IMT4891 - Digital Workflow Fundamentals

6: Academic writing
using LaTex and BibTex

September 23, 2009

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Welcome!

onsdag 23. september 2009

3

Last weeks exercises

onsdag 23. september 2009

34	Introductions	
35	Collect and describe data	
36	Transform, compress, encode data	Computer history
37	Moving data	
38	Workflow automation	Intellectual Property Rights and Creative Commons
39	Academic writing using LaTex and Bibtex	
40	Intellectual Property Rights	
41	-	
42	Exam	

Lecture

The structure of the lecture

The tools in academic work, to:
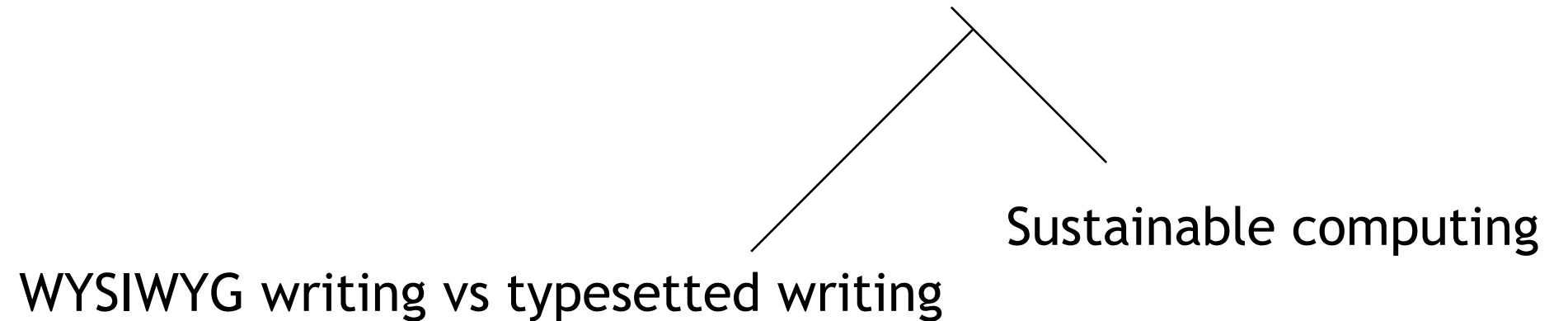
Aggregate   Organise   Write

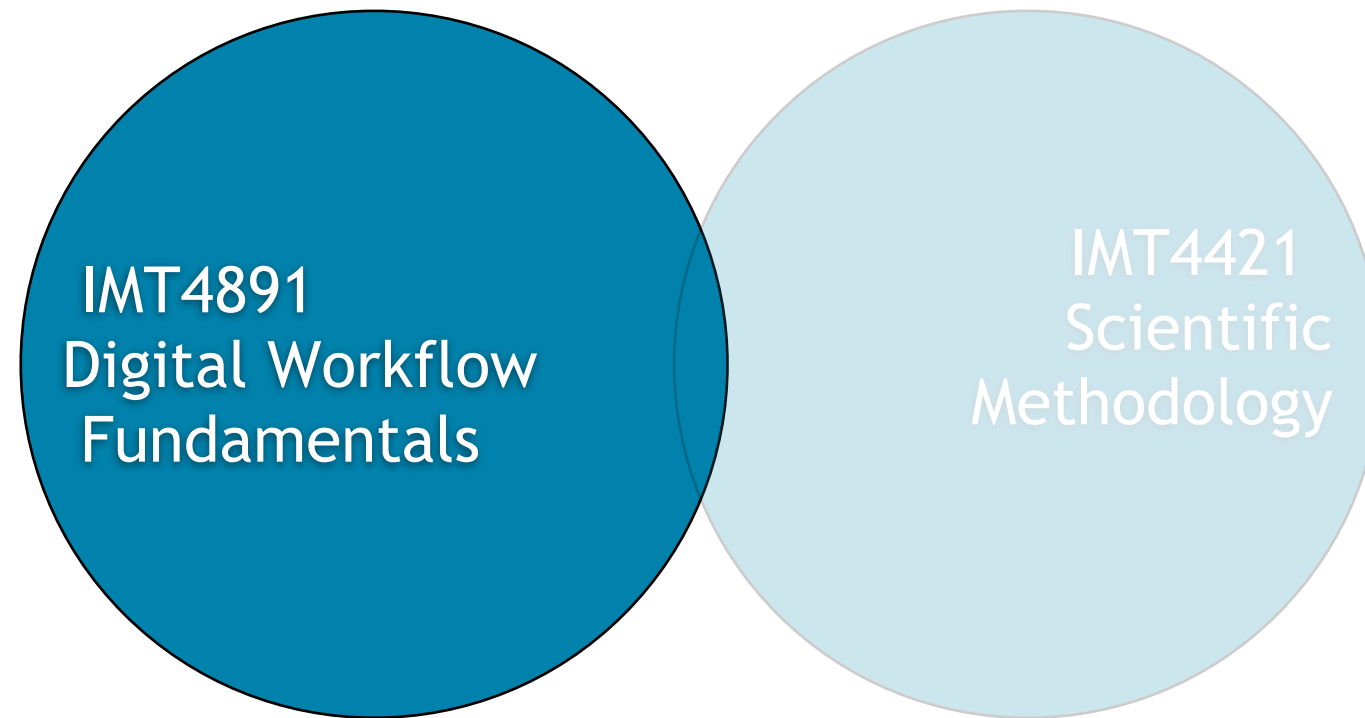This lecture is NOT about what
to write or how to write it.

