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| **Power BI DAX** Project Details | | |
| **Index** | **Heading** | **Description** |
| 1 | **Overview:** | TechnoEdge company has provided a dataset that includes various tables such as Calendar, Customers, Product Categories, Product Sub-Categories, Products, Returns, Territories, and Sales from 2022-2024. The purpose of analyzing this dataset is to gain insights and improve business operations. Using DAX Power BI, we can create interactive reports and visualizations to analyze sales trends, customer behavior, product performance, and returns. This will help in making data-driven decisions and improving business profitability. |
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| 2 | **Skill Pre-requisite:** |  |
|  |  | To become a DAX master in Power BI, there are a few system prerequisites that you need to consider: |
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|  | **1** | Access to Power BI: You will need access to Power BI, either through a personal or enterprise account. |
|  | **2** | Understanding of data modeling: It's important to have a solid understanding of data modeling concepts, such as relationships, cardinality, and normalization. |
|  | **3** | Familiarity with Excel: Since DAX is a formula language that originated in Excel, having a basic understanding of Excel functions and formulas can be helpful. |
|  | **4** | Knowledge of programming concepts: Having a basic understanding of programming concepts like variables, loops, and conditional statements can help you to create more complex DAX formulas. |
|  | **5** | Practice and experience: Practice is crucial to becoming a DAX master. Continuously working with DAX and analyzing data will help you to develop your skills and gain valuable experience. |
| 3 | **System Pre-requisite:** |  |
|  |  | To work with DAX in Power BI, you will need to ensure that your system meets the following prerequisites: |
|  | **1** | Operating system: You can use DAX with Power BI on Windows 10 or later, Windows Server 2016 or later, or Windows Server 2012 R2. |
|  | **2** | Processor: A 64-bit processor is required for running Power BI and DAX. |
|  | **3** | Memory: A minimum of 8GB RAM is recommended for running Power BI and DAX, but higher amounts of memory can improve performance. |
|  | **4** | Storage: You will need enough storage space for your data and the Power BI application. |
|  | **5** | Graphics card: A graphics card with at least 1GB of memory is recommended for optimal visual performance. |
|  | **6** | Internet connection: A reliable internet connection is necessary to access and share data through Power BI. |
|  | **7** | Power BI Desktop: You will need to download and install Power BI Desktop, which is the version of Power BI that runs on your desktop computer. |
|  | **8** | Power BI Service: You will also need to sign up for a Power BI service account to publish and share your reports and dashboards. |
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| 7 | **Tasks: (DAX Power BI)** |  |
|  | **A** | **Installation** |
|  |  | Downloading Power BI Desktop. |
|  | **B** | **Data Modeling** |
|  |  | Creating a relationship between tables in the model view of Power BI using a common column improves the accuracy and reliability of data analysis and visualization. |
|  | **C** | **Data view** |
|  |  | Display all geographical datasets in Power BI along with their corresponding data categories, such as city, country, state, and region. |
|  | **D** | **DAX Functions** |
|  |  | Date Functions |
|  |  | Text Functions |
|  |  | Logical Functions |
|  |  | Calculate Functions |
|  |  | Aggregation Functions |
|  | **E** | **Visual Insights** |
|  |  | Power BI needs DAX functions for visual insights, which manipulate and aggregate data to reveal hidden patterns. Mastering DAX is key to creating compelling visualizations. |
|  | **F** | **Published Report** |
|  |  | Power BI reports can be published and shared with others, making it easy to collaborate and work with others on data analysis projects. |
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| 8 | **Objectives** |  |
|  | **1** | To analyze sales data for TechnoEdge company across different regions, countries, and product categories. |
|  | **2** | To identify trends and patterns in sales data that can help improve business performance. |
|  | **3** | To understand customer behavior and preferences based on their buying patterns. |
|  | **4** | To identify high-performing products and product categories, as well as underperforming ones. |
|  | **5** | To monitor key sales metrics such as sales, profit, and profit margin, and identify areas for improvement. |
|  | **6** | To create reports and visualizations that can help stakeholders make informed decisions about sales and marketing strategies. |
|  |  | Overall, the objective of the TechnoEdge sales dataset is to provide valuable insights into the company's sales performance and help identify areas for improvement, so that the company can optimize its sales and marketing strategies and improve its bottom line. |
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| 9 | **Project Summary:** | Use a comprehensive dataset covering the calendar, customers, items, returns, territories, and sales from 2022–2024 to investigate TechnoEdge sales and customer behavior. |

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|  | **Page Alignment** |  |
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|  |  | #FFFFFF-Visual Background |
|  |  | #094780-Company Title |
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| **7** | Visuals Used | KPI |
|  |  | Cards |
|  |  | Slicer |
|  |  | Gauge |
|  |  | Pie Chart |
|  |  | Clustered Bar Chart |
|  |  | Table |