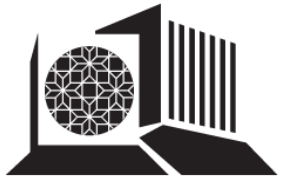

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SDP REPORT WRITING

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CONTENT

- Introduction
- Universal aspects of all reports
- Gathering material
- Structuring the project report
  - Main body
  - Supporting material
- Writing the project report

INTRODUCTION

- The purpose of an SDP report serves as a means of communicating your work to others
  - ✓ It should clearly describe the technical work, why it was done, results obtained and implications of those results
- A well-written report allows the examiner/reader to quickly understand what has been accomplished
- The key to a well-written report is **organization**

UNIVERSAL ASPECTS OF ALL REPORTS

- The report should be written in a passive impersonal style
- Take exceptional care to spell correctly
- All diagrams must be neatly presented and should be computer generated (e.g. Microsoft Visio)
- Any information in the report that is directly quoted or paraphrased from a source must be cited
- Any reference material derived from the web must come from credible and documentable sources
  - ✓ Wikipedia is **NOT** a credible reference
- All pages of the report must include the page number

UNIVERSAL ASPECTS OF ALL REPORTS (CONT'D)

- Textual references of figures and tables:
  - ✓ Number and title all figures and tables
  - ✓ Introduce figures and tables in your text in logical places and in logical ways
  - ✓ Spell out the point that you want your reader to get from your figure or table

  Example

  As Figure 1 indicates, the proposed system consists of three main parts…

GATHERING MATERIAL

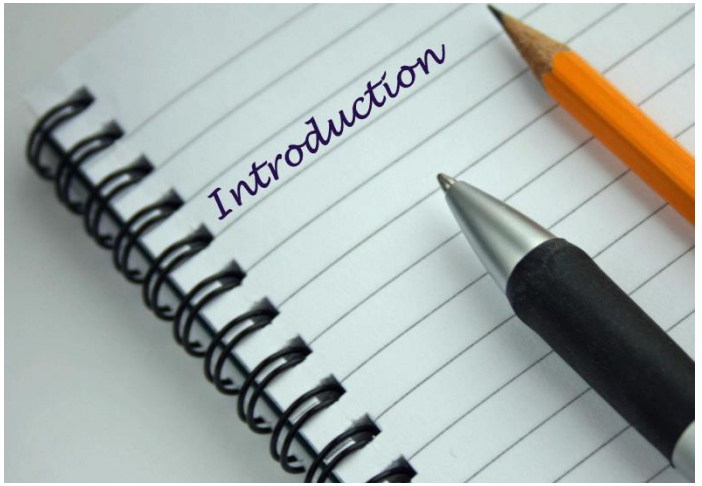
- Most of the necessary material will consist of:
  - ✓ Your own ideas and experience gained while working on the project
  - ✓ Your approach to solving the problem
  - ✓ References to various resources
- Keep a notebook handy and record all relevant information:
  - ✓ References (e.g. papers, books, websites,…etc.)
  - ✓ Lessons learned
  - ✓ Notes from meetings with your supervisor(s), potential end-users, technical experts,…etc.

STRUCTURING THE PROJECT REPORT

- All project reports consist of a main body surrounded by other information that support it in various ways
  - ✓ Presented in appropriate formats
  - ✓ Some of these are mandatory, others are optional

STRUCTURING THE PROJECT REPORT – MAIN BODY

1. **Introduction** – Tells the reader what the project is about. It should include:
   - ✓ Brief statement about the subject and its importance
   - ✓ Justification for dealing with the subject
   - ✓ Aims and objectives of the project
   - ✓ Methods employed to achieve these objectives
   - ✓ The structure of the remaining parts of the report



The introduction is the **first impression** of you – so make it a good one

STRUCTURING THE PROJECT REPORT – MAIN BODY (CONT'D)

2. **Literature Review** – Provides the readers with the information they will need to know in order to fully understand and appreciate the rest of the report . It should:

- ✓ Explain why the project is addressing the problem
- ✓ Indicate an awareness of other work relevant to this problem
- ✓ Show the reader that students have read, and have a good grasp of, the main published work concerning the subject area of the project work

STRUCTURING THE PROJECT REPORT – MAIN BODY (CONT'D)

3. **Design Constraints and Standards** – Constraints are restrictions on the project or design and **must be identified during the early stages of the project**. Examples:
   - ✓ Time constraint: must be completed on a certain time
   - ✓ Cost constraint: must be completed with a specific budget
   - ✓ Technical constraints: limits of technology or available technology

- International/national standards related to the design must also be identified
- The designed system should also be evaluated in terms of compliance with the constraints and standards in the 'Results and Evaluation' Section

STRUCTURING THE PROJECT REPORT – MAIN BODY (CONT'D)

4. **Design** – The design description part will be the longest and most important part in the body of your report
   - ✓ Use subsections to guide the reader through this section as it will be long and complex
   - ✓ Identify possible solutions and analyze them
   - ✓ Start with a block diagram that shows the major functions or layout of the selected solution
   - ✓ Use subsections to drill down into each block
   - ✓ Use additional block diagrams as needed
   - ✓ Describe how the design is used

STRUCTURING THE PROJECT REPORT – MAIN BODY (CONT'D)

5. **Implementation** – The process of converting the design into something real
   - ✓ Give details on how each block in your design has been implemented
   - ✓ Justify the choice of components, software tools, communication protocols, etc.
   - ✓ Do not attempt to describe all the code in the system, and do not include large pieces of code in this section
   - ✓ Make use of pseudo codes and flowcharts
   - ✓ Describe any problems that may have arisen during implementation and how you dealt with them

STRUCTURING THE PROJECT REPORT – MAIN BODY (CONT'D)

6. **Results and Evaluation** – Should describe to what extent the goals have been achieved

- ✓ Describe how you demonstrated that the systems works as intended or not
- ✓ Include summaries of the results of all critical tests that were carried out
- ✓ Describe the reasoning behind the tests to evaluate the results
- ✓ Critically evaluate your results, describing its strengths and weaknesses
- ✓ Evaluated in terms of compliance with the design constraints and standards
- ✓ Make the best use of methods for expressing results in a useful and informative manner (e.g. graphs, charts, tables, etc.)