Introduction

LaTex/BibTex - another dimention of you being here

Getting new perspectives on life (and computing)

Sustainable computing

WYSIWYG writing vs typesetted writing

Academic writing

IMT4891
Digital Workflow
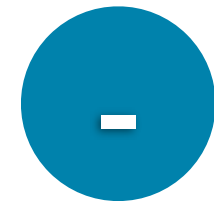Fundamentals

IMT4421
Scientific
Methodology

Why LaTex instead of MS Word???

+ Keeps focus on content instead of design

Documents becomes truly portable

LaTex produces beautiful documents

Learning curve **-**

http://ricardo.ecn.wfu.edu/~cottrell/wp.html

http://www.andy-roberts.net/misc/latex/latexvsword.html

http://ubuntuforums.org/archive/index.php/t-98120.html

http://theappleblog.com/2006/10/05/latex-and-osx/

MS Word+Endnote	**$$$** Closed Focus on design
LaTex+BibTex+Editors	Free Open Focus on writing

Academic document types

[PhD] Dissertation

Book

[Master] Thesis

Articles

[Bachelor] Project report

MASTEROPPGAVE

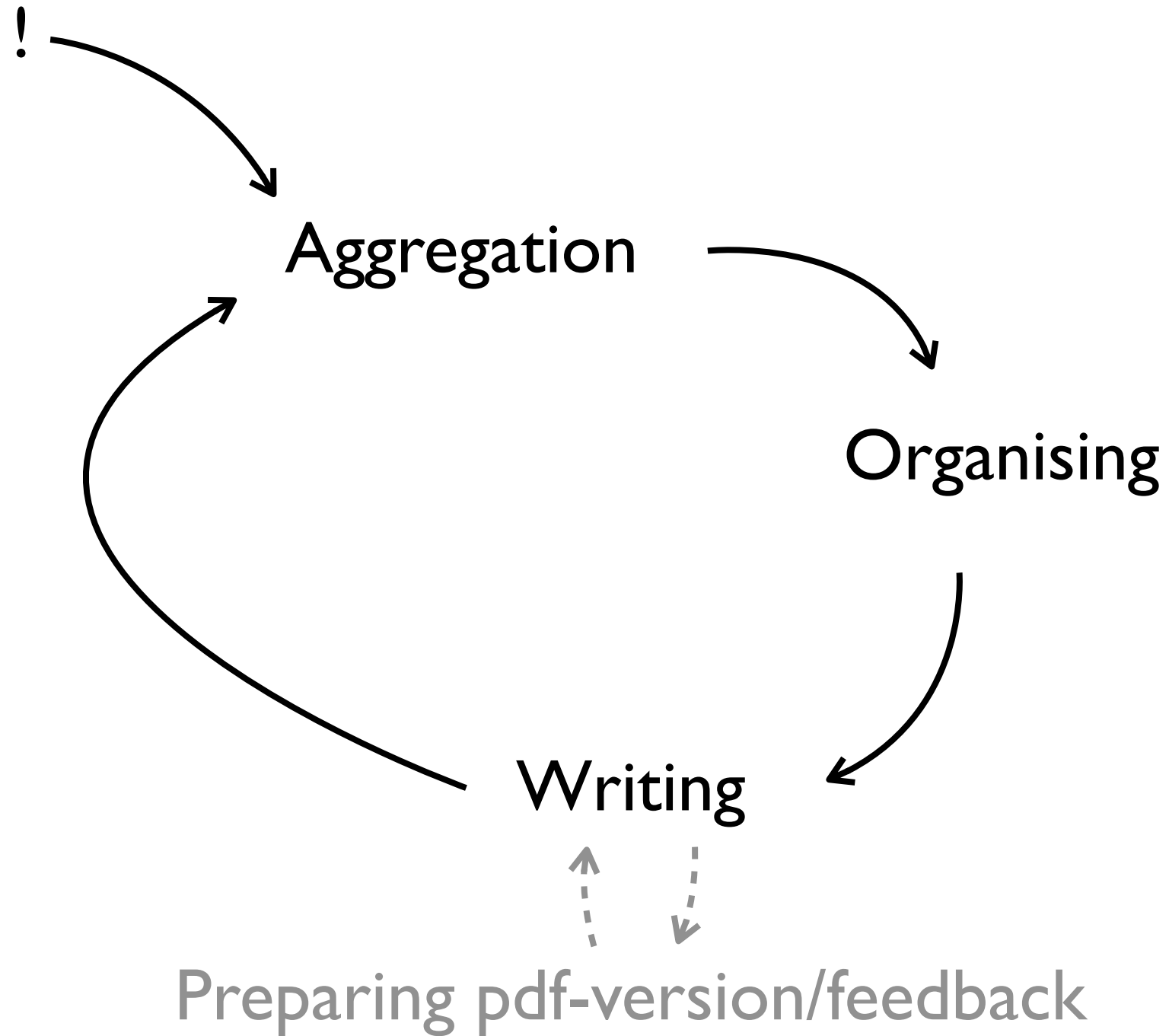Bærekraftig behandling av digitale bil

Utarbeidet av:
Kjell Are Refsvik

Fag:
Design av digitale omgivelser

Avdeling:
Avdeling for informasjonsteknologi, 2009

Høgskolen i Østfold   www.hiof.no

Writing Process

