APPENDIX 1a — Title Page of Project Report

« PROJECT TITLE »

Submitted by
« Student Name »

Department of Electrical & Computer Engineering

In partial fulfillment of the
requirements for the Degree of
Bachelor of Engineering
National University of Singapore

APPENDIX 1b — Abstract of Project Report

ABSTRACT

« The abstract should be short, generally within about 2 paragraphs (about 250 words in total). The abstract should contain the essence of the project, emphasizing the objective, the approach adopted or methodology and the important results obtained. »

APPENDIX 1c — Acknowledgment Page in Project Report

ACKNOWLEDGMENTS

« Give acknowledgment to any advisory or financial assistance received in the course of your work. »

APPENDIX 1d — Table of Contents of Project Report

CONTENTS

APPENDIX 1e — List of Figures in Project Report

LIST OF FIGURES

APPENDIX 1f — List of Tables in Project Report

LIST OF TABLES

APPENDIX 1g — List of Symbols in Project Report

Note that only important symbols need to be included in this list.

LIST OF SYMBOLS AND ABBREVIATIONS

« Symbol 1» « *Symbol Description* »

« Symbol 1» « *Symbol Description* »

… … …

"*abbreviation 1"* « *Expansion* »

"*abbreviation 2"* « *Expansion* »

APPENDIX 1h — Main Text in Project Report

The following should roughly be the structure of the thesis. Note that these are just guidelines, not rules.

- ***Introduction:*** *Most reports start with an introduction chapter. This chapter should answer the following questions (not necessarily in that order, but what is given below is a logical order). After title/abstract, introduction and conclusions are the two mainly read parts of a report.*
    - *What is the setting of the problem? This is, in other words, the background.*
    - *What exactly is the problem you are trying to solve? What is the objective?*
    - *Why is the problem important to solve? This is the motivation. In some cases, it may be implicit in the background, or the problem statement itself.*
    - *Is the problem still unsolved? The constitutes the literature review part.*
    - *How have you solved the problem? Here you state the essence of your approach. This is of course expanded upon later, but it must be stated explicitly here.*
    - *What are the conditions under which your solution is applicable? This is a statement of assumptions.*
    - *What are the main results? You have to present the main summary of the results here.*
    - *What is the summary of your contributions? This in some cases may be implicit in the rest of the introduction. Sometimes it helps to state contributions explicitly.*
    - *How is the rest of the report organized? Here you include a paragraph on the flow of ideas in the rest of the report.*

  The introduction is nothing but a shorter version of the rest of the report, and in many cases the rest of the report can also have the same flow. Think of the rest of the report as an expansion of some of the points in the introduction. Which of the above bullets are expanded into separate sections (perhaps even multiple sections) depends very much on the problem.

- ***Background:*** *This is expanded upon into a separate section if there is sufficient background which the general reader must understand before knowing the details of your work.*

- ***Literature Review :*** *It is common to have this as a separate section or chapter, discussing related work that have been performed by other students or researchers. Here, you must try to think of the comparison of your work with other work. For instance, you may compare in terms of functionality, in terms of performance, and/or in terms of approach.*

- ***Technical section:*** *The main body of the report may be divided into multiple chapters as the case may be. You may have different chapters which delve into different aspects of the problem.*

  The technical section is the most work-specific, and hence is the least described here. However, it makes sense to mention the following main points:

  - *Outlines/flow: For sections which may be huge, with many subsections, it is appropriate to have a rough outline of the section at the beginning of that section. Make sure that the flow is maintained as the reader goes from one section to another. There should be no abrupt jumps in ideas.*
  - *Use of figures: The cliche "a picture is worth a thousand words" is appropriate here. Spend time thinking about appropriate illustrations. Wherever necessary, explain all aspects of a figure (ideally, this should be easy), and do not leave the reader wondering as to what the connection between the figure and the text is. All illustrations (figures, tables, etc.) should be explicitly refered to in the text, at least once, by its figure or table number. Each illustration should also be given an appropriate caption or description. In general, the table caption should be placed at the top of the table while the figure caption should be placed below the figure.*
  - *Terminology: Define each term/symbol before you use it, or right after its first use. Stick to a common terminology throughout the report.*

- ***Results:*** *This is part of the set of technical sections, and is usually a separate section for experimental/design papers. You have to answer the following questions in this section:*
  - *What aspects of your system or algorithm are you trying to evaluate? That is, what are the questions you will seek to answer through the evaluations?*
  - *Why are you trying to evaluate the above aspects?*
  - *What are the cases of comparison? If you have proposed an algorithm or a design, what do you compare it with?*
  - *What are the performance metrics? Why?*
  - *What are the parameters under study?*
  - *What is the experimental setup? Explain the choice of every parameter value (range) carefully.*
  - *What are the results?*
  - *Finally, why do the results look the way they do?*

  The results are usually presented as tables and graphs. In explaining tables and graphs, you have to explain them as completely as possible. Identify trends in the data. Does the data prove what you want to establish? In what cases are the results explainable, and in what cases unexplainable if any?

  While describing a table, you have to describe every row/column. And similarly while describing a graph, you have to describe the x/y axes. If necessary, you have to consider the use of log-axes.

  If you are presenting a lot of results, it may be useful to summarize the main take-away points from all the data in a separate sub-section at the end (or sometimes even at the beginning) of the results section.

- ***Future work:*** *This section in some cases is combined along with the "conclusions" section. Here you state aspects of the problem you have not considered and possibilities for further extensions.*

- ***Conclusions:*** *Readers usually read the title, abstract, introduction, and conclusions. In that sense, this section is quite important. You have to state concisely the main take-away points from your work. How has the reader become smarter, or how has the world become a better place because of your work?*

Each of the above sections should be organized into chapters which start with the following :

« CHAPTER NUMBER »

« CHAPTER TITLE»

<< Body of text related to each chapter>>

Within the chapter, you can have sections and sub-sections depending on what is relevant.

The author must always bear in mind the reader when these chapters are written so that reader can understand the work that was carried out.

If a figure is given, it must always have a figure number and a caption. All figures must be referred to in the text, at least once by its figure number, and must be explained clearly. Likewise for all tables.

If graphs are used, all graphs must have axes which are clearly marked. They must also be referenced in the text and explained. Each graph should preferably be labelled as a figure with the appropriate figure number and caption.

Each chapter must lead to the next chapter in a logical manner.

« Page No »

APPENDIX 1i — References Quoted in Project Report

All references quoted in the report should be listed down in the manner and style indicated below and numbered sequentially in the order as they appear in the main text. However, the list should not contain any entry that has not been quoted anywhere in the report.

One convenient way to quote a reference is to include the reference number in square brackets. For example, "More details on the instruction formats of the processor can be found in the Processor Instruction Manual [7] …".

Each listed reference should contain complete information for the reader to easily search for it, should there be a need for this. A consistent format should be adopted for each type of reference in the reference list. Examples of (1) a journal reference, (2) an article or chapter in a book compilation or conference proceedings, (3) a book reference, and (4) a thesis reference are shown below.

REFERENCES

[1] Author(s) name(s), "Article Title", *Journal Title* **volume #**, starting page-ending page (year of publication).

[2] Author(s) name(s), "Article Title" *in* "Book Title," name of editor, ed., Publisher, City, starting page-ending page if applicable (year of publication).

[3] Author(s) name(s), "Book Title", Publisher, City, starting page-ending page if applicable (year of publication).

[4] Author's name, "Thesis Title", name of university (year of publication).

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