Engineering 100.250
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

Decimal organization

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

Notice anything?

1 HIGH LEVEL TITLE
1.2 Mid-Level Title
1.2.1 Low Level Title
Really Low Level Title

Et Cetera
## 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

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

Appendices (or Appendixes): what are they?

None of this is difficult

Just follow the examples

Pay attention to detail

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:

1. Cover sheet
2. Executive summary
3. Table of contents
4. Report
5. List citations
6. Appendix

Some examples and mock-ups

- Cover sheet
- Executive summary
- Table of contents
- Typical page
What two things do we notice about this?
Information in body of your report

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

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

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.

Get ready for outlining!


http://mongolculture.blogspot.com/2006/12/mongol-archers-images.html
Huns
Menace and aid to the late Roman army until the rise of Attila.

Nomads-- Big Names
(Sarmatians)
Huns
Magyars
Mongols
Tatars
Manchus
Huns
Absorbed Sarmatian and German tribes into their state

Domestication of the horse
– Not clear when it was actually ridden—perhaps 1600BC.—
Perhaps earlier

Huns
Dissolved almost at once upon the death of Attila
So, 62 cards...

- Ca. 2 hours to generate them
- Ca. 5 hours to write about 5,400 words
- Ca. 2 hours to read and revise