! → Aggregation → Organising → Writing → Aggregation

Preparing pdf-version/feedback

14

Aggregation

Informal information online
podcasts, broadcasts, webpages, discussions

Formal information online
Libraries, online research repositories

Books, articles, videos

WHAT

HOW

Data imports from libraries/repositories

Feed aggregators

Filters

Twitter/blogs/Wikis

RSS

Firefox/Zotero

15

Libraries and search engines

GUC Campus Library

as a starting point. Go there to get help on finding resources that will help you when writing your thesis, assist you with your writing

http://www.hig.no/biblioteket/databaser

http://english.hig.no/english/library/databases

National Library of Norway and Research publications
http://www.bibsys.no/english/pages/index.php

Other large online libraries and search engines
Library of Congress   http://scholar.google.no/

17

Organise
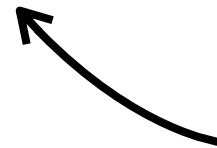
BibTex system
.bib format

18

enter references manually
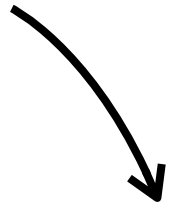
bibtex file from a library

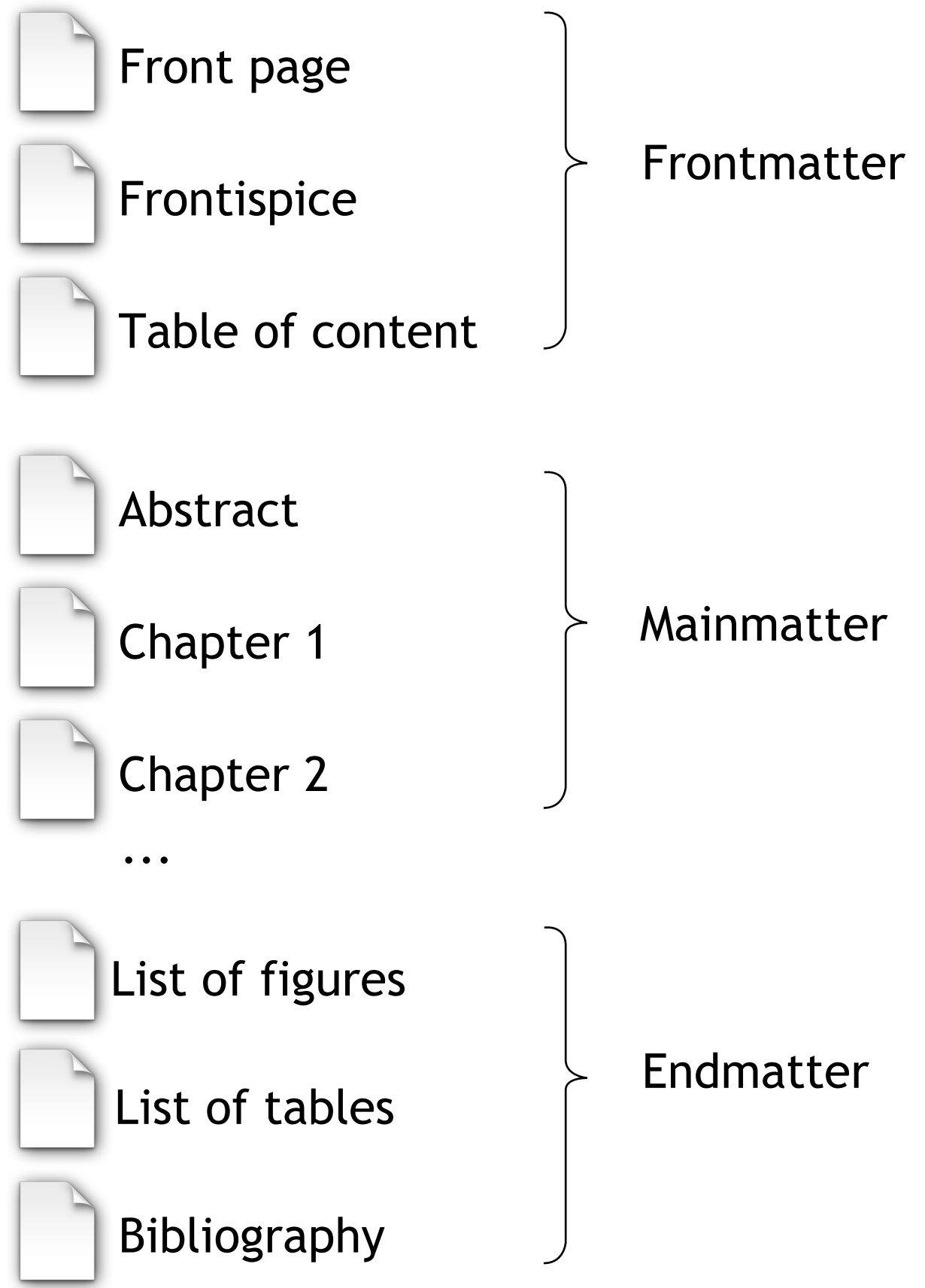help from Zotero plugin in
Mozilla Firefox

bibliography.bib

19

Writing

onsdag 23. september 2009

LaTex?

