Final Year Project Report Guide

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1 Introduction

This guide is written to guide you (the student) on the matter of writing your final year project report. It recommends a structure and guidance on some points of grammar and style expected of a good academic and or professional document. It may be that the recommendations herein do not fit your project well. In which case, with the permission and guidance of your supervisor you may diverge from the recommendations.

In general you follow the school guide on report writing [1] but qualified by the indications given in this document.

2 Overview

The following recommended layout aims to provide a problem-solution narrative in a sound academic style that presents defensible argument, with a clear context for your work. The aim is to produce a coherent account of a problem and the solution you reached but it is possible that your project followed a very iterative and incremental path. However, describing the meanderings of such a path should be saved for a discussion of the project and this has its own place in the later sections of your report.

3 Submission Process

The deadline for submission of the report is **1030 on Friday 22nd April 2016.** The report should be submitted online via Blackboard. More details about the submission process is available in the project handbook and on Blackboard.

4 Structure

The following sub-sections describe the recommended parts of the report in the order they should appear. You may well wish to sub-divide the sections in the interests of maximising the clarity of your report. Despite referring to the structure as recommended, and allowing for supervisor-approved variations, some of the following sections are essential and are expected by our external examiners. Please read the following text carefully and ask your supervisor if you are in any doubt. To summarise the following sections, the recommended high-level structure is as follows:

- Title Page
- Abstract
- Acknowledgements
- Table of Contents
- Glossary of Terms and Abbreviations
- Introduction
- Problem Articulation / Technical Specification
- Literature Review
- The Solution Approach

- Implementation
- Testing: Verification and Validation
- Discussion
- Conclusion
- Project Commentary
- Social, Legal, Health & Safety and Ethical Issues
- Reflection
- Appendices

4.1 Title page

The first page of your report should be a title page that includes the following information: project title, project ID, supervisor name, module code, your name, your student number, and the date of submission.

4.2 Abstract

Here you create a summary of the content of your report. Making clear the subject matter, the problem, solution and headline results. An abstract should not normally be longer than about 200 words, and in most cases should be finalised last when the main content of your report is complete.

4.3 Acknowledgements

Here you acknowledge the people who have been notable assistance to you throughout the journey of the project.

4.4 Table of Contents

Here you list the headings (levels 1 and 2) of your report. With correct use of formatting, most word processing packages such as Word will auto-create this table for you.

4.5 Glossary of Terms and Abbreviations

Here you list and explain all special terms, acronyms and abbreviations that will appear in the report.

4.6 Introduction

Here you introduce your report. Introduce the problem you are addressing and its context of background and environment. Stick to simple headline language. You should be able to draw on the content of the Project Initiation Document (PID) written at the beginning of the year. Detail and rigour will follow in subsequent sections. Here your aim should be to ease your reader into the subject matter and set their expectations. You may also include personal observations about your motivation. Further you may include a brief overview of the remainder of the content of the sections of this document; such an overview should be a small part of the introduction.

4.7 Problem Articulation & Technical Specification

Here you must provide a detailed description of the problem being addressed. This should include a problem statement and description of the context/environment of the problem along with the key stakeholders and their concerns. The problem statement should be succinct and should establish the criteria by which the problem would be validated and accepted as being adequately solved (ie acceptance requirements). A technical specification may be developed against which a range of possible solutions, including the one you implement, can be considered later in your report. Again the PID content should help you when composing this section.

You would include an analysis of the situation-as-is. In some cases this may be very simple. In others with socio-technical system contexts it could be complex and require system/architecture/environment representations (e.g. in UML, SysML, ArchiMate or some other means suitable to your domain). You would also include a vision of the situation-to-be where the problem is adequately solved. Again this might require complex representations.

4.8 Literature Review

The literature review is an essential component of your project report. You should discuss the existing literature that is relevant to your project with full and proper referencing. You should aim to refer to a range of material including academic papers, text books, articles and existing product descriptions. It should be clear to the reader why the literature you identify is relevant and how you have incorporated the learnings from your review into your project. For example, you may have made a number of project decisions based on your review of the literature and these decisions should be described. The literature review should also lead to the creation of a number of possible solutions to your problem articulation and technical specification.

