WEL COME

TECHNICAL REPORT WRITING

Short Technical Reports

- Types of Reports
- Proposals,
- progress reports,
- tour reports,
- completion report,
- investigation reports,
- feasibility studies,
- evaluation reports etc.

Note: the readers of the report are knowledgeable people.

They will search for the evidence that you understand the material and ideas you have presented.

- Therefore try to give information clearly and coherently.
- Organize your ideas carefully and express them coherently, also be precise and concise.

Components (format)

1. Title page
2. Abstract or summery
3. Introduction
4. Background
5. Discussion
6. Conclusion
7. Recommendations
8. Attachments

Title Page

- Essential information given here is
- Name of the report writer
- The title of the project/study and
- Date

- Choose effective title,
  (ensure it is informative but reasonably short)
- Avoid ornamental or misleading titles

Abstract or Summary

- Abstract/summary summarizes the report (presented in 100-200 words)

Hint: summarize each component in one sentence.

Emphasize the objective and result.

(avoid to copy paragraphs from the report)

Abstract should be precise and specific.

Introduction

The introduction of a technical report identifies the subject, purpose (objective) and the plan of development.

State the subject clearly and concisely (usually in one sentences called as thesis or purpose sentence)

Give: background information,

Define the terms used in stating the subject
provide the background theory or history

Note: Don’t fill the place and give sweeping statements.

Background

This section is included in the report if the introduction requires a large amount of information.

It includes

- Review of previous research
- Formulas the reader need to understand the problem

DISCUSSION

It is the most important part of a report.

It can be presented in many forms and can have many subheadings.

Basic components

- Method
- Findings
- Evaluation or analysis

Conclusion

- Knowledge outcome

Explain in terms of preceding discussion

Recommendations

- The actions the report suggests
- Also, gives plans for further research

(in professional writing this section is given just after the introduction)

Attachments

Includes

Appendixes

Appendixes include

- Raw data
- Calculations
- Graphs
- Other quantitative material that were the part of research

In private sector profile of the company/professionals involved in the project also appear as appendices.

Writing Reports

- Purpose of report writing
  - A report is written to be read
  - Written for sake of writing has no value

- Top-down Approach
  - First write section level outline
  - Subsection level outline, and
  - Paragraph level outline

At paragraph level

Think of using figures, tables and graphs

Terminology – names of various protocol/ algorithms/ steps

Refine your writing.

Structure of a Report (rough structure)

The title

- Make attract people to read
- It should reflect what u have done and should be eye-catchy

The abstract

- Should be short paragraph (generally 250 words)
- Should contain the essence of the report

And contain

- Objective
- Motivation
- Main point of methodology
- Essential difference from previous work
- Some significant results

Structure of a Report (rough structure)

- Introduction

(answers the questions)

- What is the setting of the problem? (background)
- What exactly is the problem you are trying to solve? (Problem statement)
- Why is the problem important to solve? (motivation)
- Is the problem unsolved? (statement of past related work)
- How have you solved the problem? (essence of approach)
- What are the main results? (main summary of the result)
- How is the rest of the report organized (flow of ideas)

Introduction is the shorter version of the report.

Structure of a Report (rough structure)

- Background
- Written/given if there is sufficient background (for understanding of the reader before knowing the details).
- Past related work
- Has a separate section
- You explain novelty in your work
- Think of dimensions of comparison with other works.

Placement of the related work

- Place it at the beginning of the report after introduction and background.
- If your work is entirely different from any past work then place it at the end of the report.

Structure of a Report (rough structure)

- Technical sections
- The report can be divided into multiple sections
- The organization is problem specific
- Separate sections may be for design methodology, experimental methodology or proving some facts

Necessary to mention

Outlines/flow

- Rough outline for a bigger section/containing subsections
- Maintain the flow
- No abrupt shift from one idea to another

Use of figures

"A picture is worth a thousand words".

Explain the aspects of the figure

Terminology

- Define each term/symbol
- Use common terminology throughout the report

(Contd….)

Structure of a Report (rough structure)

Results

- Use separate section for experimental/design papers
- Answers the following question

- What aspects of your system or algorithm you are trying to evaluate?/What are the questions you will seek to answer through the evaluations?
- Why are you trying to evaluate the above aspects?(if proposed an algorithm or design)
- What are the cases of comparison?
- what do compare it with?
- What are the performance matrix? Why?
- What are the parameters under study?
- What is the experimental set up?
- What are the results?
- Why do the results look the way they do?

Structure of a Report (rough structure)

- Future Work
  - In some cases combined with conclusions section
  - States problems you have not considered and possibilities for further extensions.
- Conclusions
  - States precisely the main take-away points from your work.

Thanks