Document preparation system

.sty

main.tex

Front page
Frontispice   ⎱ Frontmatter
Table of content

Abstract
Chapter 1   ⎱ Mainmatter
Chapter 2
…

List of figures
List of tables   ⎱ Endmatter
Bibliography

22

📁 master_thesis

    📄 _bibliography.bib

    📁 _bibliography

    📁 _illustrations

    📄 00_main.tex

    📄 01_abstract.tex

    📄 02_preface

    📄 03_problem_statement.tex

    📄 04_introduction.tex

    📄 05_design.tex

    📄 06_implementation.tex

    📄 07_testing.tex

    📄 08_discussion.tex

    📄 09_conclusion.tex

Common LaTex commands

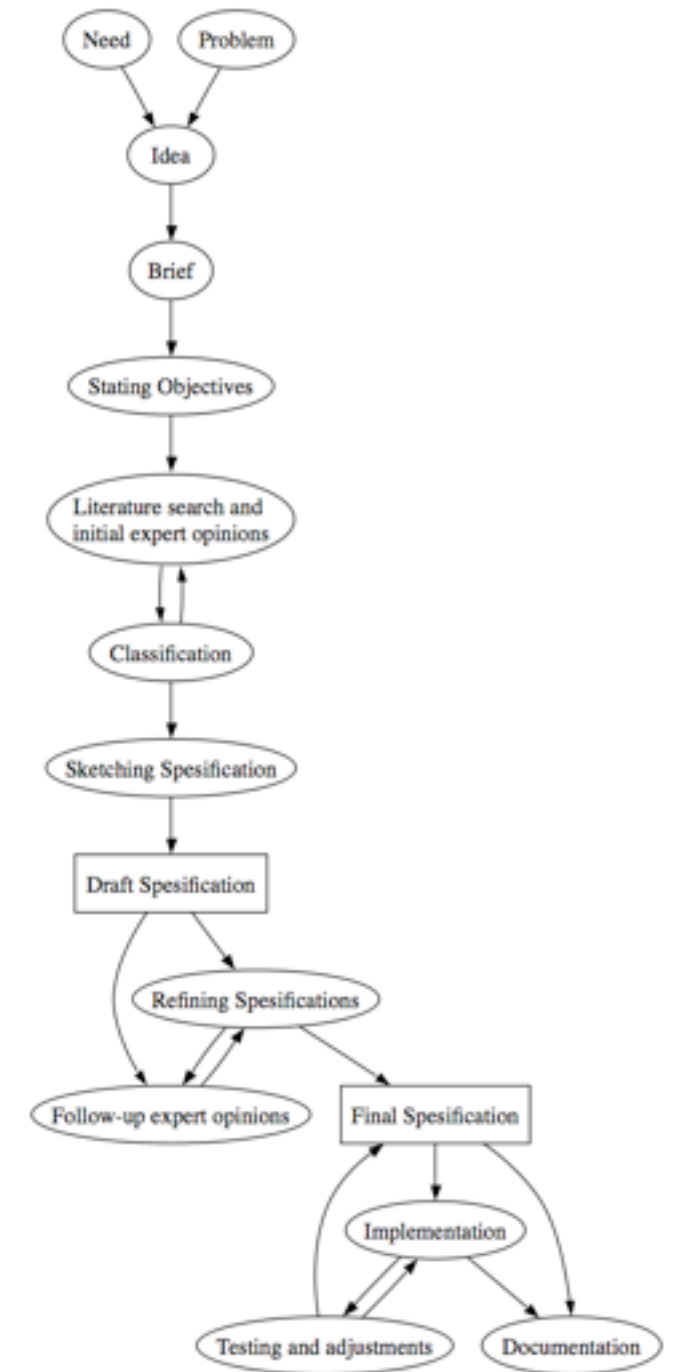| Structure	Reference	Miscellaneous
\part{...} \chapter{...} \section{} \subsection{...} \subsubsection{...}	\url{...} \quote{...} \ref{...} \footnote{...}	\figure{...} \table{...}