4.9 The Solution Approach

Here you should identify and evaluate the solution options against your problem statement / technical specification and make a reasoned choice of your chosen solution approach. Why did you do what you did? Conclude with a succinct definition of your solution approach and criteria by which the solution would be accepted as adequately verified. It is very likely that you will add further reference material in this section.

4.10 Implementation

Here you describe the detailed design of your solution and the details of the actual implementation. It may be appropriate to discuss aspects of design or implementation that were particularly problematic and / or novel. This section may well be one of the largest in your report and the exact contents will be unique to your project and so there are no general guidelines. Use of several sub-sections here is appropriate.

4.11 Testing: Verification and Validation

Here you explain your approach to testing and show your results. Testing should be a directed process and so there should be some discussion of why you have done the tests you have and why they are appropriate to the validation of your problem solution. You should also consider the limits to your presented verification and validation.

4.12 Discussion

The discussion section follows on naturally from the results presented in the previous section. The discussion is usually substantial and is where you discuss your test results in detail, and their implications, and also potentially make links to relevant previous work. Analyse the success of your solution.

4.13 Conclusion

Briefly restate the project objectives and then make straightforward conclusions about your project work and results. What have been the key outcomes? You can suggest future work that logically stems from your work.

4.14 Project Commentary

Here you should discuss the course of your project in relation to the plan in the PID.

You should also note significant events/ incidents/issues and how you addressed them. If your project followed an iterative-incremental pattern (eg agile) it is likely that the problem definition and solution emerged as a meandering progression through the weeks; this is the place to account for such meanderings.

4.15 Social, Legal, Health & Safety and Ethical Issues

The final report should include a section addressing the Social and Legal, Health and Safety and Ethical issues initially outlined in the project initiation document.

4.16 Reflection

Here you reflect on how the journey of the project has contributed to your personal growth.

4.17 References

You should strive to use evidence-based writing and argument. The literature survey supports this approach but you will also need to refer to references, best practices and other externally sourced material in other part of your report. Take care to use a recognised system of citation and you are directed again to the school guide on report writing [1]. Please note that poor referencing can be considered to be a form of plagiarism and poor academic practice.

4.18 Appendices

The appendices allow you to add reference material and detail that support the report but if included would swamp it with detail. Things in the appendix may be referred to in the body of the report. However, the reader should not normally need to refer to the appendices whilst reading the main body of your report. Arguments, discussion and descriptions in the main body of your report should be supported by sufficient content also in the main body of the report.

4.18.1 Appendix 1: Project Management

Here you should put key project material. Mandate, PID, meeting summaries, plan summary.

5 General Notes

The suggested word limit for the final report for those on SE3IP11 and SE3GP11 is 20,000 words, excluding references and appendices. Given a 12 point font with single line spacing, 20,000 words as continuous text covers about 40 A4 pages. Of course, with headings and figures included as well, the page count for this maximum word count would be significantly higher. Please note that this is a suggested word limit and not a mandated target. Successful and high scoring reports have been written with both more and less words than this limit. Those students on SE4RP11 are advised to seek further personalised guidance from their supervisors about the scope and scale of their project reports.

Some students have a tendency to write in a grammar based on the personal pronoun “I”. This is not good practice in academic writing where objectivity about problem and solution are needed. However it may well be appropriate in the project commentary and reflection sections.

Avoid repetition. There is a proper place for each bit of content. Repeating something in different sections, possibly with subtle changes, unsettles the reader and is not good academic style as it obfuscates the argument running through your report: everything has its place.

Avoid verbiage (unnecessary words). Take pity on the reader. Choose words carefully so that they express what you need to say efficiently.

Make sure you express what you mean; do not leave it to the reader to guess your meaning.

Ensure that you do not plagiarize other people’s work. All work that you take from others should be clearly acknowledged. Usually through a reference citation.

6 References

[1] Style guide for technical reports and academic papers, Dr. V. F. Ruiz, The School of Systems Engineering, http://www.reading.ac.uk/scarp/resources/School_Style_Guide_V4.0.pdf (visited 22 January 2015)