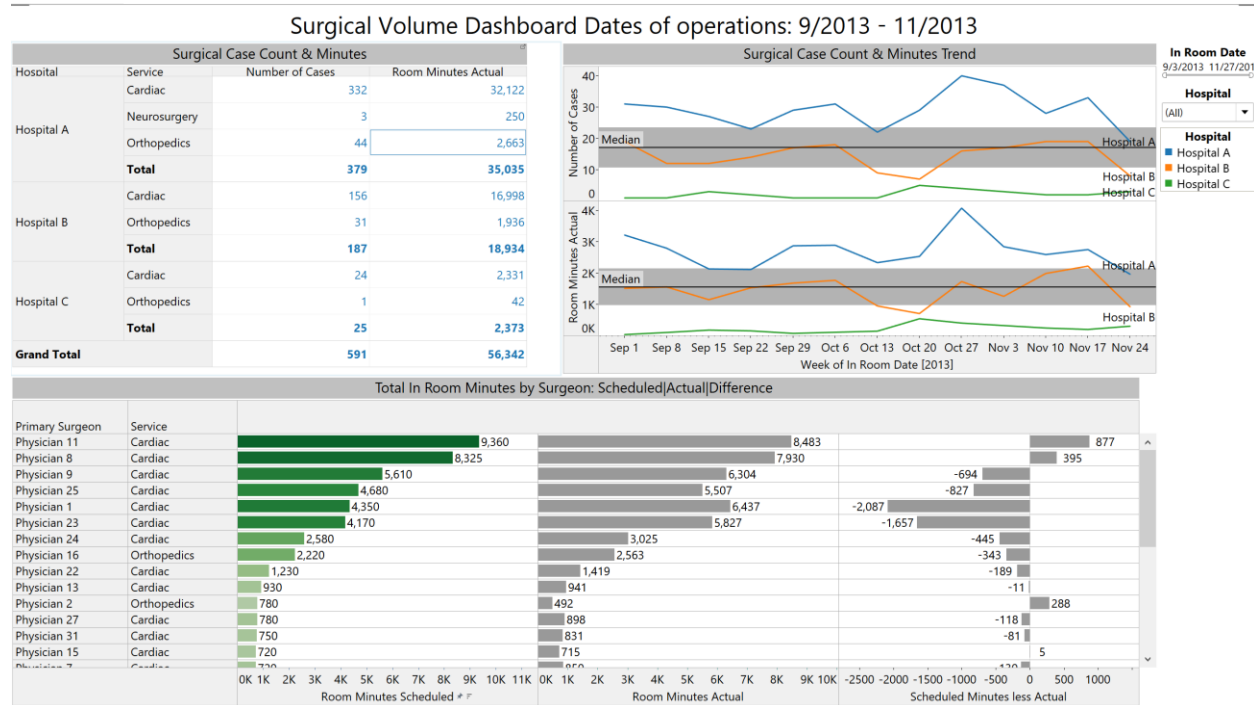1.

Using the operations room data set, create a dashboard like the one shown below:

The analysis for the creation of the dashboard should follow the following requirements:

Analysis 1: Surgical Case Count & Minutes

Requirements:

    i.   A cross tab analysis of the different hospitals, the services provided, the total number of surgical cases from 9/2003 – 11/2013 and the total actual room minutes taken for the cases.

    ii.   Make sure the subtotals for the number of cases for each hospital and for the different services provided is calculated and displayed.

    iii.   Show the grand total for the specification in (ii) as well.

Analysis 2: Surgical Case Count & Minutes Trend

Requirements:

    i.   Create a trend chart of your choice showing the pattern of the number of Cases and the actual room minutes for the different hospitals from September 1st through November 24th in-room date.

Analysis 3: Total in Room Minutes by Surgeon: Scheduled|Actual|Difference

Requirements:

    i.   Analysis should show the primary surgeon, the service provided by the surgeon, the scheduled room minutes, the actual room minutes and the difference in the scheduled and actual room minutes demonstrating whether a surgeon used more time for the operation than scheduled or less.

Note: Your users would like to be able to filter the analysis by In-Room date, the hospital and the services. For such reason, please ensure that you incorporate a dynamic filter for your dashboard to allow any effect to show across board whenever the user does any filter.

Please be aware that the screen shot shown above does not have the services filter. Also, just so you know, the difference measure is a calculated field so ensure that the calculation is done appropriately.

Take a screen shot of your work with your full credentials and paste it in a word document. I also want to have a pdf copy of your dashboards. Finally, please publish your work to Tableau Public, copy and paste your URL in your word document submission to me.

2. Using the data provided on the Raw Data tab, please answer the following questions by creating a graphical representation (dashboard, summary slide, etc.)