24

Illustrations

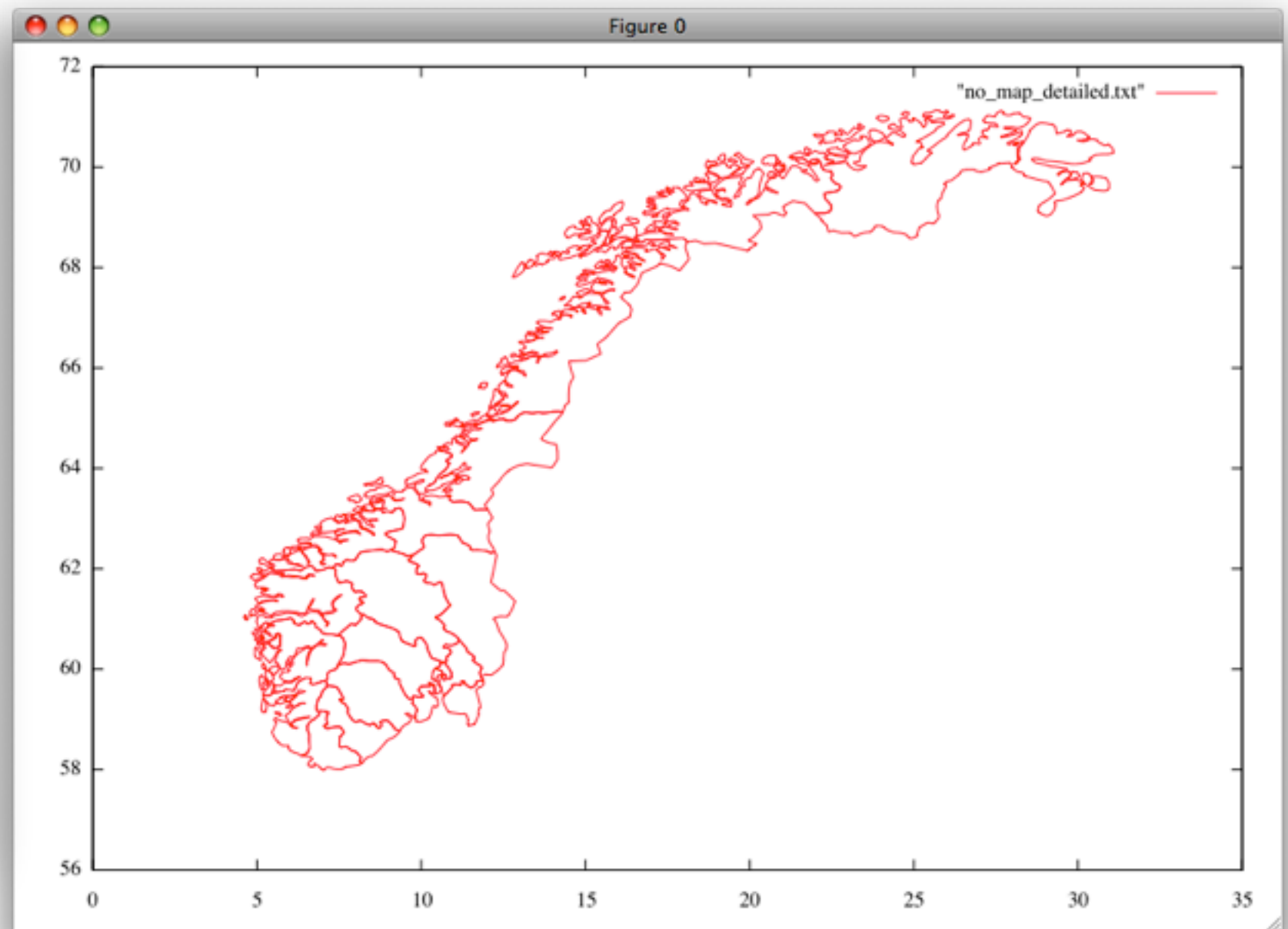| Diagrams	Graphs	Free drawing	Images
Dot/Graphwiz	gnuplot	Inkscape	Lots of devices and software

