Download the file **US and Canada Box Office data - Q1 - Practice**

1. Generate a full table of descriptive statistics for Industry Box Office (4.8 points)
   1. Mean (0.4 points)
   2. Median (0.4 points)
   3. Mode (0.4 points)
   4. Minimum (0.4 points)
   5. Maximum (0.4 points)
   6. Range (0.4 points)
   7. Variance (0.4 points)
   8. Std Dev (0.4 points)
   9. 1st quartile (0.4 points)
   10. 3rd quartile (0.4 points)
   11. Interquartile Range (0.4 points)
   12. Count (0.4 points)
2. Create the following (5 points):
   1. Column chart with year as the x-axis and Box Office Sales as the Y axis (2.5 points)
   2. Line chart demonstrating a time series of Disney’s Market Share and Include a trendline (2.5 points)

The Walt Disney Company is one of the most powerful companies in Media & Entertainment. However, when the company acquired Marvel Studios in 2009 and Lucasfilm in 2012, there were a number of doubters that an animated, children’s studio could make the leap to live, action films.

1. (5.1 points) Using the ***Marvel Dataset Pre 2010 – Q3-1 - Practice***:
   1. Generate a full table of descriptive statistics for Marvel Box Office Revenue (1.2 points)
      1. Mean (0.1 points)
      2. Median (0.1 points)
      3. Mode (0.1 points)
      4. Minimum (0.1 points)
      5. Maximum (0.1 points)
      6. Range (0.1 points)
      7. Variance (0.1 points)
      8. Std Dev (0.1 points)
      9. 1st quartile (0.1 points)
      10. 3rd quartile (0.1 points)
      11. Interquartile Range (0.1 points)
      12. Count (0.1 points)
   2. What is the 90% Confidence Interval for Marvel revenue at the time Disney acquired Marvel rights? (1 points)
   3. What is the 95% Confidence Interval for Marvel revenue at the time Disney acquired Marvel rights? (1 points)
   4. What is the 99% Confidence Interval for Marvel revenue at the time Disney acquired Marvel rights? (1 points)
   5. At the time of the Marvel acquisition, Marvel had mean annual Box Office Revenue of 354,655,650.22 with a standard deviation of 164,414,416.63 (This is for the POPULATION of Marvel Studios releases). The dataset **Marvel Studios Since 2009 – Q3-2 - Practice** has the box office receipts since the Disney merger. At the time of the Disney merger, if this had been the sample, would we deem the merger successful? To answer this, perform a hypothesis test using the Marvel Studios Since 2009 data as your sample, and use a significance level of 0.05 (or 5%). (0.9 points)
      1. Construct the appropriate Hypothesis test (0.1 points)
      2. Calculate (0.5 points):
         1. Degrees of Freedom (d.f.) (0.1 points)
         2. Std Err (0.1 points)
         3. Critical Value (0.1 points)
         4. Test Statistic (Z) (0.1 points)
         5. P-Value (p) (0.1 points)
      3. Please interpret the above analysis in a couple of sentences, using language appropriate to a Disney Executive (0.3 points).
2. (5.1 points) Using the ***Lucasfilm Dataset Pre 2013 – Q4-1 Practice***:
   1. Generate a full table of descriptive statistics for Lucasfilm Box Office Revenue (1.2 points)
      1. Mean (0.1 points)
      2. Median (0.1 points)
      3. Mode (0.1 points)
      4. Minimum (0.1 points)
      5. Maximum (0.1 points)
      6. Range (0.1 points)
      7. Variance (0.1 points)
      8. Std Dev (0.1 points)
      9. 1st quartile (0.1 points)
      10. 3rd quartile (0.1 points)
      11. Interquartile Range (0.1 points)
      12. Count (0.1 points)
   2. What is the 90% Confidence Interval for Lucasfilm revenue at the time Disney acquired Lucasfilm rights? (1 points)
   3. What is the 95% Confidence Interval for Lucasfilm revenue at the time Disney acquired Lucasfilm rights? (1 points)
   4. What is the 99% Confidence Interval for Lucasfilm revenue at the time Disney acquired Lucasfilm rights? (1 points)
   5. At the time of the Lucasfilm acquisition, Lucasfilm had mean annual Box Office Revenue of 271,150,219.75 with a standard deviation of 151,010,089.74 (This is for the POPULATION of Lucasfilm releases). The dataset **Lucasfilm Since 2012 – Q4-2 - Practice** has the box office receipts since the Disney merger. At the time of the Disney merger, if this had been the sample, would we deem the merger successful? To answer this, perform a hypothesis test using **the Lucasfilm Since 2012 – Q4-2 Practice** data as your sample, and use a significance level of 0.05 (or 5%). (0.9 points)
      1. Construct the appropriate Hypothesis test (0.1 points)
      2. Calculate (0.5 points):
         1. Degrees of Freedom (d.f.) (0.1 points)
         2. Std Err (0.1 points)
         3. Critical Value (0.1 points)
         4. Test Statistic (Z) (0.1 points)
         5. P-Value (p) (0.1 points)
      3. Please interpret the above analysis in a couple of sentences, using language appropriate to a Disney Executive (0.3 points).