

Engineering 100.250
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Formal Reports
Executive Summaries
Efficient Writing

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Final Reports

What to do and why

Review: Memos

What are the elements of a memo?

Review: Memos

They have certain features

- Heading
- Overview
 - Foreword
 - Summary
- Discussion

Your final report: putting it all together

Formal reports: what are they?

- Longer than memos
- Made with formal features
 - cover sheets
 - tables of contents
 - headings and subheadings in the text
 - visuals
 - appendices

Cover pages

- Serve the same purpose as a memo heading
- Have the same information (and more)
 - Report title
 - Recipients' names and titles
 - Authors' names and titles
 - Project dates
 - Date of preparation
 - Distribution list

Table of contents

- Lists all the parts of the report
- Titles
 - Subtitles
 - Page numbers

Table of contents

- Each part is titled
- Each part is numbered

Table of contents

- Number scheme in this class uses a decimal scheme with Arabic numerals

Decimal organization

- 1
- 1.1
- 1.2
- 1.2.1
- 1.2.2
- 2
- 2.1
- 2.2

Et Cetera

Notice anything?

1 HIGH LEVEL TITLE

1.2 Mid-Level Title

1.2.1 Low Level Title

Really Low Level Title

2 INSTALLATION

2.1 Introduction

2.2 Unpacking and Inspection

2.3 Preparation

2.3.1 *Mechanical*

2.3.2 *Electrical*

2.4 Cables

2.5 Accessories

Adapted From Mills, G. and Walter, J.
(1978). *Technical Writing, Fourth Edition.*
New York: Holt, Reinhart. P.384.

2.6 Fuses

Table of contents

- Helps the reader know what's in the report
- Serves as an outline of the report

Draw up the table of contents last

- All important headings are in the table as titles and subtitles
- No headings in table that are not in report
- Table can serve to tell you if anything is missing

None of this is difficult

- Just follow the examples
- Pay attention to detail

Appendices (or Appendixes): what are they?

Appendices (or Appendixes): materials that

- Would interrupt flow of report
- Are too long to include in body of report

Appendices may include:

- Data tables
- Graphs or visuals that must be of too large a scale to be put in the text

Any others?

Appendices are listed by letter, thus:

- A
- B
- C

List of references

- Is like a bibliography
- Contains an APA citation to every work or authority referred to or quoted in the text of the report

All of this stuff is in your table of contents

But in what order?

This order:

- Cover sheet
- Executive summary
- Table of contents
- Report
- List citations
- Appendix

Some examples and mock-ups

- Cover sheet
- Executive summary
- Table of contents
- Typical page

Appendix C: Comparison of Horsepower and Cost of Light Tractor Models

Model	Horsepower	Price in USD
3902	36	3,800
3903	36	4,800
405	32	3,800
405T	32	3,800
415	36	3,700
415T	36	3,700
425	36	3,800
425T	36	3,800
435	36	3,800
435T	36	3,800
445	36	3,800
445T	36	3,800
455	36	3,800
455T	36	3,800
465	36	3,800
465T	36	3,800
475	36	3,800
475T	36	3,800
485	36	3,800
485T	36	3,800
495	36	3,800
495T	36	3,800

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Foreign Models

Model	Horsepower	Price in USD
1000	88	1,200
1050	88	1,200
2100A	32	2,700
1050B	70	900
2075	70	1,200
2050	88	2,200
WECT5	88	4,800
111	88	4,900
Domestic	32	3,100

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Information in body of your report

- Introduction
 - Motivation/problem
 - Task
- **Sufficient** background
- Design description
 - Prototype
 - Finished product
 - Results of testing
 - Assessment of prototype
- Conclusion

What structure would this translate into?

Suggested report structure

1. Introduction (relevant background)
2. Design objectives, criteria and constraints
3. Design description
 - detailed features and benefits,
 - explanations of how your design meets the criteria,
 - major design decisions and tradeoffs
 - alternative designs considered and the reasons rejected
 - potential drawbacks to the design (including any refutation to these drawbacks)
4. Testing
5. Budget (not necessary for the final report *in this class*)
6. References
7. Appendices

Executive summary

Does for a formal report what the foreword and summary do for the memorandum

What's in a foreword and summary?

- Problem statement
- Task statement
- Purpose statement
- Results
- Conclusions/implications
- Recommendation (sometimes)

What's in an executive summary?

- Purpose statement
- Problem statement
- Task statement
- Description of your design
- Conclusions/implications
- Recommendation (sometimes)

Executive summary

Much like a foreword and summary: contains the same sort of info, but more of it

The key: contains the same sort of info, but more of it



https://openclipart.org/detail/61171/old-key-by-j_alves

What more is there? What do you choose?

- More background: *go from general to specific*
- More detail: *go from general to specific*

The executive summary will be longer than a foreword and summary

Ca. 10% of report's length

– But usually not longer than a page for a report of this length

NB: Sometimes the purpose statement will come first, as a separate sentence.

Conclusion: Formal Reports

- Longer than memos
- Have formal features
 - Cover pages
 - Executive summaries or abstracts
 - Tables of contents
 - Appendices and
 - Headings and subheadings in the text
 - May incorporate visuals

Conclusion: Executive Summaries

- Have much in common with the foreword and summary
- Are more detailed
 - (for example: state what you did as part of your task)
- Should be about 10% as long as the text
 - But no longer than a page.