Name of Organization

Name of Group/Division

Title of the Report: Some Details about the Report

Name Surname [1]

What is this report for?
It is for ...
and BLAH ...

March 27, 2021

[1]Email correspondence to: email-id@domain.url

Abstract

Insert abstract here.

More stuff to be included.

Revision History

Revision History:

1. Version 0.1, June 1, 2014. Initial copy of the report.
2. Version 0.2, June 4, 2014. Added chapter on typesetting algorithms.
3. Version 0.3, June 4, 2014. Added chapter on typesetting text, inserting figures and tables, added a subdirectory for pictures of the report, and begun a section on typesetting mathematical symbols, expressions, and equations.
4. Version 0.4, June 4, 2014. Added introductory paragraph on typesetting in LaTeX, and referencing and citations.
5. Version 0.5, June 5, 2014. Completed section on using color in LaTeX. In addition, I have completed another section on symbols representing LaTeX and related computer languages/technologies/concepts.
6. Version 0.6, June 5, 2014. Completed chapter on typesetting (macros) in LaTeX.
7. Version 0.7, June 8, 2014. Completed LaTeX template for reports.
8. Version 0.8, July 11, 2019. Provided versions of LaTeX templates for articles and reports with less package usage, since the more comprehensive versions of these LaTeX templates (for articles and reports) use packages that are typically not installed in some LaTeX engines.

Contents

Chapter 1

Text

There are a significant amount of references for helping people to learn LaTeX [1–29] and related information/technologies.

In this chapter, I will provide some templates for referencing, templates for BibTeX entries, indicate some common LaTeX symbols, usage of colors in LaTeX, and miscellaneous details.

Random macros from my LaTeX-specific IDE (or text editor):

1. \\ \rule{6in}{.1pt}
2. emailid@domain.com
3. Begin-end constructs (i.e., \begin and \end) for:
   (a) quotation
   (b) quote
   (c) verbatim
   (d) verse
4. Types of headings:
   (a) \chapter{}
   (b) \paragraph{}
   (c) \subparagraph{}
   (d) \section{}
   (e) \subsection{}
   (f) \subsubsection{}
5. To add an entry into the "Table of Contents" without it being numbered, try the following:
   (a) \addcontentsline{toc}{section}{BLAH}
   (b) \section*{BLAH}
6. Insert/import content from another file: \input{RELATIVE PATHNAME}
7. Import LaTeX packages: \usepackage{}
8. \footnote{}
9. \marginpar{}
10. $\mathcal{C}$
11. C: Caligraphy style font.
12. This is good.: Underline text.
13. `This is a statement.` TypeWriter.
14. This is a statement. Sans Serif font.

15. *This is a statement.* Slanted font.
16. This is a statement.
17. Types of labels:
    (a) "chp:" for chapter
    (b) "sec:" for section
    (c) "ssec:" for subsection
    (d) "sssec:" for subsubsection
    (e) "fig:" for figure
    (f) "tab:" for table
    (g) "eqn:" for equation
    (h) "lst:" for code listing
    (i) "defn:" for definition
    (j) "thrm:" for theorem
    (k) "lem:" for lemma
    (l) "crly:" for corollary
    (m) "prop:" for proposition
    (n) "prf:" for proof
    (o) "eg:" for example
    (p) "rem:" for remark

An enumeration of items:

1. Quite sparse enumeration:
    (a) Sparse enumeration:
        i. Very sparse enumeration:
            A. Very, very sparse list:
                - Blah
2.
3.
4. Inserting a horizontal line beneath this item in the list.

5.
6.

List of items:

- Blah

Description of items:

Key Sparse description:
key Another entry

1.1 Referencing Information

Here is how I can reference common resources:

1. For online resources:
    (a) Author, "Title of web page," in *Title of Primary Web Site*, Name of Publisher/Organization/Individual Address, Month Date, Year. Available online at: http://www.webpage.url/; last accessed on June 2, 2014.

   (b) Regarding entries for my BibTeX database, insert the following to the "howpublished" field: Available online at: http://www.webpage.url/; June 11, 2012 was the last accessed date.

