DD1301 & DD1337
Technical Reports in LaTeX

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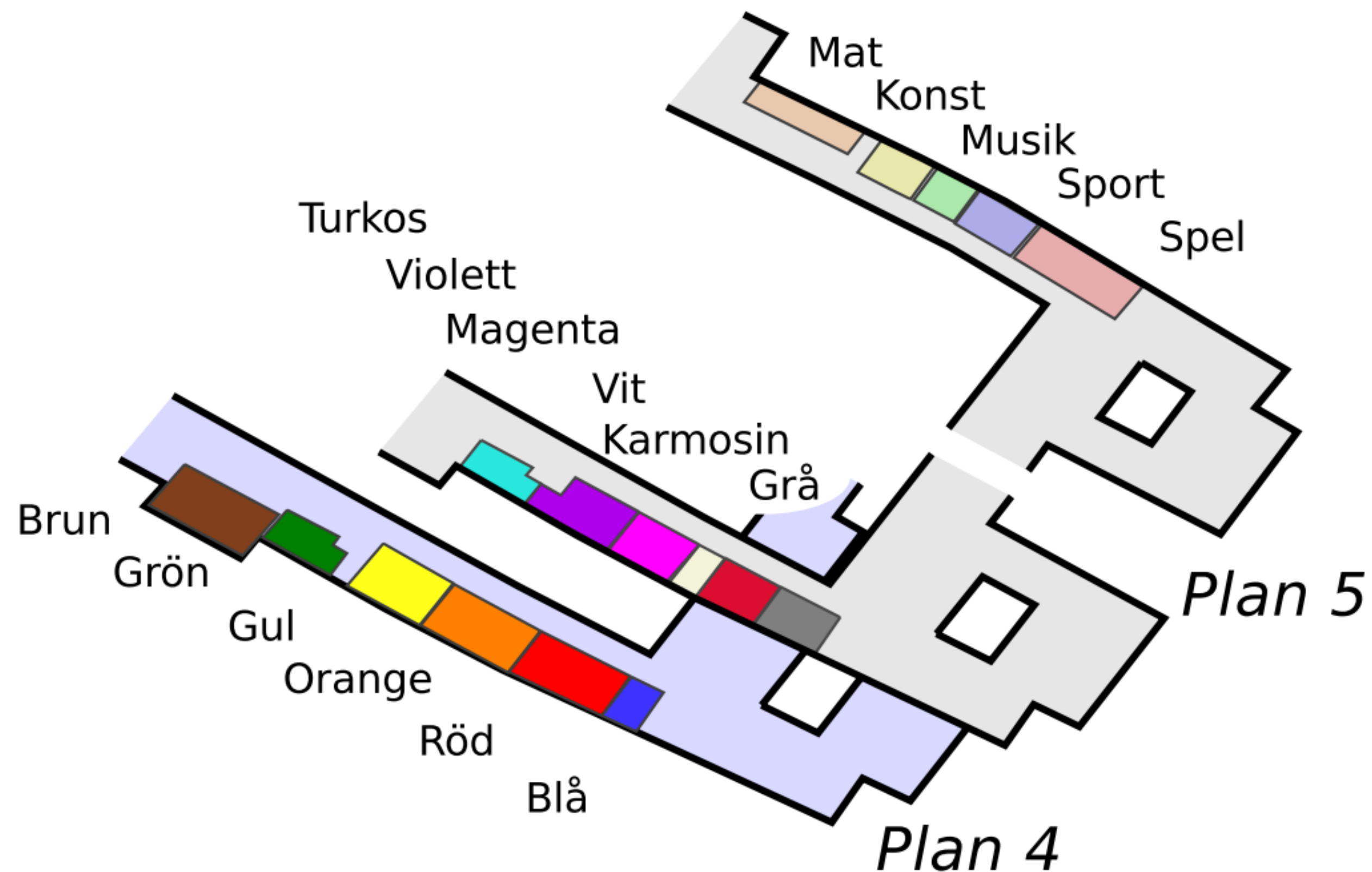glassey@kth.se
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Errata from Labb 1

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- Changes in the Linux Environment

  - Some files had moved or been removed

  - Some utilities had been removed

- Labs were unexpectedly overcrowded

- When things go wrong (they often do)

  - Ask lab assistants

  - Check Course Web (DD1301 & DD1337)

    - https://www.kth.se/social/course/DD1301/

    - https://www.kth.se/social/course/DD1337/

  - Use our online queue service: http://queue.csc.kth.se/#/queue/INDA

Information & Grading

- Information posted on DD1301 Course Web

    - Labb 1: https://www.kth.se/social/course/DD1301/page/lab-1-information/

    - Labb 2 & 3: https://www.kth.se/social/course/DD1301/page/lab-2-information/

- **Grading will not be affected**

    - Assistants will always be able to check your Intro Lab work during the opening 3 weeks.

