**Learning Log: Consider how data analysts approach tasks**

**Instructions**You can use this document as a template for the learning log activity: Consider how data analysts approach tasks. Type your answers in this document, and save it on your computer or Google Drive.

We recommend that you save every learning log in one folder and include a date in the file name to help you stay organized. Important information like course number, title, and activity name are already included. After you finish your learning log entry, you can come back and reread your responses later to understand how your opinions on different topics may have changed throughout the courses.

To review detailed instructions on how to complete this activity, please return to Coursera: [Learning Log: Consider how data analysts approach tasks](https://www.coursera.org/learn/foundations-data/supplement/I086K/learning-log-consider-how-data-analysts-approach-tasks).

| **Date:** <enter date> | **Course/topic:** Course 1: Foundations: Data, Data Everywhere | | |
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| **Learning Log:** Consider how data analysts approach tasks | | |
| **Review the 6 phases of data analysis** | Consider how the data analysts at Google used the data analysis process to break down their analysis project:  The analysts **asked** questions to define both the issue to be solved and what would equal a successful result.   Next, they **prepared** by building a timeline and collecting data with employee surveys, which should be inclusive.  They **processed** the data by cleaning it to make sure it was complete, correct, relevant, and free of errors and outliers.   They **analyzed** the clean employee survey data. Then the analysts **shared** their findings and recommendations with team leaders. Afterward, leadership **acted** on the results and focused on improving key areas. | | |
| **Reflection:** | Write 2-3 sentences (40-60 words) in response to each of the questions below. | | |
| **Questions and responses:** | * Did the details of the case study help to change the way you think about data analysis? Why or why not?   *Yes, I thought data analysis is just cleaning data, processing it, and presenting it. Apparently, there are various steps in data analysis and the first step is making guide questions on the issues to be solved which we can look back on when we feel lost in the process.*   * Did you find anything surprising about the way the data analysts approached their task?   *Not really.*   * What else would you like to learn about data analysis?   *Specific processing techniques in SQL and programs that accept this language, as well as in depth experience in Tableau and Power BI.*   1. ***Ask*** *questions and define the problem.* 2. ***Prepare*** *data by collecting and storing the information.* 3. ***Process*** *data by cleaning and checking the information.* 4. ***Analyze*** *data to find patterns, relationships, and trends.* 5. ***Share*** *data with your audience.* 6. ***Act*** *on the data and use the analysis results.* 7. ***Ask****: Business Challenge/Objective/Question* 8. ***Prepare****: Data generation, collection, storage, and data management* 9. ***Process****: Data cleaning/data integrity* 10. ***Analyze****: Data exploration, visualization, and analysis* 11. ***Share****: Communicating and interpreting results* 12. ***Act****: Putting your insights to work to solve the problem*   *NOTES: DATA SCIENCE HAS THREE PARTS: MACHINE LEARNING, STATISTICS, ANALYTICS*  *DATA SCIENTIST - CREATE NEW QUESTIONS USING DATA*  *DATA ANALYST - ANSWERS EXISTING QUESTIONS*  *DATA ANALYSIS - collection, organization, and transformation of data to draw conclusions, make predictions, and drive informed decision-making*  *DATA ANALYTICS - science of data*  *DATA DRIVEN DECISION MAKING - using facts to guide business strategy*  *BEST IS DATA + HUMAN EXPERIENCE + OBSERVATION + INTUITION*  *SUBJECT MATTER EXPERT - looks at results of data analysis and identify inconsistencies, makes sense of gray areas, validate choices made*   * *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?*   *GOOGLE DATA ANALYSIS LIFE CYCLE MODEL:*   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*   *DELL DATA ANALYSIS LIFE CYCLE MODEL:*   1. *Discovery* 2. *Pre-processing data* 3. *Model planning* 4. *Model building* 5. *Communicate results* 6. *Operationalize*   *SAS ITERATIVE LIFE CYCLE:*   1. *Ask* 2. *Prepare* 3. *Explore* 4. *Model* 5. *Implement* 6. *Act* 7. *Evaluate*   *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* | | |