Power BI Assignment 1

1. What do you mean by BI? Explain.

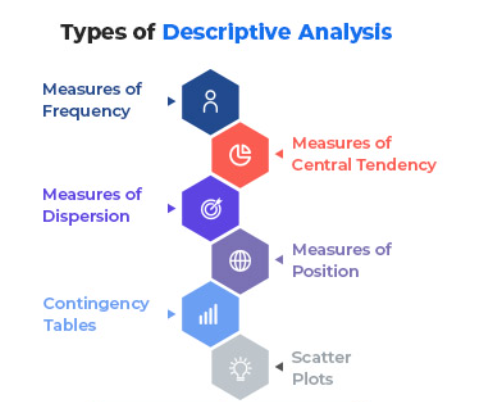
* **Business intelligence (BI)** is software that ingests business data and presents it in user-friendly views such as reports, dashboards, charts and graphs.
* **BI platforms** traditionally rely on data warehouses for their baseline information. A data warehouse aggregates data from multiple data sources into one central system to support business analytics and reporting. Business intelligence software queries the warehouse and presents the results to the user in the form of reports, charts and maps.
* **Business intelligence** gives organizations the ability to ask questions in plain language and get answers they can understand. Instead of using best guesses, they can base decisions on what their business data is telling them whether it relates to production, supply chain, customers or market trends.

1. 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.
   * **Microsoft Power BI** is a data visualization platform used primarily for business intelligence purposes. Designed to be used by business professionals with varying levels of data knowledge, Power BI’s dashboard is capable of reporting and visualizing data in a wide range of different styles, including graphs, maps, charts, scatter plots, and more.
   * As data becomes more and more important to the daily functioning of the goods and services that businesses provide, so too do business intelligence platforms capable of turning that data into insights, reports, and interactive visualizations.
   * **Some of the most common uses for the platform include:**

* Creating reports and dashboards that present data sets in multiple ways using visuals
* Connecting various data sources, such as Excel sheets, onsite [data warehouses](https://www.coursera.org/articles/data-warehouse), and cloud-based data storage, and then transforming them into business insights
* Turning data into a wide range of different visuals, including pie charts, decomposition trees, gauge charts, KPIs, combo charts, bar and column charts, and ribbon charts – among many other options
* Providing company-wide access to data, data visualization tools, and insights in order to create a data-driven work culture

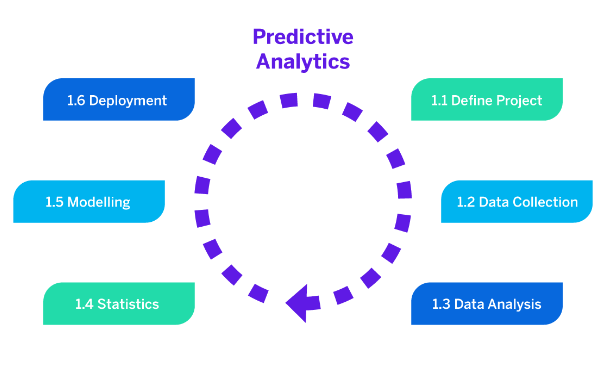
1. Explain Descriptive analytics?

* Descriptive analytics is a type of data analytics that looks at past data to give an account of what has happened. Results are typically presented in reports, dashboards, bar charts and other visualizations that are easily understood.
* Descriptive Analytics is the examination of data or content, usually manually performed, to answer the question “What happened?” (or What is happening?), characterized by traditional business intelligence (BI) and visualizations such as pie charts, bar charts, line graphs, tables, or generated narratives.

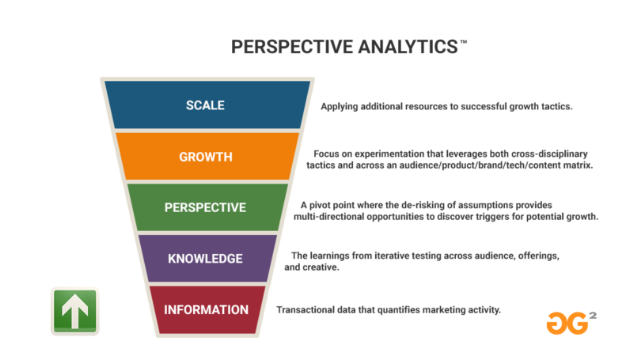


1. Explain Predictive analytics?

* **Predictive analytics** is a branch of advanced analytics that makes predictions about future outcomes using historical data combined with statistical modeling, data mining techniques and machine learning. Companies employ predictive analytics to find patterns in this data to identify risks and opportunities.
* **Predictive analytics** is applicable and valuable to nearly every industry – from financial services to aerospace. Predictive models are used for forecasting inventory, managing resources, setting ticket prices, managing equipment maintenance, developing credit risk models, and much more.



