The goal of the Final Data Translation Project is to apply all the exploratory, wrangling, reproducible research, visual design, storytelling, and communication skills developed during the quarter in one complete business analytics project. Regarding visual design, you should use an appropriate a mix of tables, standard graphics, and specialty graphics that are consistently designed using best practices, but you do not have to use all visual types you have learned – you determine which mix is best to illustrate your findings and recommendations. There are four deliverables: 1) Technical appendix with all exploratory analysis, wrangling, and visual design; 2) 2-page memorandum with visuals based on storytelling technique; 3) 5-minute presentation using slides or storyboard using storytelling techniques; and 4) Standalone interactive dashboard using shiny or PowerBI. The visuals you use for deliverables may need to be different since each depends on different modes of communication. The memo, presentation, and dashboard are all based on the same EDA in the technical appendix. This is an individual project, meaning that you do your own analysis and document creation. All documents are to be Rmd, html, or PowerBI. If you use shiny you will need to submit the Rmd file so I can run it on my computer. If you use PowerBI it will need to include a working R visual. The project description below is for using the supplied OfficeMate data set. Follow along these directions if you are going to use a different data set but provide your own context similar to below.

Task: You have recently begun an internship for an online office supply store, OfficeMate. They have been in business since 2012 and have done well. However, they are facing increased competition from Amazon and other online retailers, so need to be more effective and strategic to improve profitability. Your manager, Chris Lee, has come to you to complete an analysis and come up with two primary recommendations to improve profitability. The specifics of the task are outlined below. Chris will be sharing your findings with upper level management and the board of directors, so it is critical that your communication documents are clear to people without a technical background. Chris has requested a 2-page memo that he can share company wide, a 5-minute screencast video to share with management and the board of directors, and an interactive dashboard that managers can dive into the data themselves. Finally, since you are on a 3-month internship, Chris indicates that it is critical for you to create a fully documented technical appendix, so your work can be extended in the future – the TA will only be used by a technical audience so can contain technical jargon and visuals.

As with previous projects, you will need perform basic and detailed EDA, check the results you will be presenting statistically. You will need to be methodical, so use the standard EDA process we have developed in class. In your memo, dashboard, and presentation you must assume that your audience is non-technical and **are not familiar with the data**.

The Data: The data has self-explanatory variable names and each observation is for the sale of a specific product from an order that may contain multiple products—the Order ID variable links products from the same order. The customer ID identifies unique customers that may have multiple orders

Submission of final documents: Chris Lee needs you to submit your data, technical appendix, memo, and dashboard in zip folder and submit to Canvas. The presentation video will be submitted to a separate page due to Studio not being well integrated. If you have not used a zip folder before, type zip in the search bar of your operating system and follow the instructions.

Technical Appendix: You should submit the Rmd and html files of an RNotebook that includes all your work: base EDA, detailed EDA, statistical EDA, and development of final visuals for the memo and presentation and the data.

Storytelling memo:

1. 2-page document with visuals using RMarkdown in html (or flexdashboard storyboard). Remember to knit your document after each step to simplify debugging. Follow the best practices we have developed keeping visuals simple and to the point, with titles answering questions or prompting action.
2. Follow the general outline posed in Chapter 7 of Storytelling with Data. Specify your audience and tell them what you want them to do with the information in the story you are telling. Think carefully about the beginning, middle and end, and how to tie it all together. This is NOT easy, it will take some imagination—be creative and have fun.

Presentation: Your presentation should be made in Studio software from Canvas and should be limited to 5-minutes. You should follow much of the same guidelines as for the memo, but also make sure your slides follow horizontal and vertical logic from Ch 7 of SWD. The presentation should only be 4 – 6 slides long and you should assume the audience does not know the data set.

Dashboard:

1. Dashboard is **1-page**, with dashboard title and interactive visuals in shiny R or PowerBI
2. Each visual should be self-explanatory with title, labels, legend and short annotations where necessary. Remember, don't try to use too many visuals.
3. If a PowerBI dashboard is used it should contain an R visual that changes with slicers. If shiny is used with flexdashboard, all visuals should be interactive.

Grading Rubric		
Category	Score	**Comments**
Technical Appendix – (50)		*Code header, table of contents, documented code, data comments/questions, base EDA, detailed EDA, statistical EDA, summary of findings*
Memorandum – (15)		*Memo header, complete introduction (why important, brief data and findings), findings with consistent visuals using best practices, recommendations, clearly and concisely written, storytelling technique with beginning-middle-end,*
Presentation – (15)		*A 5-minute presentation with complete introduction, findings with consistent visuals using best practices, and recommendations. Use screen capture video software and follow storytelling technique checking horizontal and vertical logic (Chapter 7).*
Dashboard – (20)		*Effective main and chart area titles with consistently formatted visuals using best practices, best dashboard practices, create story flow. If a PowerBI dashboard is used it must contain an R graphic that changes with slicers. If shiny is used with flexdashboard, all graphs should be interactive.*
Total	**/100**	