configure and update a workspace app.
- Publish, import, or update assets in a workspace.
- Create dashboards.
- Choose a distribution method.
- Apply sensitivity labels to workspace content.
- Configure subscriptions and data alerts.
- Promote or certify Power BI content.
- Manage global options for files.

MANAGE DATASETS

- Identify when a gateway is required, configure a dataset scheduled refresh.
- Configure row-level security group membership.
- Provide access to datasets.

VISUALIZE AND ANALYZE THE DATA

CREATE REPORTS

- Identify and implement appropriate visualizations.
- Format and configure visualizations.
- Use a custom visual and apply and customize a theme.
- Configure conditional formatting.
- Apply slicing and filtering.
- Configure the report page.
- Use the Analyze in Excel feature.
- Choose when to use a paginated report.

COURSE OUTLINE

ENHANCE REPORTS FOR USABILITY AND STORYTELLING

- Configure bookmarks and custom tooltips.
- Edit and configure interactions between visuals.
- Configure navigation for a report.
- Apply sorting and configure sync slicers.
- Group and layer visuals by using the Selection pane.
- Drill down into data using interactive visuals.
- Configure export of report content and perform an export.
- Design reports for mobile devices
- Incorporate the Q&A feature in a report.

IDENTIFY PATTERNS AND TRENDS

- Use the Analyze feature in Power BI, use grouping, binning, and clustering and AI visuals.
- Use reference lines, error bars, and forecasting.
- Detect outliers and anomalies.
- Create and share scorecards and metrics.

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Virginia Institute of Finance and Management