1. Explain perspective analytics?

* **Prescriptive analytics** is the use of advanced processes and tools to analyze data and content to recommend the optimal course of action or strategy moving forward. Perspectives are used within business analysis work to provide focus to tasks and techniques specific to the context of the initiative. Many initiatives will involve one or more perspectives
* **Prescriptive analytics** answers the question “What should/can be done?” by using machine learning, modeling, simulation, heuristics, and other methods to predict outcomes and provide decision options. 

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



1. **[Koodos proves their concept](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "1-koodos-proves-their-concept)**

* [Koodos](https://www.koodos.com/) is a new startup from [Harvard Business School’s Rock Center for Entrepreneurship](https://www.hbs.edu/news/releases/Pages/rock-accelerator-spring-2020.aspx) that builds content curation technology for Gen Z based on user-generated data. [One venture capitalist called them](https://innovationlabs.harvard.edu/current-team/koodos/) “the competitive messaging-based Pinterest for music.”
* [Where they started](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "kodos-where-they-started)
* Koodos’ business model is dependent on understanding relationships between different sets of data. Their first experiment matched emojis with music— if [you texted an emoji to 566-367](https://www.koodos.com/), you got a song recommendation from another person.
* We just tried it and found that 👴 recommends [“Legend” by Twenty One Pilots](https://www.youtube.com/watch?v=f3bzqzspXPI), which is a song celebrating the life of the lead singer’s grandfather.
* It works well, but before a BI tool, they had no easy way of truly analyzing product performance to understand how their experiments were going.
* They would have to download product logs as CSVs and upload them to Google Sheets. From there, they sometimes used SQL to run queries, but because their data wasn’t centralized, they found it difficult and time-consuming to prove whether their experiments were running as intended.
* [How BI helped](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "kodos-how-bi-helped)
* With a business intelligence tool, Koodos is able to unify their data to gain an understanding of how their experiments are performing and then use those insights to build a better product.
* First, they set up their business intelligence tool as a [“central repository](https://chartio.com/customers/casestudies/koodos/)” for all product log data. With all that data collected, they could then run queries, [no matter how clean the dataset was](https://segment.com/blog/announcing-data-transformations/). With those queries, they could build out dashboards that compared sets of data directly in real time, making it a cinch to identify trends and relationships.
* For instance, in the emoji experiment, Koodos found that the 🥺 emoji [received the most song suggestions](https://chartio.com/customers/casestudies/koodos/). They now know that Gen Z has more songs to recommend to people who are feeling sad than, say, people who feel like 🕺.
* Using these insights helps Koodos not only build a better content curation product but also prove their product works well.
* [Takeaway](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "kodos-takeaway)
* Use business intelligence to unite all your data to understand what’s happening in your product, when it’s happening, and what to do about it.
* [Full Koodos Case Study](https://chartio.com/customers/casestudies/koodos/)



1. **[New York Shipping Exchange moves faster](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "2-new-york-shipping-exchange-moves-faster)**

