582519 Scientific Writing for
MSc in Computer Science:
Use of References
Time management

Lecture 3, 17.9.2013
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Last week's task:
How did it go?

-- fill comments here --

Starting to write

Outline

- Why references?
- Characteristics of references
- Where to refer?
- List of references and bibliography
- Different types of entries in the reference list
- Order of entries
- Use of references/citations

- Time management

Why references are needed?

- Scientific work must always be related to existing, relevant work
  - Connections, relationships
  - Differences

- These relationships are identified with references (or citations) to different scientific publications

- Each scientific article includes
  - a list of references in a standardized format
  - citations to publications in that list

Why references are important?

- Three main purposes for using references:
  - To demonstrate that the work done is new
  - To demonstrate the author's knowledge of the research area
  - To give pointers to background reading

- A way of telling the reader who has done the work in question

Characteristics of references

- A reference has to be
  - Relevant
  - Necessary
  - Up-to-date
  - Possible to access

- References can point to
  - primary sources
  - secondary sources

Primary or secondary source? Priority order in referencing!

Workshop

Technical report

IETF RFC

Conference

Web page

White paper   Journal

Course book

Electronic journal

Magazine   PhD Thesis

Wikipedia

Article collection   MSc thesis

Where to refer?

- Always refer to
  - a **primary source** instead of the secondary one
  - **well-written material** instead of badly-written
  - a **journal article** (or a book) instead of a conference article
  - a **conference article** instead of a technical report or an unpublished manuscript
  - a **printed document** instead of a web document

Where to refer? (2)

- Avoid referring to private communications and information provided in seminars or talks
  - Not accessible or verifiable

- Do not refer to support common knowledge
  - What is common knowledge, depends on the topic and the publication forum of the article

- **Main rule: refer to original sources (primary sources)**

List of references

- A list of articles, reports, books and other sources cited in the text
  - Just them, nothing else!
- Each entry in the list should include so much information (fields) that the reference/source can be easily found!
- Each source type has a certain type of an entry
- Fields of the same type must be formatted in the same way

Bibliography

- A larger, more general list of sources relevant to a topic
- Entries are not necessarily cited in the text
- Must be separated from the list of references
- Can be used in survey articles or course books
  - In course books related to the bibliographic notes given at the end of the chapters
- Not used in research articles or theses

Entries in the reference list

- Each publication forum has its own rules for
  - the syntax of the entries in the list of references
  - the form of the citations

- Different forms of citations
  - ordinal-number style
  - so-called Harvard style, i.e. name-and-date style
  - mnemonic abbreviation
    - the form used in seminar reports and theses of our department!

Entries in the reference list (2)

- Mnemonic abbreviations used at our department
  - Three letters + two numbers
  - The letters are the first letters of the last name(s) of the author(s)
    - Note the different ways of selecting the letters based on the number of authors from the examples on the following slides
  - The numbers are the last two digits of the publication year
- If same author(s) have several publications in a same year, lower-case letters (a, b, c) are added to the end of those abbreviations

Journal article

- General form:
  - Author1, A., Author2, B., Author3, C., Title of the article. *Name of the journal*, volume, number (publication year), pp. x-y.

- Example
  - Green, T.J., Gupta, A., Miklau, G., Onizuka, M., Suciu, D., Processing XML streams with deterministic automata and stream indexes. *ACM Transactions on Database Systems*, 29, 4 (2004), pp. 752-788.
  - GGM04

Conference/workshop article

- General form:
  - Author1, A., Author2, B., Author3, C., Title of the article. *Name of the conference/workshop proceedings*, place of the conference/workshop, year of the conference/ workshop, pp. x-y.

- Example
  - Altinel, M., Franklin, M.J., Efficient filtering of XML documents for selective dissemination of information. *Proc. of 26th International Conf. on Very Large Data-bases (VLDB 2000)*, Cairo, Egypt, 2000, pp. 53-64.
  - AIF00

Collection article

- General form:
  - Author1, A., Author2, B., Author3, C., Title of the article. In *Name of the collection*, names of the editors, name of the publisher, publication year, pp. x-y.

- Example
  - Mohan, C., Concurrency control and recovery methods for B+-tree indexes: ARIES/KVL and ARIES/IM. In *Performance of Concurrency Control Mechanisms in Centralized Database Systems*, V. Kumar, editor, Prentice Hall, 1996, pp. 248-360.
  - Moh96

Collection

- General form:
  - *Name of the collection*, names of the editors, name of the publisher, publication year.

- Example
  - *Performance of Concurrency Control Mechanisms in Centralized Database Systems*, V. Kumar, editor, Prentice Hall, 1996.
  - Mohan, C., Concurrency control and recovery methods for B+-tree indexes: ARIES/KVL and ARIES/IM. In [Per96], pp. 248-360.

Book

- General form:
  - Author1, A., Author2, B., Author3, C., *Name of the book*. Name of the publisher, publication year.