25

Diagrams with Dot/Graphviz

```
digraph design_strategi
    {
        Stating_Objectives [label="Stating Objectives"];
        Literature_search [label="Literature search and \ninitial expert opinions"];
        Spesification_sketches [label="Sketching Spesification"];
        Refinement_spesifications [label="Refining Spesifications"];
        Expert_opinions2 [label="Follow-up expert opinions"];
        Testing [label="Testing and adjustments"];
        Final_spesification [label="Final Spesification"];
        Draft_spesification [label="Draft Spesification"];

        Need->Idea;
        Problem->Idea;
        Idea->Brief;
        Brief->Stating_Objectives;
        Stating_Objectives->Literature_search;
        Literature_search->Classification;
        Classification->Literature_search;
        Classification->Spesification_sketches;
        Spesification_sketches->Draft_spesification;
        Refinement_spesifications->Expert_opinions2;
        Expert_opinions2->Refinement_spesifications;
        Draft_spesification [shape=box];
        Draft_spesification->Refinement_spesifications;
        Draft_spesification->Expert_opinions2;
        Final_spesification [shape=box];
        Refinement_spesifications->Final_spesification;
        Final_spesification->Implementation;
        Implementation->Testing;
        Testing->Implementation;
        Implementation->Documentation;
        Testing->Final_spesification;
        Final_spesification->Documentation;
    }
```
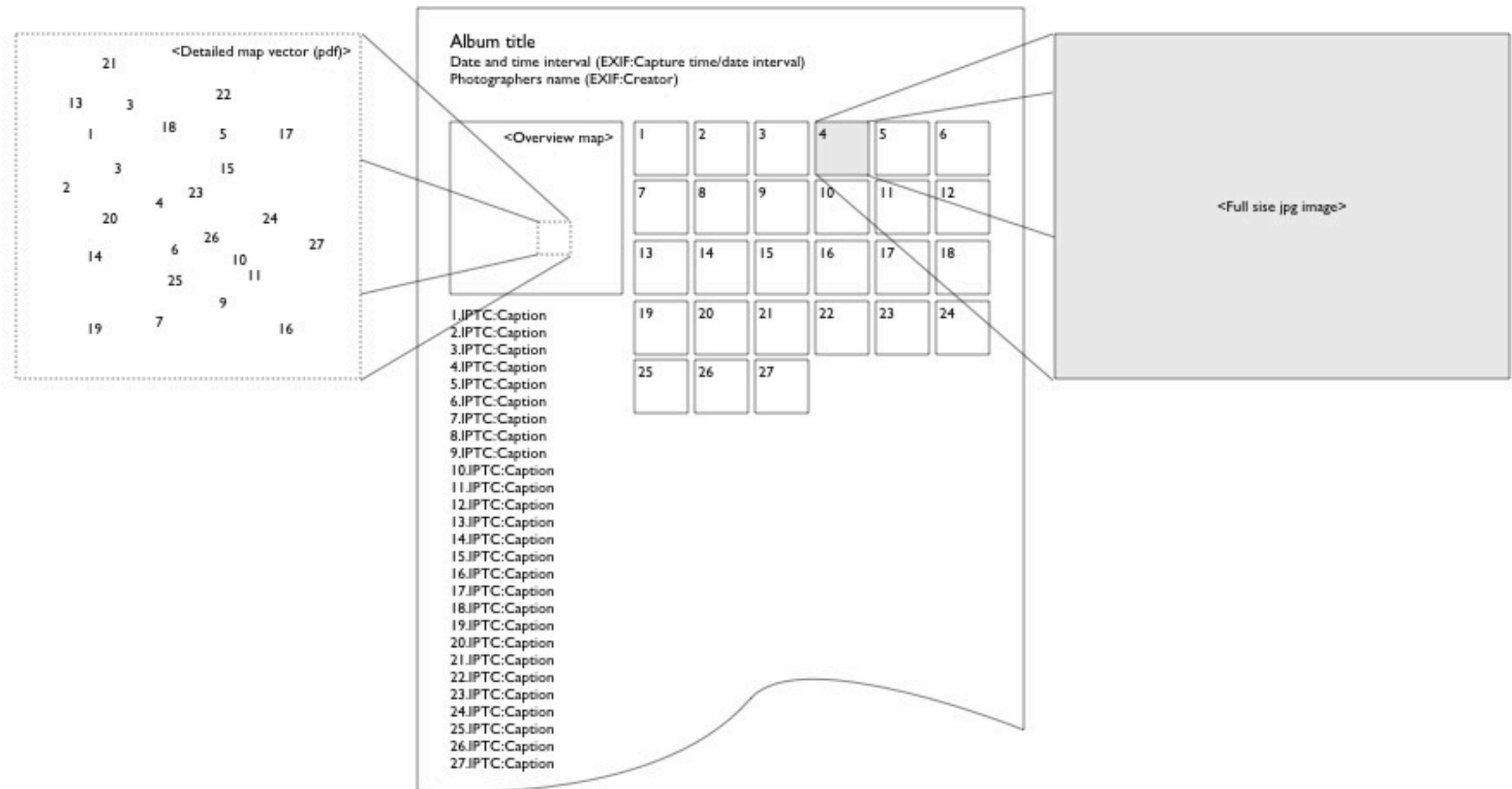

26

Graphs of raw data with <u>gnuplot</u>
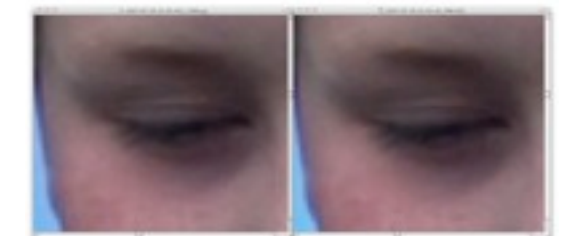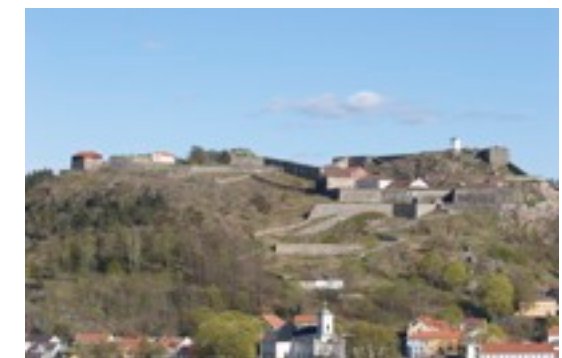