* [New York Shipping Exchange (NYSHEX)](https://www.nyshex.com/) is a shipping-technology company working to improve the process of shipping overseas. They’ve been doing very well recently, [doubling enrollment in 2019](https://www.joc.com/maritime-news/container-lines/nyshex-volume-tripled-membership-doubled-2019_20200129.html), thanks in no small part to business intelligence.
* [Where they started](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "nyshex-where-they-started)
* To make sense of overall company performance, NYSHEX used to manually extract data from their proprietary application and their various cloud apps and then import it all into Excel. Because this was such a laborious process, few people had access to this data, and most of the requests for reports fell on the engineering team to execute.
* Gordon Downes, CEO at NYSHEX, [explains his thoughts during that time](https://chartio.com/customers/casestudies/nyshex/): “There had to be a better way to make information more readily available and save time for our engineering team. We needed a solution so that I, along with the rest of the team, could explore data on the fly.”
* [How BI helped](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "nyshex-how-bi-helped)
* NYSHEX decided to give the entire company access to the data using their business intelligence tool, Chartio. This has been possible not only because all that data is centralized into one system, but also because it’s easy for someone with no coding knowledge to dive deep into analysis.
* With Chartio’s [drag-and-drop Visual SQL builder](https://chartio.com/product/visual-sql/), any NYSHEX employee can run queries, set up dashboards, and create reports. Even if they have no idea what SQL stands for (structured query language), they can still get exactly what they need, when they need it.
* NYSHEX is now an incredibly efficient operation because every employee can access and act on real-time data. Gordon says: “Chartio gets information to the people who need it so they can make decisions without taking loads of time.”
* [Takeaway](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "nyshex-takeaway)
* A [low-code or no-code](https://www.forbes.com/sites/jasonbloomberg/2017/07/20/the-low-codeno-code-movement-more-disruptive-than-you-realize/#20b6f1e722a3) BI solution is vital for any company looking to provide the ability to understand and act on data to every employee.
* [Full Case Study](https://chartio.com/customers/casestudies/nyshex/)



1. **[CareLinx personalizes care](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "3-carelinx-personalizes-care)**

* [CareLinx](https://www.carelinx.com/) is a nationwide, in-home care network connecting families to over 300,000 in-home caregivers. In recent years, they’ve increased their profile by establishing partnerships with the likes of [AARP](https://homehealthcarenews.com/2018/10/online-home-care-network-carelinx-lands-massive-aarp-partnership/) and [Aetna](https://homehealthcarenews.com/2019/06/aetna-working-with-carelinx-to-provide-in-home-services-to-members/). Taking their next step toward growth required them to adopt a compliant business intelligence solution so they could better serve their customers.
* [Where they started](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "carelinx-where-they-started)
* To serve the families that use their product, CareLinx deals with protected health information (PHI). Because PHI is sensitive, they need a BI solution that’s [compliant with the Health Insurance Portability and Accountability Act (HIPAA)](https://heylaika.com/hipaa-requirements-healthcare-startups/).
* Before they established a HIPAA-compliant solution, they had two systems: a BI for non-PHI data and a separate manual system for PHI data. Anytime they wanted to do any sort of business analysis, they’d have to filter out all PHI data in order to remain compliant, leading to an incomplete picture of the people they serve. This dual-system approach wasn’t feasible as CareLinx prepared to scale the business nationwide.
* [How BI helped](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "carelinx-how-bi-helped)
* CareLinx already used Chartio as their business intelligence tool for non-PHI data, so their engineering and product teams already realized the benefits of good BI. Once Chartio became HIPAA-compliant, a whole new world of opportunities opened up for them.
* Now, every team in the company is able to safely query any data, PHI or otherwise, to understand their users on a deeper level. Customer success, for example, utilizes Chartio to analyze data in real time and use those insights to better serve their users.
* No matter how big CareLinx gets, they can still provide personal attention to each family that uses their product by using a HIPAA-compliant BI tool.
* [Takeaway](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "carelinx-takeaway)
* Look for a BI solution that addresses all your specific needs so it can grow with you.
* [Full Case Study](https://chartio.com/customers/casestudies/carelinx/)



1. **[Bugcrowd reduces churn](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "4-bugcrowd-reduces-churn)**