2. DOI field in BibTeX should be indicated as a URL: http://dx.doi.org/DOI.
3. To enter a summary of a paper that I have written into a report, enter it as a section (or subsection or subsubsection) with the following "fields":
   (a) In the title of the section, indicate the title of the paper and its abbreviation (i.e., its BibTeX key).
   (b) Terse summary: Summary of the paper in 2-3 lines.
   (c) Not-so-concise summary and highlights. Summarize the publication in ≤ 2 pages. For publications that are not survey papers nor literature review, highlight the advantages and disadvantages of the described techniques/innovations. For survey papers nor literature review publications, summarize the primary publications that was mentioned in the survey/review.
   (d) Other notes about the publication: Insert important figures and equations, among other details about the paper.
4. *BibDesk* only creates a folder for publications with non-empty author fields. Hence, when entering a BibTeX into my BibTeX database, enter the names of the editors into the `author` field. When citing edited publications, use a script to shift the content of the `author` field into the `editor` field. This enables PDF files associated with BibTeX entries in my BibTeX database to be placed in subdirectories in my repository of publications based on the author's (or first author's) last name.
5. Wikipedia contributors, "TITLE OF THE ARTICLE," in *Wikipedia, The Free Encyclopedia: CATEGORY*, Wikimedia Foundation, San Francisco, CA, MONTH DATE, YEAR.
6. Wikibooks contributors, "CHAPTER," in *TITLE OF THE BOOK*, Wikibooks: Open books for an open world, Wikimedia Foundation, San Francisco, CA, MONTH DATE, YEAR.
7. Wikibooks contributors, "SECTION," in *CHAPTER* of *TITLE OF THE BOOK*, Wikibooks: Open books for an open world, Wikimedia Foundation, San Francisco, CA, MONTH DATE, YEAR.
8. Wikibooks contributors, "TITLE OF THE BOOK," Wikibooks: Open books for an open world, Wikimedia Foundation, San Francisco, CA, MONTH DATE, YEAR.
9. Wikiquote contributors, "TITLE," Wikiquote, Wikimedia Foundation, San Francisco, CA, MONTH DATE, YEAR.
10. Wiktionary contributors, "TITLE," Wiktionary, Wikimedia Foundation, San Francisco, CA, MONTH DATE, YEAR.
11. Dictionary.com, "WORD," IAC, Oakland, CA, MONTH DATE, YEAR.
12. AUTHOR, "TITLE," in *The New York Times: The Opinion Pages: Op-Ed Contributor*, The New York Times Company, New York, NY, MONTH DATE, YEAR.
13. AUTHOR, "QUESTION", in *CATEGORY*, Quora, Inc., Palo Alto, CA, MONTH DATE, YEAR.
14. AUTHOR, Answer to "QUESTION", in *CATEGORY: QUESTION*, Quora, Inc., Palo Alto, CA, MONTH DATE, YEAR.
15. AUTHOR, "TITLE OF POST", in *BLOG TITLE*, Quora, Inc., Palo Alto, CA, MONTH DATE, YEAR.

1.2 Writing LaTeX Symbols

Symbols used to represent LaTeX and related computer languages/technologies and concepts are:

1. LaTeX

2. LaTeX 2_ε
3. BibTeX (or BibTeX)
4. METAPOST
5. METAFONT
6. ™
7. ®
8. ©
9. ℗

Other symbols of interests:

1. €
2. "\ >":
3.

1.3 Coloring in LaTeX

Things that I can do with colors in LaTeX:

1. To change the color of the text:
   (a) **TEXT**
   (b) INSERT_STUFF_HERE
   (c) **INSERT_STUFF_HERE**
2. **INSERT_STUFF_HERE**
3. Common colors that I tend to use in LaTeX:
   (a) Apricot
   (b) blue
   (c) cyan
   (d) ForestGreen
   (e) green
   (f) magenta
   (g) RoyalBlue
   (h) RubineRed
   (i) yellow
   (j) YellowOrange

Chapter 2

Mathematics

Math symbols that I use frequently:

1. $\mathbb{N}$
2. $\sum_{i=1}^{n}$
3. $f(x) = \lim_{n\to\infty} \frac{f(x)}{g(x)}$
4. $\varnothing$
5. q

A 3×3 matrix: $\begin{pmatrix} 11 & 12 & 13 \\ 21 & 22 & 23 \\ 31 & 32 & 33 \end{pmatrix}$

Here is an equation:

$$\iint_{\Sigma} \nabla \times \mathbf{F} \cdot \mathrm{d}\mathbf{\Sigma} = \oint_{\partial\Sigma} \mathbf{F} \cdot \mathrm{d}\mathbf{r}. \tag{2.1}$$

Here is an equation that is not numbered.

$$\nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t}$$

Here is the set of Maxwell's equations that is numbered.

