Introduction to BI

1. Introduction to Tableau
   1. Download the [Tableau software](http://www.tableau.com/academic/students).
   2. Answer the following questions based on Video #1 - Getting Started with Tableau - posted under Week 1 - Your to do list: Assigned Readings and Videos.
2. What are the key features that were highlighted in this video that you think are crucial to data-driven decision making?
   * Organizing the data in order to visualize it and make productive decisions about the data being researched. Some key features are visualizing the data regionally (world map, state borders), recognizing which variable should be a column or row, and being able to make a story with all the data that was manipulated that can be translated easily.
3. What is a Measure?
   * A measure is a numeric value that measures the data (sums, average, minimum, maximum, etc.).
   * Quantitative
4. What is a Dimension?
   * A dimension describes that data (names, dates, regions, etc.).
   * Qualitative
   1. Answer the following questions based on Video #2 - Tableau’s UI - posted under the Week 1 -Your to do list: Assigned Readings and Videos.
5. List the key functions listed under the Menus & Toolbar.
   * Menus: Contains powerful options like open and save files.
   * Toolbar: Save and undo type functions.
     + Contextual to what is going on in the current sheet.
6. What is the difference between the Data tab and Analytics tab under the Data Window?
   * Data tab: All open data sources
     + Fields from that data sources are broken into dimensions and measures
     + Or sets and parameters it may have
   * Analytics tab: Pieces of our analysis as drag and drop elements.
     + Control aspects of its properties
7. What are Shelves? Provide two examples.
   * Shelves are places you can drag you pills in order to visualize them.
     + Column shelf
     + Row shelf
8. What are Cards? Provide two examples.
   * Cards are containers for shelves. Cards control how data is displayed.
     + Marks card
     + Title card
   1. Answer the following questions based on Videos #3 through #5 posted under the Week 1 -Your to do list: Assigned Readings and Videos. (Download Excel Data-sources used in these videos:
9. What is a meta-data? Provide examples of meta-data in Tableau.
   * + - Things are adding manually on top of the data that is being used in the first place.
         * Dimensions and measures
         * Calculated fields
10. What are some examples of changing the meta-data in Tableau?
    * + - Data types
        - Remaining and hiding
11. What is a hierarchy? How are hierarchies created in Tableau?
    * + - Data is organized into a tree-like structure.
        - Drag a subordinate field onto another field.
12. What kind of formatted data does Tableau prefer?
    * + - Data formatted like a database table, or raw data.
13. What is the format for an “Ideal” sheet? Use the video example to explain.
    * + - Starting from the very left, there should be no empty columns. Each column should be a characteristic of the data and each row should be the data entered in correctly.
14. What does a Data Interpreter function do? What does "review results" allow user to do?
    * + - Data Interpreter function strips out headers and nulls and the columns are properly identified.
        - “Review results” opens an excel file and reviews the changes made in the data interpreter function.
15. What is a Pivot?
    * + - Merges the information from the original columns and rows into two new columns – pivot field names and pivot field values.
16. What purpose does the function Split Columns serve?
    * + - Splits the column that has more than one type of information into multiple columns.
17. What purpose does the function Custom Split serve?
    * + - Manually splits columns by choosing the separator that is identified and splitting off either the first, last, or all columns.
18. Explore [Teradata website](http://www.teradata.com/) (refer to the Syllabus if you have not yet registered on the Teradata website) and list the various kinds of items available for the students.
    * Under the benefits for college students on the Teradata website, students can access:

* Free training videos
* Connect with global leaders
* Software (Teradata, SAS, etc.)
* Real world data problems
* Scholarship opportunities

1. Answer the following questions based on the Gartner Magic Quadrant paper posted under Week 1 - Your to do list: Assigned Readings and Videos: What purpose does the Gartner Magic Quadrant serve? What are Tableau’s strengths and weaknesses?

* The Gartner Magic Quadrant purpose is to determine the quality of different data analysis platforms. It focuses on the criteria of modern analytics and business intelligence platforms. Critical capabilities include infrastructure, data management, analysis and content creation, and sharing of findings.
* Tableau is a platform that presents data without any technical skills or coding.
  + Strengths include interactive visual exploration, customer service, and expanding/flexible deployment.
  + Weaknesses include mainstream marketing, pricing and packaging, lack of complex data. And product vision.

1. Briefly summarize the article (Max 100 words) titled, “Big data. The management revolution” posted under Week 1's Assigned Readings and Videos (Your to do list) and list the key lessons you learned from this article.

* As the need for big data grows for companies to become more successfully, management should be improved. Companies who are data-driven historically perform better financially and operationally. The term HiPPO (highest paid persons opinion) is now looked at through the story of data and not who has the most experience as an executive. Using big data creates better predictions and better decisions.
* Key lessons:
  + ‘You can’t manage what you can’t measure’
  + Better predictions lead to better decisions
  + Big Data vs Data Analytics
    - Volume, velocity, and variety
  + Rely too much on experience and intuition and not enough on data
  + Executives new roles for a managerial revolution:
    - Leadership
    - Talent management
    - Technology
    - Decision making
    - Company structure