* [Bugcrowd](https://www.bugcrowd.com/) is a cybersecurity platform that connects its customers to security researchers to identify vulnerabilities in products and applications. Just recently, they closed [Series D funding for $30 million](https://techcrunch.com/2020/04/09/bugcrowd-series-d/), and they’ve helped many [Fortune 500 companies](https://www.bugcrowd.com/products/how-it-works/the-bugcrowd-difference/)shore up their security. And the ways Bugcrowd uses BI have helped them establish their place at the forefront of their industry.
* [Where they started](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "bugcrowd-where-they-started)
* Bugcrowd’s goal is to successfully connect companies with security researchers. In an effort to keep both groups happy, they needed to dive into the mountains of data involved in each interaction. It was too much data to handle with spreadsheets and SQL, so they turned to business intelligence.
* Their requirements were strict: airtight security and the ability to handle many data sources—and it had to be easy to use. They were having trouble finding a BI tool that fit those parameters, so they considered building their own analytics system. They had the know-how to do so, but it would’ve been costly and time-consuming. Fortunately, they found a ready-made solution.
* [How BI helped](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "bugcrowd-how-bi-helped)
* Quite a few BI tools meet the first two requirements (security and number of sources), but, too often, they sacrifice usability to reach that point. Bugcrowd found their solution in Chartio, and with those three requirements satisfied, they were able to surpass their goal of retaining customers by keeping them happy.
* To retain your customers, you need to deeply understand them and learn how they use your product. Bugcrowd used Chartio to centralize all their interaction data in one place. From there, they could dive into each interaction individually or zoom out to see them all in aggregate.
* This made it much easier to identify trends and insights, and it [improved the work of all teams](https://chartio.com/customers/casestudies/bugcrowd/), from “customer support for proactive problem solving” to “engineering for feature release activity.”
* At first, Bugcrowd’s goal was to just understand these interactions. But their business intelligence tool made this so easy that they moved seamlessly to *improving* each interaction. The result was a high-touch customer service approach that helped Bugcrowd acquire new business and retain existing business.
* [Jonathan Cran](https://chartio.com/customers/casestudies/bugcrowd/), VP of product at Bugcrowd, says: “We are able to drive negative churn because everyone from Sales to Customer Success uses Chartio to look at how customers are interacting and ask the right questions to improve an account’s health or find an opportunity to upsell.”
* [Takeaway](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "bugcrowd-takeaway)
* Start with a concrete and attainable business intelligence goal (e.g., understand user interactions), and then set stretch goals based on achieving that objective (e.g., improving those interactions).
* [Full Case Study](https://chartio.com/customers/casestudies/bugcrowd/)



1. **[DataRobot democratizes data](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "5-datarobot-democratizes-data)**

* [DataRobot](https://www.datarobot.com/) is an enterprise-level artificial intelligence platform that invented the automated machine-learning category. They’re used by [a third of the Fortune 50 companies](https://www.datarobot.com/news/press/datarobot-announces-206-million-series-e-funding-round/) and recently announced Series E funding, amounting to $206 million. What would a company of this caliber need a business intelligence tool for? Quite a bit, it turns out.
* [Where they started](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "datarobot-where-they-started)
* As a data-centric company, DataRobot knows its way around analyzing, modeling, and presenting data. Early on, they created an ad hoc business intelligence solution, in which they created a few custom reports using Python and sent them via email. It worked pretty well for their purposes—for a while.
* But after [growing 60% in 2018](https://chartio.com/customers/casestudies/datarobot/), they realized this solution couldn’t scale with them. It wasn’t enough for DataRobot to have a [data-centric culture](https://chartio.com/blog/how-to-create-a-data-culture-without-a-data-team/)—they needed a culture of data democracy.
* [How BI helped](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "datarobot-how-bi-helped)
* DataRobot made the choice to onboard new employees with a seat on their BI tool, Chartio. Their goal was to give every team the power to understand and act on data without the need to go through the engineering or analytics team.
* The result was an [83% adoption rate](https://chartio.com/customers/casestudies/datarobot/) of Chartio throughout the company. By incorporating their BI tool into the onboarding process, DataRobot cemented a culture of data democratization, where every employee had the power to analyze and act on data.
* This culture turned out to be vital to their recent success. [Daniil Bratchenko](https://chartio.com/customers/casestudies/datarobot/), VP of business operations and analytics at DataRobot, said, “Democratization of access to data is super important when you see how it works, and if we didn’t have it, we would be much less effective as a company.”
* [Takeaway](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "datarobot-takeaway)
* Entrench your business intelligence into the day-to-day functions of your employees from day one to establish a culture of data democracy.
* [Full Case Study](https://chartio.com/customers/casestudies/datarobot/)



1. **[Reddit eliminates a data bottleneck](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "6-reddit-eliminates-a-data-bottleneck)**

