Purpose: The purpose of this report is to present final, complete documentation describing the development, implementation, testing and operation of the product/prototype which has been developed under "contract" with the "sponsor."

I. Title Page

Include title of project, project engineer (that’s you), project sponsor, project supervisor, company name, date and some indication that this is a final project report.

II. Abstract

Should simply and concisely tell what the report is about.

III. Overview

Introduce the reader to your project and the need that it satisfies. If necessary, discuss enough theory so that a person with a technical background will be able to understand your project.

IV. Project Definition

State the goals you have achieved.

V. Project Objectives

Include complete and accurate design specifications of the "product." (Final product specifications may be included as an appendix, however, the design specifications must be discussed here.) List all constraints and limitations, including any standards which have been applied and met.

VI. Implementation

Describe in detail the manner in which the project has been implemented. Include, as appropriate:

A. System Structure
   1. Hardware block diagram – show functional modules and describe the operation of each.
   2. Software structure chart – document and describe the overall plan of how the software has been structured.

B. Hardware Description
   1. Functional module schematic diagrams – a detailed circuit diagram for each functional module indicating inputs and outputs, along with a complete description of circuit operation.
   2. Functional module timing diagram (if necessary) – provide timing diagrams showing the relationship between key signals.
C. Software Description
   1. Module algorithms – describe each module algorithm using a structure chart, flowchart or pseudo-code design language.
   2. Module software listing – include a program listing that is internally documented with comments explaining each module.

VII. Evaluation

Give clear and complete discussion of test procedures which were used to evaluate system performance and to confirm that design specifications have been met. Include actual test results. Provide a concise performance analysis which compares test results with product specifications. Include appropriate comments explaining how you considered the following issues in carrying out your design: safety, standards, reliability, sustainability, manufacturability, economics.

VIII. Conclusions

Interpret your results; what does it all mean? Was your design project successful? Does the product work as intended?

IX. Recommendations

Where to go next? Any suggestions for improving the product?

X. References

List all documents and resources related to the project. Use a standard format (see any IEEE publication and/or the course text for example format). At least five (5) sources must be listed.

XI. Acknowledgments (optional; but be certain to acknowledge any companies and/or individuals who provided sample parts, for example; it is also good practice to acknowledge those who may have provided valuable technical guidance)

Appendixes (as appropriate)

A. User’s Manual
   1. Installation procedure
   2. Operating instructions
   3. Troubleshooting procedures
B. Component price and source list (p. 186)¹
C. Component layout diagram (p. 78)
D. Hardware block diagram (p.85)
E. Principal component data sheets
F. Bar chart of the tasks performed and the time spent on each. (p. 9, 67, 98, etc.)
G. A complete circuit diagram (p. 78)
H. Software design/description charts (p. 129)
I. Program listing(s)