Thesis projects
and reports
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Where to begin

Idea → Do the work → Write report

Idea → Write report → Do the work

Let the report feed your work!
(not the other way around)
Where to begin

- Start writing day 1!
- Mandatory events to make sure you do:
  - Day 1: Make a disposition of the whole report and discuss it with your reviewer
  - Mid course meeting: Focusing on what you have written so far (which should be plenty by then). Book a time for this now!
Swedish or English?

- English is recommended
  - Easier to find a reviewer
  - Wider audience for your thesis
  - No need to translate technical terms

- Swedish
  - if you think language quality would suffer otherwise
  - if your supervisor requires it
Who is the reader?

■ Consider who you're writing for!
  ● What can they be expected to know?
■ Be explicit and comprehensive!
  ● Don't take things for granted
■ Will your report make sense 10 years from now?
  ● Affects both when you refer to sources, and to where you can refer
Structure

- Title
- Abstract
  1. Introduction
  2. Background (optional)
  3. Body (several sections)
  ... 
  5. Related work (that is not part of introduction)
  6. Discussion (optional)
  7. Conclusions and future work
- References

If you need a glossary, insert it here
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Title

- The 'face' of your report
  - Maybe few people read your report, but many will read the title!
- You have 2 seconds to catch the reader's interest!
- Short
- Catchy
- True
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Abstract

- Written last!
- Sell your idea!
- Single paragraph, 100-200 words
- Come directly to the point!
  1. What's the problem
  2. How did you solve it
  3. What are the results
  4. Conclusion (what it means for the future)

- Make sure the abstract stands on its own!
  * The reader may not have access to the full report yet
  * No reference tags
  * Avoid acronyms
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Introduction

1. Describe the problem
   - Probably including some prior work but not necessarily all related work
   - If this grows too big, consider inserting a Background section after the Introduction

2. State your contributions
   - Perhaps as a bulleted list (optional)
   - For each contribution, refer to where in the report you go into more details, or finish with a short paragraph about the structure of the rest of the report
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Body

- Subject dependent. For example:
  - Theory → Method → Results
  - Requirements → Design → Implementation → Evaluation
  - Existing methods → Comparison → Suggestions
  - …
Body: When explaining things

- Do it top-down! (when possible)
- Intuition first, details later
  - Easier to understand the details
  - A reader who skips the details, gets something valuable anyway
- The order in which you discovered or did things, may not be the best order for the reader!
Body: When explaining things

- Justify your decisions!
- Describe also the alternatives!
  - How did you come up with them?
  - Why you did not choose them?
  (Some of them may of course be open for discussion later, in the Discussion or Future work sections)
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Related work

- Part of the introduction or after the body
  - After the body: easier to explain, shorter intro
  - Prior work ⊂ Related work

- Credit is not like money!
  - Giving credit to someone else does not take away from yours!
  - Failing to give credit, however, does!
    - If you claim an idea is yours when it isn't, you either did not know (bad), or you knew but pretended it was yours (very bad)
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  7. Conclusions and future work
- References
Conclusions and future work

- Summarize your contributions
  - Be honest!
  - Acknowledge weaknesses in your work
- Conclusions from the results
- Make sure that you live up to your promises in the introduction!
- Implications for the future
- No new information in this section!
Structure

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- Abstract
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  ...
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References

- Always refer to the literature when
  - you first introduce an established concept
  - you claim things for which there is no evidence in this report
  - you are quoting (including figures from other sources, which require a reference in the caption)

- Most common reference tag formats
  - Vancouver: [1] (most common in computer science)
  - Harvard: (Andersson, 2019)

- If you want to refer to a certain page, do so in the tag [1, p.17], not in the reference list!
References

- References in the list must be complete!
  - a source, not just a name and a title
- Refer to the publication, not to the web site where you found the paper! (good complement though)
  - Web links to publications should be to the publisher's web site, or via the DOI
- Avoid web references!
  - Often neither authoritative nor of high quality
  - Content may, and probably will, change
  - Imagine someone reading your report in 10 years
  - If a web site really is the best source, include:
    - date of access
    - a link to an independent archive (e.g. Wayback Machine)
Language

- Don't write as you talk! (or chat)
- Grammatically correct English, including ...
  - Articles ('the', 'a', etc)
  - Singular/plural dependencies (is/are, has/have and verbs with or without an 's')
- Be personal if you wish, but within reason!
  - Your reviewer decides what "within reason" means
  - Don't address the reader directly! ("you")
- Spell check!
- Have someone else proof read
- Spell out acronyms first time they are used
- Use figures!
The most common mistakes

- Forgetting who the reader is
- Taking too much for granted
- Poor reproducibility (lack of details)
- Weak relation between conclusion and introduction
- Not supporting your claims by references
- Unnecessary web references
- Incomplete references
  - Author and title is not sufficient
Good luck!