$$\nabla \cdot \mathbf{E} = \frac{\rho}{\varepsilon_0} \tag{2.2}$$

$$\nabla \cdot \mathbf{B} = 0 \tag{2.3}$$

$$\nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t} \tag{2.4}$$

$$\nabla \times \mathbf{B} = \mu_0 \left(\mathbf{J} + \varepsilon_0 \frac{\partial \mathbf{E}}{\partial t} \right) \tag{2.5}$$

$$\begin{aligned}
&\text{minimize} \sum_{\mathrm{i}=1}^{\mathrm{c}} \mathrm{c_i} \cdot \mathrm{x_i} \\
&\underline{x} \in S \\
&\text{subject to :} \\
&x_1 + x_4 = 0 \\
&x_3 + 7 \cdot x_4 + 2 \cdot x_9 = 0
\end{aligned}$$

$$f(n) = \begin{cases} case - 1 & : \text{n is odd} \\ case - 2 & : \text{n is even} \end{cases} \tag{2.6}$$

Proof. This is a proof for BLAH ... □

Theorem 2.1. *TITLE of theorem. My theorem is...*

Axiom 2.1. *TITLE of axiom. Blah...*

Cases of putting a bracket/parenthesis on the right side of the equation.

$$\left.\begin{aligned} B' &= -\partial \times E, \\ E' &= \partial \times B - 4\pi j, \end{aligned}\right\} \quad \text{Maxwell's equations}$$

Cases of putting a bracket/parenthesis on the right side of the equation.

$$\left.\begin{array}{ll} E = mc^2 & \text{foo} \\ \int x - 3\,dx & \text{barbaz} \end{array}\right\} y = f(x)$$

Labeling an arrow: $\xrightarrow{ewq}$

Chapter 3

Tables

A template for inserting tables is shown in Table 3.1.

Table 3.1: My caption for my table

Level	Use	Features	Abstraction
Level	Use	Features	Abstraction
Level	Use	Features	Abstraction

Chapter 4

Figures

A template for inserting figures is shown in Figures 4.1, 4.2, 4.3, and 4.4.

I have used the `\clearpage` command to clear the remanding part of the first page for this section (§4), and insert the remaining figures and text in subsequent pages. If the last three figures (Figures 4.3 and 4.4) are reordered to the following order, Figures 4.4 and 4.3, the effects of the `\clearpage` command would be more evident.