http://commons.wikimedia.org/wiki/Category:Gnuplot_diagrams

27

Free drawing with <u>Inkscape</u>

Images from a variety of sources (software and devices)
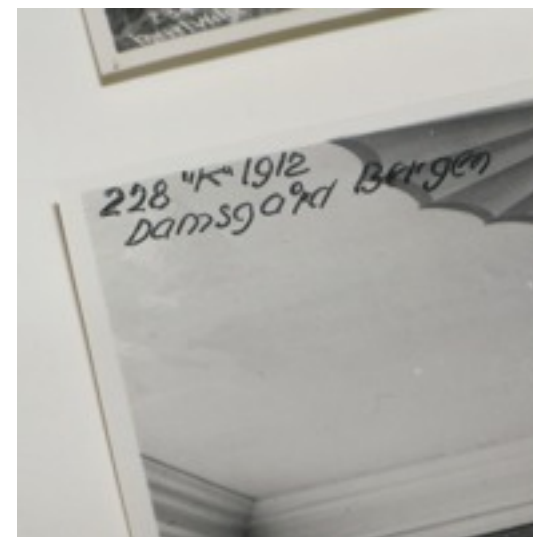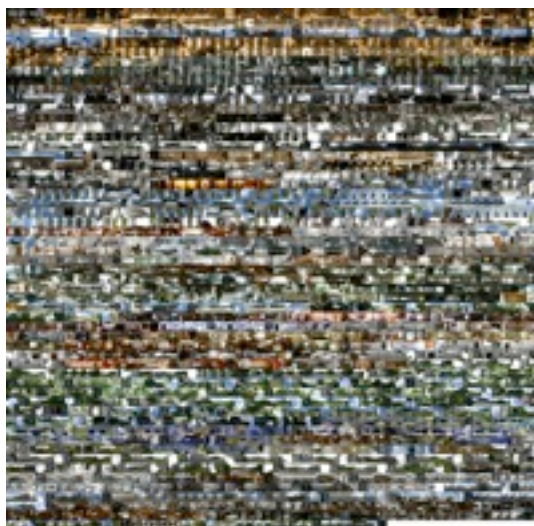
Providing functionality for feedback while writing

\linenumbers   PDF annotation

Backup

Perhaps the single most important thing you need to do while writing.

rsync to a server somewhere every day!

Miscellaneous software

Electronic questionnaire

Interview transcription

Qualitative data processing

Quantitative data processing

Data visualisation

Presentation (web, slides ++)

The Memoir Class

http://tug.ctan.org/tex-archive/macros/latex/contrib/memoir/memman.pdf
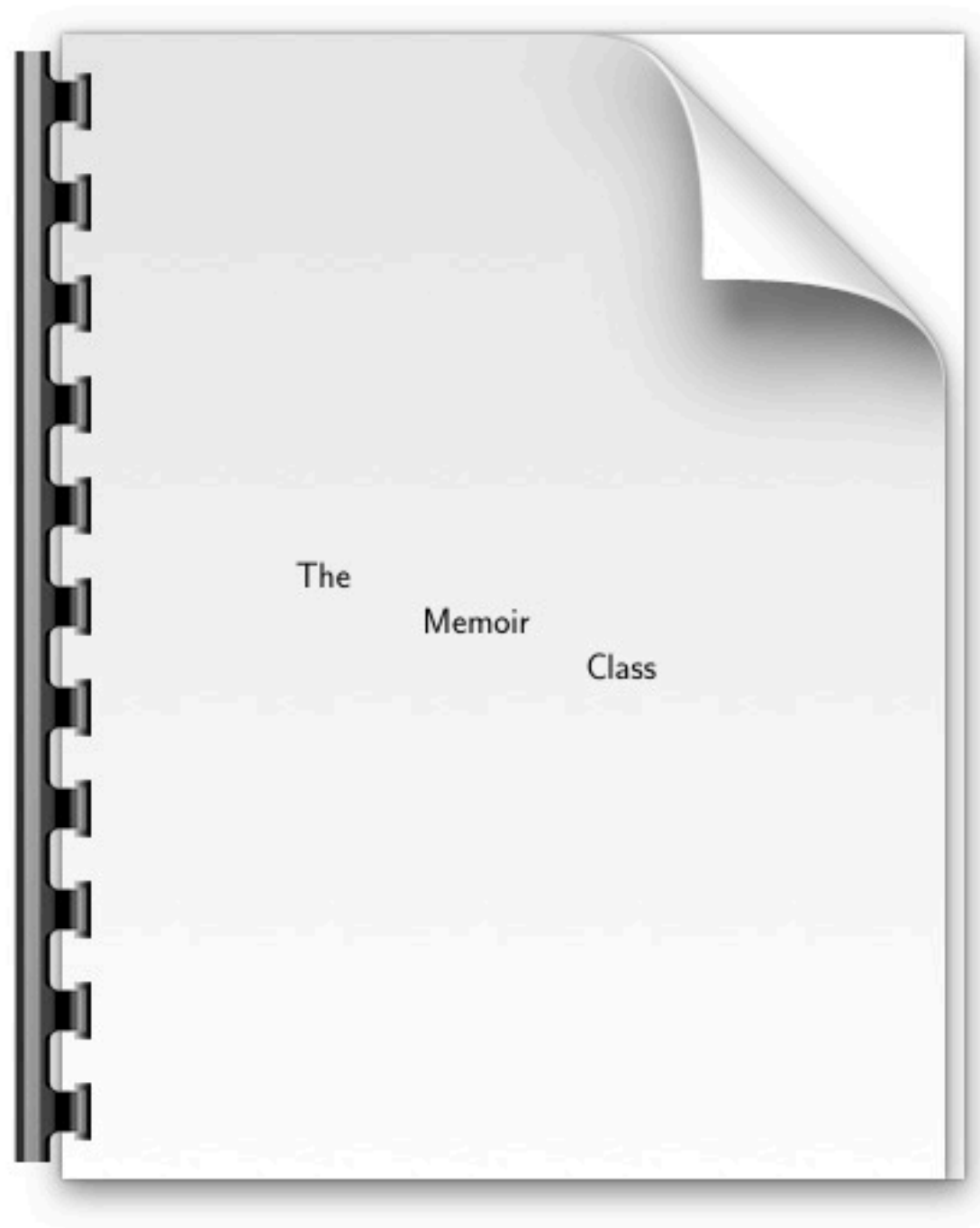
Summation - Software

