**Data analysis isn't a life cycle. It's the process of analyzing data.**

Steps of data analysis:

* ask, prepare, process, analyze, share, and act.

**Ask phase**

Let's start with the first step in data analysis, the **ask phase**.

In this phase, we do two things.

* We define the problem to be solved and
* we make sure that we fully understand stakeholder expectations.

Stakeholders hold a stake in the project.

They are people who have invested time and resources into a project and are interested in the outcome.

Let's break that down.

* First, **defining a problem** means you look at the current state and identify how it's different from the ideal state.
* Usually there's an obstacle we need to get rid of or something wrong that needs to be fixed.

For instance, a sports arena might want to reduce the time fans spend waiting in the ticket line.

The obstacle is figuring out how to get the customers to their seats more quickly.

* Another important part of the ask phase is understanding stakeholder expectations.

The first step here is to determine who the stakeholders are.

That may include your manager, an executive sponsor, or your sales partners.

There can be lots of stakeholders. But what they all have in common is

* that they help make decisions, influence actions and strategies, and have specific goals they want to meet.
* They also care about the project and that's why it's so important to understand their expectations.

For instance, if your manager assigns you a data analysis project related to business risk,

it would be smart to confirm whether they want to include all types of risks that could affect the company, or just risks related to weather such as hurricanes and tornadoes.

Communicating with your stakeholders is key in making sure you stay engaged and on track throughout the project.

So as a data analyst, developing strong communication strategies is very important.

* This part of the ask phase helps you keep focused on the problem itself, not just its symptoms.
* As you learned earlier, the five whys are extremely helpful here.

**upcoming course**

In an upcoming course, you'll learn how to ask effective questions and define the problem by working with stakeholders.

You'll also cover strategies that can help you share what you discover in a way that keeps people interested.

**Prepare step**

After that, we'll move on to the **prepare step** of the data analysis process.

This is where data analysts collect and store data, they'll use for the upcoming analysis process.

You'll learn more about the different types of data and how to identify which kinds of data are most useful for solving a particular problem.

You'll also discover why it's so important that your data and results are objective and unbiased. In other words, any decisions made from your analysis should always be based on

facts and be fair and impartial.

**Process step**

**Next is the process step**. Here, data analysts find and eliminate any errors and inaccuracies

that can get in the way of results. This usually means cleaning data, transforming it into a more useful format, combining two or more datasets to make information more complete and removing outliers, which are any data points that could skew the information.

After that, you'll learn how to check the data you prepare to make sure it's complete and correct.

This phase is all about getting the details right. So you'll also fix typos, inconsistencies, or missing and inaccurate data.

To top it off, you'll gain strategies for verifying and sharing your data cleansing with stakeholders.

**Analyze**

Then it's time to **analyze**.

Analyzing the data, you've collected involves using tools to transform and organize that information so that you can draw useful conclusions, make predictions, and drive informed decision-making.

There are lots of powerful tools data analysts use in their work and in this course, you'll learn about two of them, spreadsheets and structured query language, or SQL, which is often pronounced "sequel."

**share phase**.

Here you'll learn how data analysts interpret results and share them with others to help stakeholders make effective data-driven decisions.

In the share phase, visualization is a data analyst's best friend.

So this course will highlight why visualization is essential to getting others to understand what your data is telling you. With the right visuals, facts and figures become so much easier to see and complex concepts become easier to understand.

We'll explore different kinds of visuals and some great data visualization tools.

You'll also practice your own presentation skills by creating compelling slideshows and learning how to be fully prepared to answer questions.

Then we'll take a break from the data analysis process to show you all of the really cool things you can do with the programming language R. You don't need to be familiar with R or programming languages in general. Just know that R is a popular tool for data manipulation, calculation, and visualization.

**Act**

For our final data analysis phase, we have act. This is the exciting moment when

the business takes all the insights you, the data analyst, have provided and puts them to work in order to solve the original business problem and will be acting on what you've learned throughout this program.

This is when you prepare for your job search and have the chance to complete a case study project. It's a great opportunity for you to bring together everything you've worked on throughout this course.

Plus adding a case study to your portfolio helps you stand out from the other candidates when you interview for your first data analyst job.