Plan 5

Mat
Konst
Musik
Sport
Spel

Turkos
Violett
Magenta
Vit
Karmosin
Grå

Brun
Grön
Gul
Orange
Röd
Blå

Plan 4

| E-huset (västra sidan) | | | | D-huset (östra sidan) | |
Plan 4		Plan 5		Plan 5	
Brun	21×Ubuntu	Turkos	8×Mac OS X	Mat	10×Win
Grön	8×Ubuntu	Violett	14×Mac OS X	Konst	12×Mac OS X
Gul	20×Ubuntu	Magenta	14×Win	Musik	9×Mac OS X
Orange	21×Ubuntu	Vit	7×Win	Sport	13×Ubuntu
Röd	21×Ubuntu	Karmosin	14×Ubuntu	Spel	24×Ubuntu
Blå	*(ej student)*	Grå	13×Ubuntu		

Technical Reports

Which software can I use?

- There is a choice between:

  - **Word processing**

    - WYSIWYG (What you see is what you get)

    - Word / Open Office / Libre Office / Pages / Google Docs

  - **Typesetting**

    - WYSIWYW (What you say is what you want)

    - LaTeX

What are the benefits?

- **WYSIWYG**
  - Fast and **minimal effort** up front
  - Familiar software
  - Commonly shared
- **Typesetting**
  - High quality
  - Focus on **content and not style** (especially with templates)
  - Ideal for scientific and engineering (especially maths)

LaTeX Demo

```
# A fresh document

\documentclass[11pt]{article}

\title{Template}
\author{Name}
\begin{document}
\maketitle


\section{Section}


\end{document}
```

```
# Document Elements

\part{title}
\chapter{title}
\section{title}
\subsection{title}
\subsubsection{title}
\paragraph{title}
\subparagraph{title}
```

```
# Environments

\begin{itemize} # bullet point list
  \item item1
  \item item2
\end{itemize}


\begin{enumerate} # numbered list
\begin{quote} # indented text
\begin{table} # tables
\begin{figure} # graphics
\begin{equation} # mathematics


# remember to /end{environment}
```

```
# Cross Referencing

\label{marker}
# Set a marker for cross-reference, often of the
form \label{sec:item}.


\ref{marker}
# Give section/body number of marker.


\pageref{marker}
# Give page number of marker.


\footnote{text}
# Print footnote at bottom of page.
```

```
# Bibliography and Citations

\cite{key} # include a citation

# At end of document…

\bibliographystyle{plain}
\bibliography{bibfile}
```

```
# Inside the bibfile

@String{N = {Na\-ture}}

@Article{WC:1953,
  author  = {Jack Watson and Frank Crick},
  title   = {A structure for Deoxyribose Nucleic
             Acid},
  journal = N,
  volume  = {171},
  pages   = {737},
  year    = 1953
}
```

```
# A complete document with citations etc

\documentclass[11pt]{article}
\usepackage{fullpage}
\title{Template}
\author{Name}
\begin{document}
\maketitle
\section{section}
\subsection*{subsection without number}
text \textbf{bold text} text. Some math: $2+2=5$
\subsection{subsection}
text \emph{emphasized text} text. \cite{WC:1953}
discovered the structure of DNA.
A table:
\begin{table}[!th]
\begin{tabular}{|l|c|r|}
\hline
first  &  row  &  data \\
second &  row  &  data \\
\hline
\end{tabular}
\caption{This is the caption}
\label{ex:table}
\end{table}
The table is numbered \ref{ex:table}.

\bibliographystyle{plain}
\bibliography{bibfile}
\end{document}
```

```
# Changing style

It is also possible (and advised) to re-use existing
styles to achieve high-quality results.

# Lab Reports
# Presentations
# Scientific articles (e.g. ACM/IEEE)
# Thesis
# CV
# etc…
```

* Review *

- Differences between Word Processing and Typesetting

- LaTeX is very useful in scientific and engineering contexts

- Produce documents where "What you say is what you mean"