D

**Data:** A collection of facts

**Data analysis:** The collection, transformation, and organization of data in order to draw conclusions, make predictions, and drive informed decision-making

**Data analyst:** Someone who collects, transforms, and organizes data in order to drive informed decision-making

**Data analytics:** The science of data

**Data-driven decision-making:** Using facts to guide business strategy

**Data ecosystem:** The various elements that interact with one another in order to produce, manage, store, organize, analyze, and share data

**Data science:** A field of study that uses raw data to createnew ways of modeling and understanding the unknown

**Dataset:** A collection of data that can be manipulated or analyzed as one unit

**Data and Gut Instinct :**

* The more you understand the data related to the project the easier it is to figure out what is required!
* Past experiences may form connection that no one else would notice, so it isn’t always just the gut instinct
* **Gut instinct** is an intuitive understanding of something with little or no explanation. This isn’t always something conscious; we often pick up on signals without even realizing. You just have a “feeling” it’s right.

Try to ask yourself:

* How do I define success for this project?
* What kind of results are needed?
* Who will be informed?
* Am I answering the question being asked?
* How quickly does a decision need to be made?

These questions help us to do the job effectively

Lifecycles:->

***Google Data Analytics Certificate Lifecycle:***

1. **Ask**: Business Challenge/Objective/Question
2. **Prepare**: Data generation, collection, storage, and data management
3. **Process**: Data cleaning/data integrity
4. **Analyze**: Data exploration, visualization, and analysis
5. **Share**: Communicating and interpreting results
6. **Act**: Putting your insights to work to solve the problem

## ***EMC's data analysis life cycle: EMC Corporation is now Dell EMC***

1. **Discovery**
2. **Pre-processing data**
3. **Model planning**
4. **Model building**
5. **Communicate results**
6. **Operationalize**

This model, created by David Dietrich, reflects the cyclical nature of real-world projects.

***SAS's iterative life cycle:***

1. ***Ask***
2. ***Prepare***
3. ***Explore***
4. ***Model***
5. ***Implement***
6. ***Act***
7. ***Evaluate***

## 

## ***Project-based data analytics life cycle:***

1. **Identifying the problem**
2. **Designing data requirements**
3. **Pre-processing data**
4. **Performing data analysis**
5. **Visualizing data**

This data analytics project life cycle was developed by Vignesh Prajapati. It doesn’t include the sixth phase, or what we have been referring to as the Act phase.

## ***Big data analytics life cycle:***

1. **Business case evaluation**
2. **Data identification**
3. **Data acquisition and filtering**
4. **Data extraction**
5. **Data validation and cleaning**
6. **Data aggregation and representation**
7. **Data analysis**
8. **Data visualization**
9. **Utilization of analysis results**

Thomas Erl, Wajid Khattak, and Paul Buhler proposed a big data analytics life cycle in their book.This life cycle appears to have three or four more steps than the previous life cycle models. But in reality, they have just broken down what we have been referring to as Prepare and Process into smaller steps.