STRUCTURING THE PROJECT REPORT – MAIN BODY (CONT'D)

7. **Future work** – This section is for expressing your unrealized ideas. It is a way of:
   - ✓ Recording that 'I have thought about this'
   - ✓ Stating what could have been done if only time allows it

A starting point for someone else to continue the work

STRUCTURING THE PROJECT REPORT – MAIN BODY (CONT'D)

8. Conclusions – Should be a summary of the aims of the project and a restatement of its main results

- ✓ Do not introduce new material
- ✓ Briefly summarize, combine and reiterate the main points made in the main body of the report
- ✓ Present opinions based on them

Be honest and objective in your conclusions

STRUCTURING THE PROJECT REPORT – SUPPORTING MATERIAL

Title page – should include:

- ✓ The title of the project
- ✓ The degree title
- ✓ The name of the course
- ✓ The names of students
- ✓ The name(s) of the supervisor(s)
- ✓ Month and year of submission of the report

Declaration Statement – a signed statement that the project and report are the students' own work except where specifically referenced

STRUCTURING THE PROJECT REPORT – SUPPORTING MATERIAL (CONT'D)

Abstract Page – should:

- ✓ Be no longer than 400 words
- ✓ Give a summary of what the project is about and the outcome of the work

Acknowledgment – includes thanks to all people and organizations who have helped

Table of Content – gives a view of the detailed structure of the report, by giving section and subsection headings and associated pages

List of Figures/Tables – lists all figures and tables in the report with their page numbers

Glossary – consists of a list of all specialist vocabulary or acronyms with a brief explanation of their meanings

STRUCTURING THE PROJECT REPORT – SUPPORTING MATERIAL (CONT'D)

References*

- ✓ Cited evidence in the main body of your report must be referenced
- ✓ References should be in an identifiable referencing style
- ✓ IEEE referencing style is the style used in the Department of Electrical Engineering

- Don't neglect references – you will lose marks if you don't reference your sources properly

* Check the slides from 'Plagiarism and Referencing' Seminar for more details about referencing and the IEEE referencing style

STRUCTURING THE PROJECT REPORT – SUPPORTING MATERIAL (CONT'D)

Appendices – Appendices can be included if relevant, this could be:

- ✓ Extensive technical details or mathematical proofs, etc.
- ✓ Lengthy tables of data
- ✓ Copies of surveys
- ✓ Other documents you have written (e.g. user manuals, technical manuals)

- The appendices should not contain any of the source code for your software (will be submitted separately)
- Should be headed by letters in alphabetical order (i.e. Appendix A, Appendix B, etc.)

WRITING THE PROJECT REPORT

- Effective writing requires sustained concentration over long periods of time
- There are some general rules you can follow that may make the task easier and improve the writing quality:
  - ✓ Keep potential readership in mind
  - ✓ Use sections and sub-sections to structure the work to provide breaks for the reader
  - ✓ Include only what is necessary
  - ✓ Follow appropriate academic and professional stylistic conventions
  - ✓ Avoid long sentences
  - ✓ Write as you go along
  - ✓ Leave time for proof-reading and corrections

WRITING THE PROJECT REPORT

– POTENTIAL READERSHIP

- keep your potential readers in mind and repeatedly review what you have written
  - ✓ Put yourself in their place
  - ✓ Do not explain things which are common knowledge

Potential readers

- ✓ Supervisor(s)
- ✓ Internal examiners
- ✓ External examiner
- ✓ Industrial mentor(s)
- ✓ Future students and others interested in the subject

WRITING THE PROJECT REPORT

– SECTIONS AND SUBSECTIONS

- The main body of the project report should be divided up into sections/chapter
- Each section/chapter should, if necessary, be divided up into subsections
  - ✓ Start each section and subsection with a summary of the rest of the material in it
  - ✓ Each major section (or Chapter) should begin on a new page
  - ✓ All sections and subsections should be numbered and headed

WRITING THE PROJECT REPORT

– STYLISTIC CONVENTIONS

- There are many stylistic conventions related to technical writing that you should follow. For example:
  - ✓ Do not use shortened forms such as **“don’t”** for **“do not”**
  - ✓ Avoid colloquialisms and slang words
  - ✓ Divide your writing up into paragraphs
  - ✓ Link paragraphs to make smooth transition
  - ✓ Avoid long sentences
  - ✓ Be careful with words whose common misspelling is a correct spelling of a different word (e.g. affect/effect, loose/lose)

FURTHER INFORMATION

1. “Senior Design Project Handbook”, Department of Electrical Engineering, Qatar University Available at: http://www.qu.edu.qa/engineering/electrical/senior_project/documents/Fall_2017/SDP_handbook_Fall_2017_v2.0.pdf
2. “A Short Guide to Writing Your Final Year Project Report or MSc Dissertation”, Cardiff University. Available at: https://www.cs.cf.ac.uk/PATS2/wiki/lib/exe/fetch.php?media=project-report.pdf
3. “Rules and Conventions for Academic Writing”, WordPress. Available at: https://drhazelhall.files.wordpress.com/2013/01/2013_hall_rules-conventions_ac_writing.pdf
4. A.J. Fisher, “How to Write a Project Report”, University of York. Available at: https://www.cs.york.ac.uk/projects/howtowrt.html