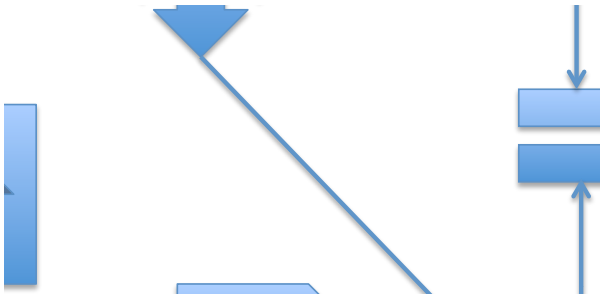

Figure 4.1: Caption for my figure1

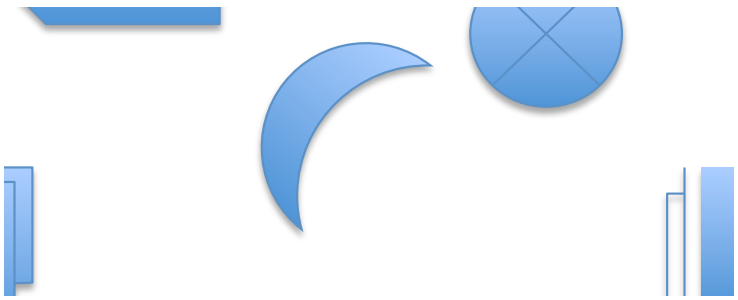

Figure 4.2: Caption for my figure2

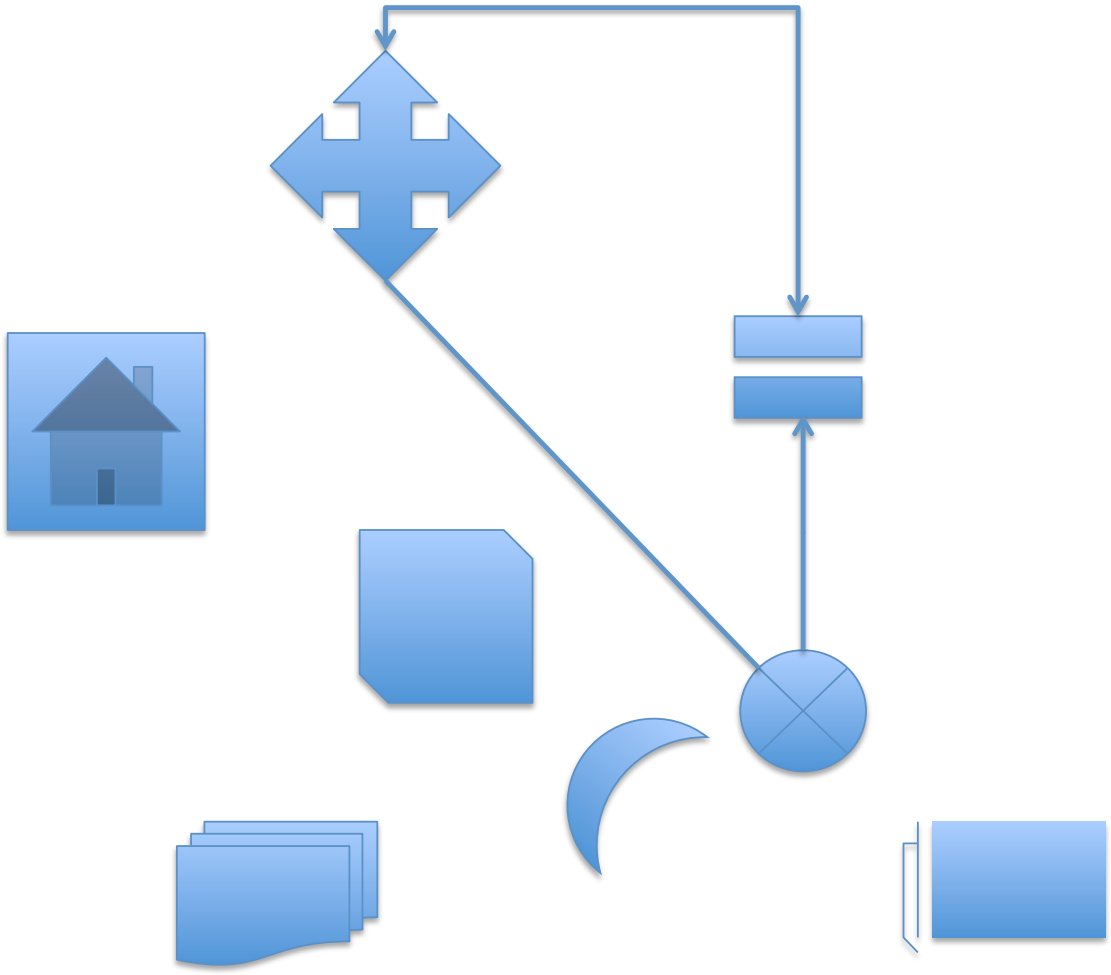

Figure 4.3: Caption for my figure3

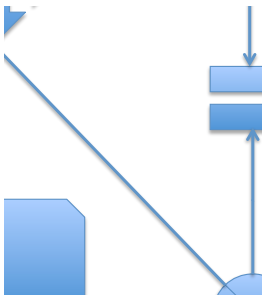

Figure 4.4: Caption for my figure4

Chapter 5

Algorithms

A template for typesetting algorithms is shown in PROCEDURE 5.

NAME OF THE ALGORITHM(*ARGUMENTS*)
    {*Input ARGUMENT #1: Definition1*}
    {*Input ARGUMENT #2: Definition2*}
1   BODY OF THE PROCEDURE
    {*A while loop.*}
2   **while** [condition]
3   [Something]
    {*A for loop.*}
4   **for** *Var* = [initial value] **to** [final value]
5   [Something]
    {*An if-elseif-else block.*}
6   **if** [Condition1]
7   Blah...
8   **elseif** [Condition2]
9   Blah...
10 **elseif** [Condition3]
11   Blah...
12 **else**
13   Blah...
    {*A variable assignment.*}
14 *blah* = *A*[*j*]
        {*This is indented with a tab.*}
    {*What is the output of this procedure?*}
15 **return**

Bibliography

[1] Karl Berry and David Walden. TEX People: Interviews from the world of TEX. TEX Users Group, Portland, OR, 2009.

[2] Donald Bindner and Martin Erickson. A Student's Guide to the Study, Practice, and Tools of Modern Mathematics. Discrete Mathematics and Its Applications. CRC Press, Boca Raton, FL, 2011.

[3] Thomas H. Cormen. Using the `clrscode3e` package in LATEX 2_ε. Avaliable on Dartmouth College: Department of Computer Science: Prof. Thomas H. Cormen's web page: The `clrscode` and `clrscode3e` packages for LATEX 2_ε at: http://www.cs.dartmouth.edu/~thc/clrscode/; September 18, 2010 was the last accessed date, January 27 2010.

[4] Antoni Diller. LATEX Line by Line: Tips and Techniques for Document Processing. John Wiley & Sons, Chichester, West Sussex, England, U.K., second edition, 1999.