- Example
  - Aho, A.V., Hopcroft, J.E., Ullman, J.D., *The Design and Analysis of Computer Algorithms.* Addison-Wesley, 1974.
  - AHU74

Thesis or technical report

- General form:
  - Author1, A., Author2, B., Author3, C., Name of the thesis/report. Type of the publication, name of the publication series, number of the thesis/report, name of the publisher, publication year.
    - Number of the thesis/report included if it exists

- Example
  - Jaluta, I., B-tree concurrency control and recovery in a client-server database management system. Ph.D Thesis, Department of Computer Science and Engineering, Helsinki University of Technology, 2002. Jal02

Other kind of sources

- Manuals, patents, standards
  - Can be used, but not very common sources
- Web documents
  - Same bibliographical information as from the similar printed sources + URL of the document and a date when the URL last existed
  - Example: XML Query (Xquery) requirements. D. Chamberling, P. Frankhauser, M. Marchiori, J. Robie, editors. W3C Working Group Note, 23.3.2007. http://www.w3.org/TR/2007/NOTE-xquery-requirements-20070323/ [2.1.2008]
  - BUT: **prefer printed sources to web documents**!
- Other special cases: see, for example, Zobel's book!

Order of entries

- Depends on the style of the citations
  - Ordinal numbers in numerical order
  - Mnemonic abbreviations in alphabetical order

- In the case of ordinal numbers, entries can be in
  - the order of citations
  - the alphabetical order by the last names of the authors

- In a list with mnemonic abbreviations entries can also be in the alphabetical order by the last names of the authors

Order of entries (2)

- Example
  - Nie89a Nielsen, J., *Introduction to …*
  - Nie89b Nielsen, J., *Methods of …*
  - Nie90 Nielsen, J., *Algorithmic …*
  - Nie93 Nielsen, J., …,
  - NiA91 Nielsen, J., Ahlblad, T., …
  - NiM90a Nielsen, J., Mack, R.L., Teaching …
  - NiM90b Nielsen, J., Mack, R.L., *Usability …*
  - NMH88 Nielsen, J., Mack, R.L., Helms, H.-J., *Advances …*

References and citations

- References (citations) tell the reader
  - where does the information come from
    - Work of others
    - Work of the author(s)
  - where it is possible to find more information on that topic

- The structure of the text has to indicate
  - the topic of the citation
  - the coverage of the citation

Placement of citations

- Close to the cited material
- Technically given in brackets, e.g. [Nie93]
- Usually references to page numbers or chapters are not included
  - Sometimes used when referring to books
  - Example: The following is based on the text book of Aho et al [AHU74, Chapter 41].
- Always placed within a sentence!
- Never placed in titles of chapters or sections
- Can be placed in the caption of figures or tables

Placement of citations (2)

- References that are discussed should not be anonymous
  - Names of the authors of the source must then be mentioned in the text
  - Examples:
    - A method for filtering XML documents proposed by Altinel and Franklin [AlF00] is …
    - Efficient filtering of XML documents has also been studied by Green et al [GGM04].
- References that are not discussed can just be listed
  - Example: For filtering XML documents, several methods have been proposed [ALF00, CFG02, GGM04, CHC06, ChN07].

Placement of citations (3)

- Should be punctuated as if they were parenthetical remarks
  - Wrong: According to [GGM04], ...
  - **Correct:** According to Green et al [GGM04], ...

- Each sentence should be understandable even without the citation!

Placement of citations - exercise

WordNet, Concept Net and Cyc are three projects with aim to create a semantic network. WordNet aims at categorisation of words based on lexical meaning and deducing likeness or similarity between them. Cyc aims to address logical reasoning for unambiguous information. Concept Net aims to check role played by context play in information.

Exercise – citation, style, editing

There are various methods to protect MA's data and their operational infrastructures, like authenticate login of MAs by cryptographic techniques, authorize access controls of resources, and monitoring the MA's route, list of destination hosts address. Therefore, these methods can support development of secure mobile agent systems.

Other remarks

- Footnotes and endnotes seldom used in computer science texts
  - They are never used for citations!
- Quotations also seldom used in computer science
  - Quoted material must be an exact copy of the original text
  - Copied text must be enclosed in double quotes
    - Example: Information retrieval is "the science of matching information needs to documents" [Bri91].
  - Longer quotations given in an indented block
- **It is better to paraphrase than quote!**

Small group work

- Correct the given list of references
- What mistakes did you find?
- How would you correct them?
- Do you have enough information for the corrections?

Time management

- How to balance studies, sleap and hobbies/family life / free time?
  - any ideas?

- Timetable for studies
- Study plan: which courses and when?

Decisions, skills, tools

Self confidence

Distributing one's own resources according to own values

Threats, hinders

Cristallising goals
→ motivation, plans, followup

Feeling of acceptance, value rapport

Stress, anxiety, exhaustion

Feeling of insufficiency

Selection and priorisation of tasks
- based on values
- systematically
- clear subgoals in terms of Contents, quality, schedules
- persistence, courage

Process skills, leadership, subordinance skills, expert role

Avoiding larger tasks

Procastination

self

Unclearly stated goals

Long term resoursing vs instant pleasure

Management Of your own work

**Decisionmaking difficulty ←
Partititioning of work, commitment**

Control of own and shared
Ways of work, e.g. Reporting, Feedback, splitting work

Feeling of control
Satisfaction of work
Quality of work
Keeping deadlines

**Unrealistic expectations →
Difficulty estimating quality of work,
Failure to resource**

Removal of disturbance
- materials, tools, peaceful work Environment, notes available for No-delay access

Cyclic development of life management

**Difficulty reporting
→ failure to receive advisory**

**Difficulty completiting task
← expectations on advisor's push**