Workshop On LaTeX for Scientific Writing

Day 2: Activities

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14^{th} August 2017

Activity 1: Tables

Open the Activity.ex file and type the following under Result subsection:

1. Create a table similar to table 1

2. Add the booktabs package to your preamble and create a table similar to table 2.

3. Experiment with the table cross-reference in using `\ref{key}` and `\cref{key}` com-

Table 1 – First Week

Day	Max Temp	Min Temp
Mon	20	13
Tue	22	14
Wed	23	12
Thurs	25	13
Fri	18	7
Sat	15	13
Sun	20	13

Table 2 – Table caption text

	Growth Media	
Strain	1	2
GDS1002	0.962	0.821
NWN652	0.981	0.891
PPD234	0.915	0.936
Average Rate	0.920	0.882

Figure 1 – Here is a simple figure

mands.

4. Try writing `\listoftables` in the top of your document just after `\tableofcontents`. What happens when you typeset?

Activity 2: Figure

Open the Activity.ex file and type the following under Result subsection:

1. Insert the graphicx package in your preamble
2. Place a figure in the same directory as your LATEX document.
3. Now insert the image in your document as shown in fig. 1
4. Experiment with the figure cross-reference using `\ref{key}` and `\cref{key}` com-

mands.

5. Try writing **\listoftables** in the top of your document just after **\listoffigures**. What happens when you typeset?

Activity 3: To do notes

Open the Activity.ex file and type the following:

1. Insert **\usepackage**{hyperref} in your preamble.

2. Also load **\usepackage**{todonotes} just after **\usepackage**{hyperref}.

3. Experiments with **\todo**{text} commands.

4. Try writing **\listoftodos** in the top of your document just after **\listoffigures**. What happens when you typeset?

Activity 4: Export from Mendeley to BibTeX

1. Select five references from your Mendeley library and export to Bibtex. Save to the same location as the Activity.tex file.

2. Try to open it with notepad and examine the bibtex file.

3. Set up the Mendeley auto sync and save it in bib folder in the savme location as the Activity.tex file.

Activity 5: Bibliography

1. Insert **\usepackage**{natbib} in your preamble.

2. Define bibliography style just after `\usepackage{natbib}` with `\bibliographystyle{plainnat}` command.

3. Include .bib file created in activity 10 at the end of document just before `\end{document}` with `\bibliography{bibfile(without an extension)}`.

4. Add a `\citet{key}` and `\citep{key}` commands some place in your document. What happens ? **Hints**. To compile bibtex press `F8` followed by `Build & View` button.

5. What happens if you use the `\cite{key}` commands?

6. What happens if you change bibliography style to `\bibliographystyle{abbrvnat}`, `\bibliographystyle{agsm}`, `\bibliographystyle{apa}` and `\bibliographystyle{plain}`.

Activity 6: Proposal, Thesis and Journal Paper

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1. Use the CoCSE journal latex template provided to write your paper.

2. Use the proposal or the thesis template provided to write your proposal or thesis

Activity 7: Presentation

Create a new tex file name it Beamer.tex

1. Define beamer class with `\documentclass{beamer}`

2. Define title of your presentation with the following command.

```
\title[Proposal]{Machine Learning Algorithm for Predicting Student's Performance.}
\subtitle{Concept Note Presentation}
\author{Neema M., Dr Dinna M.}
```

```
\institute{NM-AIST (CoCSE)}
\date{\today}
```

3. To print the tittle define the tittle page frame.

```
\begin{document}
\begin{frame}
\titlepage
\end{frame}
\end{document}
```

4. Run quick build. What do you see?

   - There are a lot of different beamer themes for your presentation, to use them, use the command `\usetheme{...}` (in the preamble). Available themes includes; *AnnArbor Berkeley, Berlin, Boadilla, boxes, CambridgeUS, Frankfurt, JuanLesPins, Montpellier, PaloAlto and Warsaw*

   - Add the Berlin theme to your beamer by inserting `\usetheme{Berlin}` in your preamble just after `\documentclass{beamer}`. Run quick build. What do you see?

   - Experiment with other themes.

   - If you like the theme structure but not the choice of colours, use the `\usecolortheme{...}` command (again in the preamble). List of colours, *albatross, crane, beetle, dove, fly, seagull, wolverine and beaver*

   - Change the color theme of your beamer by inserting `\usecolortheme{fly}`. Run quick build. What do you see?

   - Experiments with different colours style.

   - You can also specify colors of inner elements most notably the colors of blocks in the same way regular color themes are chosen: `\usecolortheme{...}`. You can

choose from: *lily, orchid and rose*.

- In the same way you can also specify outer color themes. Outer color themes change the palette colors, which are the colors the headline, footline, and sidebar are based on. You can choose from: *whale, seahorse and dolphin*.

- You can also use a pre-made beamer template. Several pre-made templates can be obtained from overleaf.

5. Add a table of content frame just after a tittle frame.

6. Create three sections just after table of contents frame say `\section{Introduction}`, `\section{Motivation}` and `\section{Results}`.

7. Add one frame with some contents under each section.

   Hints. You may use `\begin{itemize} \item .. \end{itemize}` environment to create list of item.

8. Compile and run. What do you see?

Activity 8: Presentation

Experiment with frame structure (cloumns and blocks) and overlay in your presentation.

Activity 9: Presentation

Use the skills gained in class to prepare Latex presentation for your proposal.