

CSCM10 Computer Science Project Research  
Methods  
Writing a Background Research Report

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① Details of Report

② Writing a Good Report

## ① Details of Report

## ② Writing a Good Report

# Roadmap To Project

- Friday 6 December 3:45 pm - submission of project selections.
- Before christmas: allocation of projects.
- Until end of your exams: Focus on passing exam and remaining coursework.
- After exam: contact project supervisor, arrange topic for report.
- Monday, 10 February 2020 (11:00 am). Deadline for report
- Before Easter Vacation (TBC): presentation on project.
- Wednesday 29 April 2020 (11:00 am) specification.
- After exam boards: official start of main part of the project.
- 30 Sept 2020 submission of project (unless you had resits)
- 15 Dec 2020 submission of project if you had resits.

# Report

- The first assignment will be a report on a topic related to your project and supporting your project.
  - Precise description can be found in the **assignment handout** on Blackboard.
- For instance, if your project is about electronic voting in the cryptocurrency Ethereum, the topic could be
  - electronic voting,
  - Ethereum,
  - cryptocurrencies,
  - Solidity (the programming language used for programming in Ethereum),
  - or similar topics.
- The report should **not** be a literature review over the **whole project** (that will happen in the program specification).

# Content of Report

- The report should at the beginning give a brief description of your project.
- Then it should present the chosen topic in detail.
- The report should discuss literature **related to your specific topic**.

# Report

- You should agree the precise topic with your project supervisor, who will be assigned to you between end of Semester 1 and beginning of Semester 2.
- The report contributes 25% of the mark for the module.
- Approximately 3000 words.
- Due Monday, 10 February 2020 (11:00 am).
- You will need to submit an electronic copy via Blackboard/Turnitin.
- In addition we will provide an email address (to be determined) where you can send your report as a backup.
  - That backup is to be used only in case of submission problems with blackboard.
- The assignment handout will provide precise rules regarding the format, filename of the submitted document and the subject line of the email.
  - We reserve the right to deduct marks in case of not observing those rules.

## 1 Details of Report

## 2 Writing a Good Report

Section 2 based on material by Liam O'Reilly



# Story Teller's Rule

- Step 1: Tell them what you will tell them.
- Step 2: Tell them.
- Step 3. Tell them what you told them.

# Main parts

A report should have

- A title page or a clearly worked out title,
- an abstract (optional),
- an introduction (Step 1),
- a body (Step 2),
- a conclusion (Step 3),
- a bibliography (also called references).

# Title Page or Title

- Should contain
  - the title of your document,
  - coursework reference (probably best: CSCM10 Report),
  - date of submission (for future referencing),
  - student number.
  - If you want you can provide your name.

# Abstract

- Can be on the title page, or put directly after the title,
- usually indented.
- Summarises in a few sentence what your document is about.
- Is a help for any reader who wants to decide whether to read it or not.

# Introduction

- Introduces main concepts in the report.
- Gives a motivation
  - When motivating, don't write why you are motivated, but write what could motivate **the reader** to read your document.
  - Keep a dry style in the motivation.
  - E.g. if motivating an essay on computer security, one could write something like

Computer crime has been rising sharply in recent years. The UK government estimates ([3], p. 50) that the annual cost of computer crime to businesses, has increased from XX billion pounds in 2007 to XX billion pounds in 2017. ...

- Briefly states what will come in each major section of the body.
- After reading this the reader
  - should be motivated to read your report,
  - should have a good idea what the report is about,
  - and what is to come.

# Body

- The body is where you present the bulk of the material.
- Should be logically structured (see below)

# Conclusion

- The report should at the end contain a **Conclusion Section** which
  - clearly states the conclusion(s) of the report (which should already have been presented in the body).
  - summarises the report
  - reminds the reader what they have read.
- The conclusion should introduce no new topics.
- It should remind the reader of what they have read,
- and reiterate any conclusions you have taken.

See Lecture on bibliographies.



# General Good Practises

- Write in full sentences.
- Report should be a self contained document.
- As the reader reads it they should understand the content without needing a question, task or other description.
- Write with precision.
- Give evidence, proofs, supporting information for your statements.
- Be self critical. It is positive to write about weaknesses of your approach.

# General Good Practises

- Use plenty of citations. Citations are positive since they
  - document proper scientific working.
  - allow the reader to check what you have been written
  - and allows the reader to identify other material which could be of interest to him/her.
- The style should be more dry scientific style, not like a magazine, no jargon, no slang.

# Use the Active Voice

- Avoid use of 1st person, i.e., don't do "I did ..."
- Use active voice:

No	Yes
I investigated ...	We investigated ...
Hence, I recommend to ...	Hence, we recommend to...
It can be seen that ...	We can see that ...
34 tests were run ...	We ran 34 tests ...
These properties were thought desirable.	We wanted to retain these properties.
It might be thought that this would be a type error.	You might think this would be a type error.

# Logical Structure

- Use sections, subsections (and even subsubsections) to structure your report.
- Example:
  1. Propositional Logic

Propositional logic uses atomic propositions . . . . Atomic propositions can be 'glued' together using the logical connectives: and, or, implies, and equivalence.

    - 1.1 Disjunction

...
    - 1.2 Negation

...
    - 1.3 Implication

**Definition** of implies  
...  
**Reduction of implication** to disjunction and negation.  
...
  2. Type Theory.

# Consistent Formatting

- Aim at uniform formatting.
- In MS Word you use for headings section heads such as “Heading 1”, “Heading 2”.
  - Allows to generate table of contents (e.g. for your dissertation).
  - Allows cross referencing.

- Figures should have a a caption, and should be referred to in the text.
- Usually they have numbers (for easier referencing).
- If a figure comes from some other source, you need to state clearly the source (“taken from [3]”).

- The purpose of footnotes  
(at least in Computer Science)  
is to provide a place for distracting text  
that is not part of the main story.  
The interested reader can choose to read the distracting part.

- When quoting text, you need to make it clear that this is from a different source, e.g.

John ExampleAuthor states in [3], p. 381:

“This is a quoted text which is copied verbally from some other source it is quite long and intended”

- **Just writing [3] without quotation mark doesn't express that you are quoting verbally**
  - It is **Not** enough to prevent you from accusation of **academic misconduct**.
  - Use of [3] means that some of the knowledge you present originates from [3] or that [3] is just some additional source of information.
  - Quotations like this are beneficial and add value to your report.



# Before Submission

- Make sure all text is justified (straight line at the right side) where appropriate.
- Text has been spell-checked.
- Text is uniformly formatted (same font for text of the same category).
- References, cross references, page numbers are correct.
- Student number and module code is on title page, and is repeated on every page.
  - You may or may not provide your name.