

SOA - Lab 1

Mendeley and LaTeX

1 Mendeley

1. Search for papers with scholar.google.com on a certain research topic using relevant keywords. Download at least 3 papers in PDF format.
2. Create an account on mendeley.com
3. Open Mendeley (Applications→Education→Mendeley Desktop) and log in using the created account.
4. Add to Mendeley the downloaded papers.
5. Open a paper and highlight the main idea from the abstract.
6. Verify and update paper details (conference/journal, year, pages).
7. Search in the paper collection after a keyword. Then open a paper and search for the same keyword.
8. Create a new private group with your name and add another colleague as a member in the group.
9. Share a paper with the group. Your colleague can access that paper?
10. Export the paper collection in a .bib file.

2 LaTeX

1. Inspect this LaTeX template: <http://elf.cs.pub.ro/soa/res/paper/soa-paper-template.zip>.
2. Compile the source file (.tex) using make and open the PDF file.

3. Add a figure to the source file and refer it in the text.
4. Insert a table similar to Table 1 using booktabs and refer it in the text.

Table 1: Consumed Energy (J)

Packet loss rate	Number of hops					
	10	20	40	60	80	100
No packet loss	1.15	2.20	4.31	6.41	8.51	10.61
10% packet loss	1.24	2.36	4.62	6.88	9.13	11.39
20% packet loss	1.32	2.53	4.94	7.34	9.75	12.16

5. Use the .bib file produced by Mendeley and refer all papers in the text.
6. Install the lyx package and import the previous LaTeX file in lyx.
7. Insert a formula similar to Formula 1 and refer it in the text.

$$\frac{d}{dx} \arctan(\sin(x^2)) = -2 \frac{\cos(x^2)x}{-2 + (\cos(x^2))^2} \quad (1)$$

8. Export the .lyx file in .tex format.

3 Resources

1. http://download.mendeley.com/Getting_Started_Guide.pdf
2. <http://en.wikibooks.org/wiki/LaTeX>
3. <http://tobi.oetiker.ch/lshort/lshort.pdf>
4. http://en.wikibooks.org/wiki/LaTeX/Importing_Graphics#Including_graphics
5. http://en.wikibooks.org/wiki/LaTeX/Tables#Professional_tables
6. <ftp://ftp.ams.org/pub/tex/doc/amsmath/short-math-guide.pdf>
7. <ftp://ftp.tex.ac.uk/ctan/tex-archive/info/mil/mil.pdf>