

Conclusions

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Abstract—A “Conclusion” section thoroughly but briefly summarizes the results or main points of your study. A reader should be able to skip the rest of your paper and still know everything important about your project just from reading the Conclusion. This handout gives suggestions and examples for writing a Conclusion.

I. WHY DO I NEED A CONCLUSION?

The Conclusion section of a technical report gives the author one final chance to emphasize his/her most important points. Many readers know that authors often tend to hold back their findings until they get to the Conclusion, so the reader will just skip everything else and go right to the end of the paper. Your conclusion should be a “Mini-Me” version of your entire paper. It should also examine the greater significance of what you have done.

II. WHAT DO I PUT IN MY CONCLUSION?

A Conclusion must at least accomplish the goal of summarizing your paper or project. There are a number of other elements that can be included, depending on the individual project. The following is a list of possible elements to include in a Conclusion:

- Summary of project
- Summary of main points or findings
- Numerical values or other specific information not yet covered
- General scientific principles governing the experiment
- The greater significance of the experiment—what it might mean in a real world application
- Questions that remain unanswered
- Action that should be taken
- How to improve performance
- Recommendations for future research

III. HOW DO I ORGANIZE MY CONCLUSION?

Conclusions are organized differently, depending on the nature and complexities of the project. The more complex the project, the more time you will have to spend on each finding, instead of trying to summarize them all together.

A. *Project Summary > Findings*

If you are writing about a fairly simple project, the first part of your conclusion should briefly

summarize the entire project and its goals, followed by a sentence that describes the overall results. Then, explain each finding in a little more detail. Finally, suggest the overall significance of the project and what this might mean to future researchers.

B. *Most Important > Least Important*

For a more complex project, you could start by summarizing your most important finding first, then move on to lesser findings. Finally, step back and examine the bigger picture.

C. *Problem > Answer*

If your project sought to answer a question, first remind the reader what the problem was, then summarize the answer you discovered. Next, review briefly how you reached that answer. Finally, discuss why it was important to answer that specific question

IV. SAMPLE CONCLUSION

The following sample conclusion uses the *Project Summary > Findings* structure [1]:

This report has discussed the development of a temperature measurement and display system. The objectives of this lab were to develop the necessary hardware and software to have the HC11 measure temperature and indicate whether that temperature fell outside of prescribed limits. [*project summary and goals*] Both objectives were met. [*overall results*] By keeping track of the measured temperature, the HC11 was able to control an LED temperature display. [*most important finding*] Also, if the temperature became very cold or hot, the HC11 sent an alarm message to a host PC terminal. [*less important finding*]

This lab introduced us to the important topics of A/D conversion and serial communications. [*significance of project*] In the lab, an A/D converter allowed us access to analog inputs of temperature from a remote computer. Besides temperature measurement, A/D converters have many applications in automatic control systems and factory automation. For example, in an electric motor drive, the phase currents and flux are continually measured by using scaling circuitry and an A/D converter input to a microprocessor. [*larger significance of project*]

REFERENCES

- [1] M. Alley, L. Crowley, J. Donnell, C. Moore. Virginia Tech. (2006, Aug). [Online]. Writing Guidelines for Engineering Students: Laboratory Reports: Conclusion. Available: <http://www.writing.eng.vt.edu/> September 14, 2006 [date accessed].