
Power BI Assignment 1

1. What do you mean by BI? Explain.

BI(Business Intelligence) is a set of processes, architectures, and technologies that convert raw data into meaningful information that drives profitable business actions. It is a suite of software and services to transform data into actionable intelligence and knowledge.

BI has a direct impact on organization's strategic, tactical and operational business decisions. BI supports fact-based decision making using historical data rather than assumptions and gut feeling.

2. How Power-BI helps in BI, and how does it help Analysts? Explain.

Power BI is a BI and data visualization tool that leverages visual analytics to empower people and organizations in making the most of their data. The engaging visualizations created in Power BI take the excel workflow to the next level and help stakeholders make sense of the massive amounts of data available.

PowerBI is useful in following ways:

a. Extract data insights with no coding skills required

One of the main strengths of Power BI is its intuitive user interface that allows both technical and non-technical analysts to build data visualizations and analyses efficiently.

The user-friendly drag-and-drop interface makes it easy to answer complex data-related questions without the need for programming skills. This simplicity lowers the barrier for users to perform advanced analytics such as trend analyses, regressions, and statistical summaries.

Power BI can also be integrated with a variety of existing Microsoft apps, such as Microsoft teams, Excel, and PowerPoint, which makes integrating data insights into existing workflows much easier.

b. Democratize data insights with dashboards.

A classic BI application most people will be familiar with is the dashboard, where data is obtained from multiple sources and

presented visually in charts and graphs to give a sense of the company's processes and strategies.

Power BI comes with many reporting features for users to readily create well-designed interactive dashboards. It can also connect to a wide range of data sources and can help you create powerful data models (e.g. SQL Server, Excel spreadsheets, Amazon Redshift, etc.). As a result, these dashboards can be enriched with comprehensive data from various applications across the organization.

These dashboards go a long way in aligning an organization's strategic efforts, uncovering critical insights, and speeding up enterprise-wide decision-making. When many users are trained to create such dashboards, data insights can be democratized at scale to help transform the business into a data-driven company.

c. Tell data stories with advanced data visualization.

Compelling data storytelling is more important than ever, given the burgeoning amounts of data generated in the digital age.

Dashboards are great for monitoring data and telling users what is happening. However, data stories help shape the data into a step-by-step process to explain why specific trends are happening.

Power BI allows users to string together a series of visualizations (including dashboards) to form a visual story to communicate data insights, provide context, and demonstrate how decisions relate to outcomes.

The ability to weave advanced visualizations into a coherent data narrative is what sets Power BI apart from other tools like Excel.

These data stories are highly effective in framing a compelling case to communicate actionable insights to decision-makers, which aligns with the primary goal of business intelligence.

3. Explain Descriptive analytics?

Descriptive, which answers the question, "What happened?"

Descriptive analytics is the process of using current and historical data to identify trends and relationships. It's sometimes called the simplest form of data analysis because it describes trends and relationships but doesn't dig deeper.

4. Explain Predictive analytics?

Predictive, which answers the question, “What might happen in the future?” Predictive analytics is the use of data to predict future trends and events. It uses historical data to forecast potential scenarios that can help drive strategic decisions.

The predictions could be for the near future—for instance, predicting the malfunction of a piece of machinery later that day—or the more distant future, such as predicting your company’s cash flows for the upcoming year. Predictive analysis can be conducted manually or using machine-learning algorithms. Either way, historical data is used to make assumptions about the future.

5. Explain perspective analytics?

Prescriptive, which answers the question, “What should we do next?”

Prescriptive analytics is the process of using data to determine an optimal course of action. By considering all relevant factors, this type of analysis yields recommendations for next steps. Because of this, prescriptive analytics is a valuable tool for data-driven decision-making.

6. Write five real-life questions that PowerBi can solve.

a. Waiting on figures

Having to hold off on major business decisions because you’re unable to collect figures from a colleague or need to sift through numerous reports on a server to find what you need may have been considered normal routine back in the day, but business has progressed, and waiting for data reports is no longer acceptable. Power BI allows you to access your company's data analytics almost instantly. On top of that, it also makes the data easy to decipher with advanced visualizations which can be shared at the touch of a button.

b. Using Data From Old Reports

While being able to share documents (such as quarterly reports) with employees through the cloud was exciting when it first came out, it leaves too much room for human error. For example, it’s not uncommon for documents shared in a cloud to be mislabeled, altered,

and even deleted by accident. Even if stored in the correct location, finding reports this way can be incredibly time-consuming. All of these factors can lead to unnecessary mistakes and delays.

Using Power BI reduces the possibility of error by allowing reports to be run in seconds using only the most current data. This ensures that reports can't be altered or deleted and eliminates the time spent sifting through files to find the correct data.

c. Excessive Time Spent Preparing For Presentations

Whether it's for a meeting with potential investors, sharing the latest figures with your shareholders, or leading an internal meeting with your colleagues, presentation preparation can be tedious. On top of collecting all of the data you want to share, the information has to then be put into a visually appealing presentation. If you want to include charts, graphs, and images, presentations can take a significant amount of time to produce. In addition to that, by the time the presentation is complete, the data will already be outdated.

Power BI can quickly and easily create visual representations of your data and provide stunning and accurate presentations for your meetings. Using Power BI's automated reporting tools can save hours of preparation.

d. Being Unable To Find Specific Data Sets

Sifting through spreadsheets in search of specific data sets is time-consuming and inefficient. One of the most useful Power BI solutions is the ability to easily search for data and data-sets.

Power BI allows IT members to publish data catalogs for others to view. This makes it easier for you to find the data sets needed to perform an analysis. Additionally, using natural language technology and its Question & Answer feature provides a more natural experience to locate and better understand your BI.

e. Not Being Able To Determine Your Level Of Success

While business intelligence offers a lot of useful information, not everyone knows how to use it. Even with the numbers in plain view, it can be difficult to determine whether or not your business is successful and what areas need improvement. Using Power BI's

Question & Answer feature, it's now possible to ask your software these questions using natural language. Ask what your profits were for that month or how customer subscription numbers compare to last year's.

The natural language technology makes it incredibly easy, and you don't have to worry about putting your questions in any specific format. The tool will also draw your attention to any problem areas that need to be addressed, ensuring you don't miss even the smallest opportunities to make a profit.

