**1. POWER BI INTRODUCTION**

**ITEM #1: WHAT IS REPORTING?**

A MECHANISM TO ACCESS & PRESENT ANY TYPE OF DATA TO END USERS.

**ITEM #2: WHAT IS POWER BI?**

A SET OF TOOLS USED TO PERFORM END TO END REPORTING OPERATIONS.

THESE INCLUDE: DATA **EXTRACTION**, DATA **MODELING** AND **REPORTING.**

**MODELING MEANS TO RESHAPE OR FORMAT THE DATA. UNION, SORT, JOIN .........**

**ITEM #3: HOW IS POWER BI DIFFERENT FROM MSBI?**

**MSBI** : USED TO DESIGN DATABASES [90%] + USED TO DESIGN REPORTS [10%]

**POWER BI**: USED TO DESIGN REPORTS [100%] {Enterprise and Self Service BI}

**ITEM #4:** **WHAT ARE THE JOB ROLES WITH POWER BI? BUSINESS ANALYSTS / DATA ANALYSTS**

**ROLE 1: ACCESS ANY TYPE OF DATA, DESIGN REPORTS**

**ROLE 2 : PERFORM ETL (POWER QUERY) AND DATA MODELLING (DAX),**

**ROLE 3: DESIGN DATASETS, DASHBOARDS, APPS & SECURITY (RLS)**

**ITEM #5:** **WHAT ARE THE LICENSING OPTIONS IN POWER BI?**

**\* 1. Power BI Pro Trail {60 DAYS}**

**2. Power BI Pro**

**3. Power BI Premium**

**\* 4. Power BI Report Server**

**ITEM #6: WHAT ARE THE POSSIBLE DATA SOURCES THAT CAN BE USED WITH POWER BI?**

**File** **Database** **Azure** Others

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• **Excel** • **SQL Server Database**  • **Microsoft Azure SQL Database** • Web

• CSV • **Access Database** • Microsoft Azure Synapse • SharePoint

• XML • **SQL Server Analysis Services** • Microsoft Azure Storage • OData Feed

• Text • Oracle Database • Microsoft Azure Data Lake • Hadoop File

• JSON • IBM DB2 Database • Microsoft Azure Cosmos DB • Google

• PDF • MySQL Database • Microsoft Azure Analysis Services • Facebook

**ITEM #7: WHAT ARE THE DIFFERENT VISUALIZATIONS (REPORT SHAPES) IN POWER BI?**

|  |  |  |
| --- | --- | --- |
| 1. STACKED BAR CHARTS | 11. LINE, CLUSTERED COLUMN CHART | 21. GAUGE |
| 2. STACKED COLUMN CHARTS | 12. RIBBON CHART | 22. CARD |
| 3. CLUSTERED BAR | 13.WATERFALL CHART | 23. MULTICARD |
| 4. CLUSTERED COLUMN | 14. SCATTER CHART | 24. KPI |
| 5. 100% STACKED BAR | 15. PIE CHART | 25. SLICER |
| 6. 100% STACKED COLUMN | 16. DOUGHNUT CHART | 26. **TABLE** |
| 7. LINE CHART | 17. **TREEMAP** | 27. MATRIX |
| 8. AREA CHART | 18. MAP | 28. R SCRIPT VISUAL |
| 9. STACKED AREA | 19. FILLED MAP | 29. PYTHON VISUAL |
| 10. LINE, STACKED COLUMN CHART | 20. FUNNEL | 30. ArcGIS Maps |
| 31. KEY INFLUENCER | 32. DECOMPOSITION TREE | 33. Q & A |
| 34. ARCGIS MAP | 35. POWER APPS FOR POWER BI | ++ Customized Visuals |

**ITEM #8: WHAT ARE THE TYPES OF REPORTS ?**

|  |  |
| --- | --- |
| **1. INTERACTIVE REPORTS** | REPORTS ARE GENERATED BY DEVELOPERS. CAN BE EDITTED BY END USERS |
| **2. PAGINATED REPORTS** | REPORTS ARE GENERATED BY DEVELOPERS. CANNOT BE MODIFIED BY USERS |
| **3. ANALYTICAL REPORTS** | REPORTS ARE GENERATED USING **EXCEL** & **DAX** [DATA ANALYSIS EXPRESSION] |
| **4. MOBILE REPORTS** | REPORTS ARE GENERATED FOR MOBILES, TABLETS, SMART CLOCKS |