AGGREGATION	RSS feed aggregators for text, video, sound
	Access to relevant search databases and resource sites
ORGANISING	BibTex installation
	.bib editor
WRITING	LaTex installation
	Text editor
	Data processing software (quantitative, qualitative)
	Illustration software (graphs, diagrams, free-drawing, photo

To watch

http://www.youtube.com/watch?v=m4cEAVmLegg

http://www.youtube.com/watch?v=OMtrswrQ5sA

35

To read I

LaTex in Norway

uio.no
http://www.ifi.uio.no/it/latex.html
http://folk.uio.no/ifidrift/doc/LaTeX-for-nybegynnere.pdf
http://www2.usit.uio.no/it/forfatterstotte/formater/omlatex.html
http://www.ifi.uio.no/it/latex.html
http://heim.ifi.uio.no/dag/
http://www2.usit.uio.no/it/unix/store/tex.html
http://www.ub.uio.no/umn/biol/endnote.html
http://fui.ifi.uio.no/site/events/latex-kurs
http://www.duo.uio.no/dokumentasjon/student/skrive/skrive_latex.html

hig.no
http://www.hig.no/imt/master/thesis/latex
http://www.hig.no/imt/master/thesis/information
http://linux.hig.no/LaTeX-triks

hiof.no
http://abdallah.hiof.no/dmpro/digdok-2009/latex.html
http://www.ia.hiof.no/~gunnarmi/linda/spesialpensum/modules/writing.html

ntnu.no
http://www.pvv.ntnu.no/~berland/latex/
http://www.math.ntnu.no/~hanche/kurs/latex/2005-05-18/

36

To read II

Writing tips
http://en.wikipedia.org/wiki/A_Manual_for_Writers_of_Research_Papers,_Theses,_and_Dissertations
http://www.capris.no/product.aspx?isbn=0226823377

Reference systems/editors
http://malkinware.com/referencetracker/
http://mac1.no/artikkel/7145/hold-styr-p%C3%A5-referansene-med-reference-tracker
Papers
EndNote
BibDesk
Sente (http://www.thirdstreetsoftware.com/site/introduction.html)
BookEnds (http://www.sonnysoftware.com/)

Text Editors
LyX (http://www.lyx.org/)
Scrivener (http://www.literatureandlatte.com/scrivener.html)

To read III

WIKIPEDIA
http://no.wikipedia.org/wiki/LaTeX
http://en.wikipedia.org/wiki/Comparison_of_reference_management_software
http://en.wikipedia.org/wiki/LaTeX
http://en.wikipedia.org/wiki/BibTeX
http://en.wikipedia.org/wiki/Reference_management_software
http://en.wikipedia.org/wiki/Comparison_of_reference_management_software
http://en.wikipedia.org/wiki/Citation
http://tug.ctan.org/tex-archive/macros/latex/contrib/memoir/memman.pdf

MISCELLANEOUS
http://www.latex-project.org/
http://homepage.mac.com/kvmagruder/hsci/resources/academicApps.html
http://www.dartmouth.edu/comp/resources/downloads/mac/academic/
http://macresearch.org/
http://www.apple.com/science/software/
http://www.math.wisc.edu/~andrejko/resources/LaTex-on-Mac-OSX.html
http://www.tug.org/mactex/
http://latex.yauh.de/index_en.html
http://openwetware.org/wiki/Getting_started_with_LaTeX_on_a_Mac

To do

Lab A211:

Full bibtex/latex installation with editors (BibDesk/TexShop)

Use them to get familiar with LaTex/ BibTex or install your own systems and editors to complete the exercises

To do

Watch the documentary "Good Copy - Bad Copy" and - together with the book "Free Culture", use it to solve the following 2-4 exercises:

1 Setup a LaTex document that use the report class and use that document
   to write a short report (1-2 pages), providing a short introduction
   about the topic treated in the documentary, a brief discussion and a short
   conclusion. Name the files "good_copy.tex" and good_copy.pdf" and upload
   your work to Fronter.

2 Create a BibTex document that include the correct bibliographic
   reference to the book "Free Culture" as well as the documentary
   itself. Link it to the LaTex file and create references to the material
   as well as a bibliography in the report. Feel free to include other
   sources of information you find relevant in the bibtex file. Name the files
   "good_copy2.tex" and good_copy2.pdf" and upload your work to Fronter.

3 Extending on exercise 1/2 - include a table of contents at the front of your
   report. Name the files "good_copy3.tex" and good_copy3.pdf" and upload your
   work to Fronter.

4 Extending on exercise 1/2/3 - include a screenshot from the documentary and
   a quote you find relevant to your report. Name the files
   "good_copy4.tex" and good_copy4.pdf" and upload your work to Fronter.