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Business Intelligence System

Experiment no: 2

* Aim: Demonstration of BI techniques, ETL on Application Financial Analysis

* Theory:

Microsoft Power BI is a tool in business intelligence that converts data from sources to interactive BI reports and dashboard. With Power BI, you can quickly connect your data, wrap it, visualize it as needed, and share it on sites securely.

⇒ Power BI Key components:

- Power Query
- Power Pivot
- Power View
- Power BI Services

⇒ Power Query

Power Query is one of the important components of Power BI. This can be included in your Excel or can be used as a component of the Power BI Desktop. Using Power Query, you can delete data from numerous data sources and extract data from a wide range of different databases like Oracle,

SQL Server, MySQL, and other different databases. You can also fetch data from records like text files, CSV files or Excel files.

⇒ Power Pivot

- Power Pivot is used to model your data and perform more complex calculations than Excel can handle.
- Power Pivot is great when working with huge datasets. Once Power Query has imported and cleaned the various data sources, Power Pivot is used to establish relationships between the tables / queries.

⇒ Power View

- Power view is a data visualization technology that lets you create interactive charts, graphs, maps, and other visuals that bring your data to life. Power View is available in Excel, in SharePoint, SQL Server, and Power BI.

⇒ Power BI services

- Power BI service is a cloud-based business analytics and data ~~visuta~~ visualization service that enables anyone to visualize and analyze data with greater spred, efficiency, and understanding.
- It connects users to a broad range of data through easy-to-use dashboards, interactive reports, and compelling visualizations

that bring data to life.

- The Power BI service website is built upon the azure cloud platform and adhere to HTML5 standard. It has robust support for HTML5 via what is called PowerView.

⇒ Matrix

- The matrix visual is a type of table visual (see Tables in the that supports a stepped layout.
- A table supports two dimensions, but a matrix makes it easier to display data meaningfully across multiple dimensions.
- Often, report designers include matrixes in reports and dashboards to allow users to select one or more element (rows, columns, cells) in the matrix to cross-highlight other visuals on a report page.

⇒ Line chart

- Line charts emphasize the overall shape of an entire series of values, usually over time.
- A line chart is a series of data points that are represented by dots and connected by straight lines.
- A line chart may have one or many lines.
- Line charts have an x and a y axis.

⇒ Slicers

- A slicer is a standalone chart that can be used to filter the other visuals on the page.

- Slicers come in many different formats (category, range, date, etc) and can be formatted to allow selection of only one, many or all of the available values.

⇒ Bar chart

- Power BI Bar chart or horizontal Bar chart is useful for data comparison. For example, you can compare Sales by Color, Region, Product Group, etc.

⇒ The Role of Financial Statement Analysis

- In financial statement analysis, a company's financial reports and other related pieces of information, such as financial notes and supplementary schedules, are assessed and used to evaluate the company's performance and financial position in order to make an investment or other economic decision.
- Financial statement analysis can be used to determine if a company is profitable, adequately ~~capital~~ capitalized, able to meet its long and short term obligations, and able to generate positive cash flows on a continuous basis.
- It also allows analysts to project estimates or expectations of a company's future performance and financial position.