**ITEM #9: TOOLS USED IN POWER BI ?**

|  |  |  |
| --- | --- | --- |
| **REPORT TYPE (4)** | **TOOL USED FOR DESIGN (6)** | **PRODUCTION ENVIRONMENT (2)** |
| **INTERACTIVE REPORT** | POWER BI DESKTOP | POWER BI SERVICE (CLOUD) : PUBLIC |
| POWER BI DESKTOP RS | POWER BI REPORT SERVER : CORPNET |
| **PAGINATED REPORT** | POWER BI REPORT BUILDER | POWER BI SERVICE (CLOUD) |
| MICROSOFT REPORT BUILDER | POWER BI REPORT SERVER |
| **MOBILE REPORT** | MOBILE REPORT PUBLISHER | POWER BI REPORT SERVER |
| **ANALYTICAL REPORT** | EXCEL ANALYSER [Excel Add-In] | POWER BI SERVICE (CLOUD) |

**Power Query:** Used to **E**xtract Data from various sources. Prepare Data for Reporting.

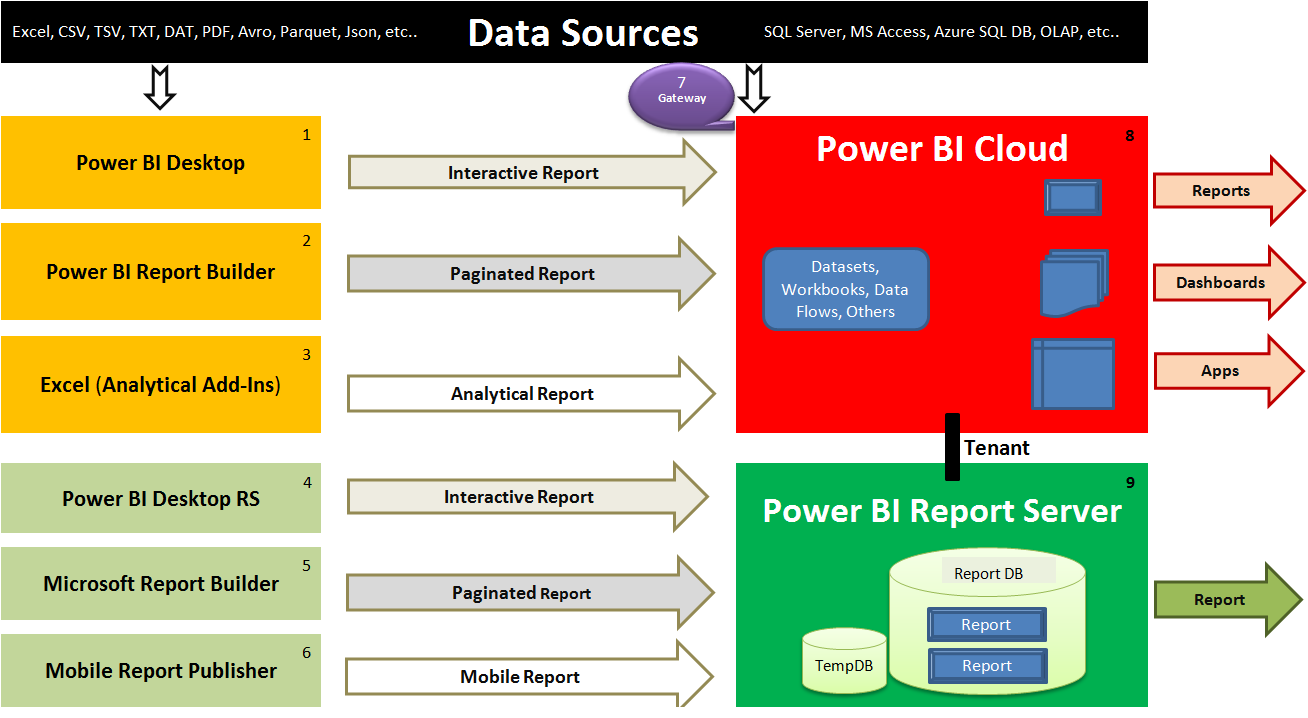
Perform Data **T**ransformations, **L**oad Data into Power BI Environment for Reporting.

**DAX:** Data Analysis Expression Language

Used for Dynamic Data Reporting (Ex: Star Rating of Sales)

Used for Reporting Computations, Analytical Reports, Row Level Security (RLS).

**LAB PLAN**

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