

LATEX

UML ASSOCIATION FOR COMPUTING MACHINERY

TECHNICAL WRITING

- Technical writing can be tricky
- Words processors such as MS Word are not suitable for technical writing
 - Difficult for typing complex math formulas
 - Any program code cannot be properly formatted
- So what other tools can you use?



LATEX

- Markup language for typesetting documents
 - Created in 1984 by Leslie Lamport (also the creator of Lamport's Algorithm)
 - An extension of the typesetting language TeX
 - Papers submitted to ACM conferences are usually written in LaTeX
- LaTeX editors:
 - Overleaf: <https://www.overleaf.com/project>
 - LaTeX Workshop on VS Code: <https://marketplace.visualstudio.com/items?itemName=James-Yu.latex-workshop>
 - Kile: <https://apps.kde.org/kile/>

LATEX

WHY SHOULD YOU USE IT?

- Homework
 - Looks nice
 - Impresses professors
 - Easier than typing it in Word or Google Docs
 - Can easily include code in document
- Papers
 - Can segment different sections into their own files
 - Use BibTeX for sources
- Resume
 - Neatly format to highlight relevant skills/projects
 - ATS systems can parse text at a higher success rate

FEATURES

BASIC FORMATTING

- Lists
 - 1. Enumeration
 - Itemize
 - Description
- Tables
- **Bold**
- *Italics*
- Underline
- Monospace
- LaTeX

MATH MODE

- Allows you to type
 - Mathematical symbols
 - Greek letters
 - Sub & Super script
- Indicated by $$$$, $\backslash()$, $\backslash[]$
- Some commands only work in math mode, will cause errors outside
- Italicizes Latin letters, removes all spaces

IMAGES

- Image
 - `\usepackage{graphicx}`
 - `\includegraphics[]{}{ }`
 - Scale
 - Height
 - Width
 - Angle
- Figure
 - Positioning
 - Centring
 - Caption

LISTINGS

- Allows you to insert code into a document
- Some limited syntax highlighting
 - Type code in document
 - Insert from another file
- Very customisable with a wide variety of supported languages

ABAP (R/2 4.3, R/2 5.0, R/3 3.1, R/3 4.6C, <u>R/3 6.10</u>)	
ACM	ACMscript
ACSL	Ada (<u>2005</u> , 83, 95)
Algol (60, <u>68</u>)	Ant
Assembler (Motorola68k, x86masm)	Awk (<u>gnu</u> , POSIX)
bash	Basic (Visual)
C (<u>ANSI</u> , Handel, Objective, Sharp)	
C++ (11, ANSI, GNU, <u>ISO</u> , Visual)	Caml (<u>light</u> , Objective)
CIL	Clean
Cobol (1974, <u>1985</u> , ibm)	Comal 80
command.com (<u>WinXP</u>)	Comsol
csh	Delphi
Eiffel	Elan
elisp	erlang
Euphoria	Fortran (03, 08, 18, 77, 90, <u>95</u>)
GAP	GCL
Gnuplot	Go
hansl	Haskell
HTML	IDL (empty, CORBA)
Inform	Java (empty, AspectJ)
JVMIS	ksh
Lingo	Lisp (empty, Auto)
LIVM	Logo
Lua (5.0, 5.1, 5.2, <u>5.3</u>)	make (empty, gnu)
Mathematica (1.0, <u>11.0</u> , 3.0, 5.2)	Matlab (empty, 5.1)
Mercury	MetaPost
Miranda	Mizar
ML	Modula-2
MuPAD	NASTRAN
Oberon-2	OCL (decorative, <u>OMG</u>)
Octave	OORexx
Oz	Pascal (Borland6, <u>Standard</u> , XSC)
Perl	PHP
PL/I	Plasm
PostScript	POV
Prolog	Promela
PSTricks	Python (<u>2</u> , 3)
R	Reduce
Rexx (empty, VM/XA)	RSL
Ruby	S (empty, PLUS)
SAS	Scala (empty, 3.0)
Scilab	sh
SHELXL	Simula (<u>67</u> , CII, DEC, IBM)
SPARQL	SQL
Swift	tcl (empty, tk)
TeX (AllaTeX, common, LaTeX, <u>plain</u> , primitive)	
VBScript	Verilog
VHDL (empty, AMS)	VRML (<u>97</u>)
XML	XSLT

USEFUL LIBRARIES

- geometry
- enumitem
- fontenc
- xcolor
- amsmath, amssymb, amsthm
- hyperref
- tikz
- lipsum, kantlipsum

CONTACT INFO

Our Linktree!