[5] Michel Goossens, Frank Mittelbach, Sebastian Rahtz, Denis Roegel, and Herbert Voβ. The LATEX Graphics Companion. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Reading, MA, second edition, 2007.

[6] Michel Goossens, Sebastian Rahtz, Eitan M. Gurari, Ross Moore, and Robert S. Sutor. The LATEX Web Companion: Integrating TEX, HTML, and XML. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison Wesley Longman Limited, Reading, MA, 1999.

[7] Michel Goossens, Sebastian Rahtz, and Frank Mittelbach. The LATEX Graphics Companion: Illustrating documents with TEX and PostScript. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Reading, MA, 1997.

[8] George Grätzer. More Math Into LATEX. Springer Science+Business Media, LCC, New York, NY, fourth edition, 2007.

[9] David F. Griffiths and Desmond J. Higham. Learning LATEX. Society for Industrial and Applied Mathematics, Philadelphia, PA, 1997.

[10] Wilhelmiina Hämäläinen. Scientific writing for computer science students. Technical report, University of Joensuu, Joensuu, Finland, September 20 2006.

[11] Yannis Haralambous. Fonts & Encodings: From Unicode to Advanced Typography and Everything in Between. O'Reilly Media, Sebastopol, CA, 2007.

[12] Nicholas J. Higham. Handbook of Writing for the Mathematical Sciences. Society for Industrial and Applied Mathematics, Philadelphia, PA, second edition, 1998.

[13] Alan Hoenig. TEX Unbound: LATEX & TEX Strategies for Fonts, Graphics, & More. Oxford University Press, New York, NY, 1998.

[14] Donald E. Knuth. Digital Typography. Center for the Study of Language and Information – Lecture Notes. University of Chicago Press, Chicago, IL, 1999.

[15] Helmut Kopka and Patrick W. Daly. Guide to LATEX. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Boston, MA, fourth edition, 2004.

[16] Sandeep Koranne. Handbook of Open Source Tools. Springer Science+Business Media, LCC, New York, NY, 2011.

[17] Stefan Kottwitz. LATEX Beginner's Guide: Create high-quality and professional-looking texts, articles, and books for business and science using LATEX. Packt Publishing, Birmingham, U.K., 2011.

[18] Steven G. Krantz. Handbook of Typography for the Mathematical Sciences. Chapman & Hall/CRC, Boca Raton, FL, 2001.

[19] E. Krishnan. LATEX Tutorials: A Primer. Indian TeX Users Group, Trivandrum, India, September 2003.

[20] Leslie Lamport. LATEX: A Document Preparation System. Addison-Wesley, Reading, MA, second edition, 1994.

[21] Frank Mittelbach, Michel Goossens, Johannes Braams, David Carlisle, and Chris Rowley. The LATEX Companion. Addison-Wesley Series on Tools and Techniques for Computer Typesetting. Addison-Wesley, Boston, MA, second edition, 2004.

[22] Scott Pakin. The comprehensive LATEX symbol list. Available online at: http://mirror.ctan.org/info/symbols/comprehensive/symbols-a4.pdf; July 1, 2011 was the last accessed date, January 3 2008.

[23] Eric S. Raymond. The Art of UNIX Programming. Addison-Wesley Professional Computing Series. Pearson Education, Boston, MA, 2004.

[24] Martin Scharrer. The tikz-timing package: A LATEX package for timing diagrams. Available online at: http://www-inst.eecs.berkeley.edu/~cs150/fa13/resources/tikz-timing.pdf and http://latex.scharrer-online.de/tikz-timing; February 8, 2014 was the last accessed date, January 9 2011.

[25] Apostolos Syropoulos, Antonis Tsolomitis, and Nick Sofroniou. Digital Typography Using LATEX. Springer Professional Computing. Springer-Verlag New York, New York, NY, 2003.

[26] TeX Users Group. Proceedings of the International Conference on TeX, XML, and Digital Typography: Held Jointly with the 25^{th} Annual Meeting of the TeX Users Group, TUG 2004, volume 3130 of Lecture Notes in Computer Science, Xanthi, Greece, August 30-September 3 2004. Springer-Verlag Berlin Heidelberg.

[27] UIT Cambridge. LatexConditionals. Available online at: http://www.uit.co.uk/ForAuth/LatexConditionals; March 20, 2013 was the last accessed date, January 17 2011.

[28] M. R. C. van Dongen. LaTeX and Friends. X.media.publishing. Springer-Verlag Berlin Heidelberg, Heidelberg, Germany, 2012.

[29] Herbert Voss. PSTricks: Graphics and PostScript for TeX and LaTeX. UIT Cambridge, Cambridge, U.K., 2011.