Now that you have written the parts of the report you need to combine them. Here are some guidelines for the final document as a whole:

- Even though there are separate sections the whole report needs to read as one document.

- You are telling a story about the process you went through to arrive at your answers.

- Your audience is well educated but not necessarily statistically savvy.

- The tone of the report needs to be professional. Avoid slang, colloquialisms, and chatty style. Write as if this were a report for a boss whom you wanted to impress.

- The report should read as if one person wrote it, even if you have divided the writing among the members of the group. One way to do this is to designate one person as proofreader, who will go through the whole report and make sure it has consistent style, etc.

Here are some copy edit points:

- All pages should be numbered (except the cover page).

- Keep the font size and type consistent throughout the document.

- Each section needs to have a clear header.

- If you are including a bibliography pick a citation style and be consistent throughout the document. Most (if not all) statistical journals use APA style.

- If you choose to have an appendix it should be the last section. You still need to be clear and clean with the appendix. Just because it is the appendix does not mean you can put “junk” in it.

- Check spelling, grammar etc. Just because this is a draft does not mean you are exempt from proofreading.

Finally you need to have a cover page that looks like the following:
Here are some reminders about what needs to appear in each section:

**Introduction**

- Start with the context of the problem. There is most likely a larger question or problem and your project is a piece of that puzzle. Talk to your client about the context.

- You need to explain who the client is and where he or she works.

- Explain what has already been done concerning your question of interest, or studies that are similar but may not have focused on the same subset of data. Again talk to your client about this.

- Explain what the potential ramifications are if you are able to prove/disprove the client’s question.

- Do not get into specifics concerning data, methods or outcome in this section.

**Data and Methods**

- Do not use internal names (like $d\$V1). Use variable names that are clear and intuitive. Make sure you use these variable names throughout the paper.

- The data description needs to be clear enough so the reader gets a feel for the variables and an idea of what the values of the variables could be.

- Any summary statistics (including things like histograms, box plots etc.) need to have some context for being there. If you are going to use exclusively nonparametric methods it does not make sense to show that all the variables have a normal distribution. Better yet, if you need to show certain properties of the data put that in the analysis with the appropriate test(s).

- The methodology should give the reader a basic understanding of the techniques you plan on using, what they are intended to prove/disprove and any possible limitations the method(s) might have.

- Feel free to make this two separate sections.

**Analysis**

- The analysis walks the reader through each step that leads towards the final result.

- Avoid heavy statistical jargon unless explicitly defined.
- When presenting results, plots, tables, charts etc. usually work best. In fact all your results should be in one of these forms. Make sure everything is clearly labeled and can stand alone.

- Even though the results themselves are given, it is your job to also walk the reader through what they mean. Make sure your explanations are correct! In statistics there can be subtleties that can make your explanations flat out wrong.

- DOUBLE CHECK YOUR RESULTS!!! If you get a \( p \) value of -2 this should immediately alert you to an error.

- DO NOT (as in never) copy and paste raw output from a software package (even in the appendix). Make the table yourself. This will also help you catch errors.

- All tables, plots and so on should have an explanation in the paragraph preceeding or following them. You can also add brief descriptions in the title of the plot, table etc. directly. Although they need to stand alone that does not mean they should appear without any context.

- Avoid saying “we reject/do not reject”. This does not give the reader enough to agree/disagree with your assessment of the results. It is better to report \( p \) values, misclassifications or whatever and justify your conclusion based on those.

**Conclusion/Discussion**

- Summarize what your results mean in the original context of the research.

- Emphasize any unexpected results, especially if they contradict earlier studies or what was assumed in the discipline.

- If certain techniques proved more effective than others discuss why.

- Discuss recommendations that would be useful for continuing this line of research. However this does not mean bash the data, client, statistics or whatever else comes to mind.

- What are the next steps you recommend for the client or reader.

- Generally the Conclusion and Discussion is one section but if you really feel that things are easier to follow by separating them you can split this into two sections with the Conclusion covering the first three points and the Discussion handling the next two.

As always if you have any questions about anything, ask one of us.