- How many impressions were delivered in 2017?
- Which Programmer delivered the most impressions?
- Which campaign generated the most revenue?
- Was this campaign a Mashable campaign?
- Of all Mashable campaigns, which generated the most revenue and on which Network?
- What were the top 5 networks by impressions delivered?

Some useful information to help guide you:

- The formula for revenue would be (CPM*Impressions)/1000
- The SD/HD column is the definition/resolution of the content. HD is high def content, so, any value with HD in the name would be considered HD content - else, SD (standard definition).
- The Sellable column defines whether we can sell the inventory. Yes = sellable, No = non-sellable. If it is non-sellable, we can't place ads there to generate revenue, but we can still run ads on that network.
- The hierarchy is Programmer > Network. Example, FX is a network that is owned by the Programmer (parent company) Fox.

3. Use the datasets in the tableau project 3 file folder in the Assignments folder to answer the

problem below: Please use your experience to develop great analysis and visuals to best answer

the problem below:

i) Demographics: A common problem in healthcare is inequity of care across demographics.

Break the patient population down by their demographic information (age, gender, ethnicity)

and give an accounting of what our patient volume looks like

(ii) Diagnosis Grouping: Patients who are admitted to the hospital are assigned a "Diagnosis

Related Group" based on what their problem is. What diagnosis related groups are the most

expensive to treat?

(iii) Trending: Are there any patterns in how the data changes over time? Look for cycles or

patterns as well as any directional trends.

Optional:

What's the big picture? Pull the demographics, diagnostic and time frame data together in a

way that shows a clearer picture of the entire system.

4. Use the datasets in the tableau project 4 file folder in the Assignments folder to answer the

problem below: Please use your experience to develop great analysis and visuals to best answer

the problem below:

Souper Bowl Inc.—December 31, 2016
Disaggregated Revenue Analytics

Purpose: The purpose of this memo is to document plausible trends and expectations for disaggregated revenue data and to identify specific days and locations that warrant further substantive investigation.

Data: We obtained a listing of daily sales by location from the client's IT system. We tested the details for mathematical accuracy, as summarized in the table below:

	Total Sales, 2015	Total Sales, 2016
Store Type 1	$	$
Store Type 2	$	$
Store Type 3	$	$
Total	**$**	**$**

Procedures: Based on our risk assessment process, we identified the following assertions as significant risks related to revenues/sales:
- Recorded sales occurred.
- Sales are accurately recorded.
- Sales are recorded in the proper period.

Because Souper Bowl's operations are solely in the state of Maine, we obtained disaggregated data that reports daily sales by store location and store type. Based on discussions with management and our review of the board of director minutes, we are unaware of any new store locations or other major changes to operations during the year. Therefore, we expect prior year to be a reasonable baseline expectation for this year's revenues (e.g., similar seasonal trends). Because the business can also be impacted by weather conditions, which vary by year, we also perform analyses that consider changes in weather patterns to predict expected changes from the prior year's sales. We performed several analytics to identify unusual trends compared to the prior year's sales, taking weather conditions into consideration. The purpose of these analytics is to identify specific observations (or specific sets of observations) to select for further substantive testing. The analytics that we performed are as follows:

- ***Visualization Analysis #1: Title***
  [Provide a description of the relationship you expected to observe in the data, along with screenshots of the visualization results. Clearly identify (using circles, arrows, etc.) the part of the visualization that leads you to believe that a specific location/day is an anomaly. Ensure that all tables and graphics are properly labeled (x axis, y axis, etc.).]
  - o *Results: [In each of the "results" sections, include a brief summary of your findings so that your manager can see (in words) the way that you interpret the visualization screenshots.]*

- ***Visualization Analysis #2: Title***
  - o Results:

- *[The number of analyses that you perform is up to you. Remember that you want to impress your manager, but you also know that the manager's time is valuable. Therefore, each analysis that you report should offer new information and conclusions (e.g., avoid repeating the same type of analysis with different coloring, shapes, etc., if the conclusions drawn are the same.)*

Conclusion: Based on the procedures described above, the audit team will pull supporting sales information to substantively test transactions from the following locations and days*:*
- *This section of the memo can be achieved using lists or tables, but regardless of the style of presentation, it should clearly describe which item(s) you're recommending that the audit team look into it further (based on all the analyses above). For each item, you should reference which analysis # the item comes from. The item should be a specific location on a specific day, or a sample of certain days from a set of observations that exhibit the same unusual trend based on your analyses above (e.g., if you identify an unusual relationship for Q4 for location #1001, but you can't identify one specific day or set of days that is driving the unusual relationship, you may choose to sample from Q4 instead). Remember that it takes time and resources to test each selection, so be strategic in your selections and include justification for your decisions in this section of the memo*

Enjoy.

Thank you.