

Report guidelines

Pages should be numbered except for the Title Page. Reports should contain the following sections:

- Title Page
- Executive Summary
- Table of Contents
- Introduction
- Theoretical Solution
- Conclusions
- References
- Appendix

Title Page

The title page must contain the name of the project, the course number, your name, your student ID number and the date of submission.

Executive Summary- *In case the reader goes no further*

Summarize the main results for the reader. The executive summary should not exceed one page. It should include a brief description of the project and a summary of the results or conclusion. Explain the purpose and scope of your Project Report very briefly in this section. It is nontechnical in nature and is intended for reading by management who wants to know what was accomplished, not how. The executive summary should be written after you have finished the main report. Combining the introduction and conclusion sections make a good basis for an executive summary. The executive summary is usually placed on its own page.

Table of Contents

The table of contents cites the major sections of the report. For example:

Executive Summary.....	1
Introduction.....	3
Theoretical Solution.....	5
Conclusions.....	10
References.....	13
Appendix.....	14

Note that the Theoretical Solution section may have sub-sections. These should also be cited in the table of contents. Do not cite the Table of Contents in the Table of Contents.

Introduction- *What is to be done and why*

The introduction states the purpose of the project. Summarize the purpose of your project in one or two sentences: “The purpose of this project was to develop an effective means of solving problem ABC by designing device XYZ.” Your purpose statement is simply an expansion of your title into sentence format.

Theoretical Solution- *Background and discussion of solution*

This section presents the design itself, the theory behind the design, the problems encountered (or anticipated) in producing the design, how those problems were (or could be) overcome, and the results of any tests on the design. Discuss the incremental design approach that was used (i.e. the milestones). Describe precisely how the user is to interact with the system. Specify what the user input to the system will be and what the desired system response will be. Provide technical background information needed by the reader. Give a detailed discussion of system input that is provided by any external device(s) to the system. Provide the results of research or experimentation that was done. Include timing diagrams or oscilloscope traces to aid your discussion. Discuss any subsystems of the microcontroller that were used and the reasons for their use in the project. Explain the purpose of any external hardware that must be added to the system and include wiring diagrams. Give a detailed discussion of the design strategy used. Provide any calculations that are needed in your solution. Include flowcharts that layout the solution to the problem. Discuss your use of interrupts.

Conclusions- *Sum it up*

The "Conclusions" section summarizes the design and testing work completed and assesses how well the design meets the objectives presented in the "Introduction." Note that if the design does not meet the objectives, you should analyze why the design did not succeed and what could be modified to make the design a success. Besides summarizing the work and analyzing whether the objectives were met, the "Conclusions" section also gives a future perspective for how the design will be used in the future.

References

Your project usually requires research to obtain background information for your project. You must always cite references for information used in your project. The following are sample references.

Here is an example of a book as a reference:

Okuda, Michael, and Denise Okuda.

Star Trek Chronology: The History of the Future. New York: Pocket, 1993.

Here is an example of a journal article as a reference:

Wilcox, Rhonda V. "Shifting Roles and Synthetic Women in Star

Trek: The Next Generation." *Studies in Popular Culture* 13.2 (1991):5365.

Here is an example of a website article reference:

Lynch, Tim. "DSN Trials and Tribbleations Review."

Psi Phi: Bradley's Science Fiction Club. 1996. Bradley University. 8 Oct. 1997.

<<http://www.bradley.edu/campusorg/psiphi/DS9/ep/503r.html>>.

I obtained these examples and some of the content of this document from:

Author unknown. "Engineering Report Formats"

http://evan.lemley.org/courses/engr_report_format_spring_2005.pdf

Appendix

One type of appendix that appears in design reports presents information that is too detailed to be placed into the report's text. For example, if you had a long table giving voltage-current measurements for an RLC circuit, you might place this tabular information in an appendix and include a graph of the data in the report's text. The appendix should contain the code used to implement the design. *Any sections of code needed to aid the discussion of the design should be placed in the report's main body to make it easier to reference.* The code must be documented properly.