* Reddit is a social media website with a focus on aggregating news and community discussion. It currently ranks seventh in Alexa’s list of [Top Sites in the United States](https://www.alexa.com/topsites/countries/US), and its ability to monetize that traffic relies on their business intelligence.
* [Where they started](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "reddit-where-they-started)
* With over [430 monthly visitors](https://www.reddithelp.com/en/categories/advertising/basics/why-reddit-ads) around the globe, Reddit has a lot of data to deal with. Previously, the data team was tasked with completing one-off requests that not only took time away from their own projects but also made it harder for other teams to access data.
* This bottleneck obscured promising insights and made it nearly impossible to fully leverage the monetization opportunities available to the seventh-most-visited site in the United States.
* [How BI helped](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "reddit-how-bi-helped)
* Reddit didn’t originally plan on everyone using their business intelligence tool, but because Chartio was so easy to use, they kept getting requests from employees to query data on their own. The end result was a culture of data democracy like DataRobot, but through a “grassroots” progression.
* Once they gave access to the rest of the company, the sales team became some of the biggest BI enthusiasts, using it to analyze Reddit’s huge data set in real time to identify when brands or products got mentioned among the [2-million-plus communities](https://redditmetrics.com/history). They use Chartio and [Google BigQuery](https://cloud.google.com/bigquery) to create [graphs and visualizations](https://chartio.com/product/dashboards/) showing how brands can naturally enter the discussions happening every day on Reddit.
* This kind of insight never would have happened if the bottleneck stayed in place. It also wouldn’t have happened without a culture of data democracy. As [Justin Bassett](https://chartio.com/customers/casestudies/reddit/), data scientist at Reddit, says: “More people are making discoveries and uncovering answers they couldn’t have found on their own before,” later adding, “Sales have increased dramatically.”
* [Takeaway](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "reddit-takeaway)
* Leverage the culture of data democracy that business intelligence naturally develops to surface opportunities you never could’ve foreseen otherwise.
* [Full Case Study](https://chartio.com/customers/casestudies/reddit/)



1. **[Clever surfaces insights collaboratively](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "7-clever-surfaces-insights-collaboratively)**

* Clever is a portal for digital learning used in [60% of K-12 schools](https://clever.com/) in the United States. Its near-ubiquitous role in the modern classroom is due to the culture of collaboration made possible with their business intelligence.
* [Where they started](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "clever-where-they-started)
* Clever grew very fast and had to deal with a massive influx of data using MongoDB, a database; Amazon Redshift, a data warehouse; and SQL to make sense of it all. To keep things running smoothly, they needed a way to filter through all that data faster. Specifically, they sought to understand how educators used their technology.
* [How BI helped](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "clever-how-bi-helped)
* Like a few of our other examples of business intelligence, Clever took a page out of DataRobot’s book and sought to establish a culture of data democracy using Chartio, their BI tool. By giving every employee [data source access](https://chartio.com/product/data-sources/) to Chartio, they quickly took data democracy to a new level and now have a [90% adoption rate](https://chartio.com/customers/casestudies/clever/) among all employees.
* To help each other use BI more effectively, Clever created an internal group called the [“Number Munchers”](https://classicreload.com/number-munchers.html) [(named after the classic video game),](https://en.wikipedia.org/wiki/Munchers#Number_Munchers) who interact through a dedicated Slack channel. In this channel, they share their reports, insights, and advice with each other.
* Out of this collaboration comes greater insight into how their users interact with Clever’s product. For instance, the customer success team can independently identify trends in support-ticket data from educators that the product team can then use to inform prioritization of future features.
* With 90% of the company functioning like this, thanks to business intelligence, Clever is able to identify and act on insights faster. [Colin DuRant](https://chartio.com/customers/casestudies/clever/), product manager at Clever, says, “In democratizing data, [we] ensured that no one would make a decision in the absence of data. When you give people access to data, you are automatically enabling them to make better decisions.”
* [Takeaway](https://chartio.com/learn/business-intelligence/7-real-world-examples-of-business-intelligence-in-use/" \l "clever-takeaway)
* Use business intelligence to combine a culture of data democracy with a culture of collaboration to make better decisions faster.