MATTALX symbol list

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Introduction

Browser and operating system

If you are using Windows, MatTalX in Google Chrome works very well. However, on a Linux based system, Firefox is recommended. MatTalX saves your work in progress, so you don't have to rewrite everything if you close the popup. As a Linux user, this feature works better on Firefox.

N.B. Every software renders unicode characters differently, this explains most bugs and weirdness.

Important differences with LaTeX

An important difference from LaTex is that you can't "build" a symbol in MatTalX (see "Combining symbols" in the table of content for nuance). As an example, $\stackrel{\text{def}}{=}$ is simply \def in MatTalX, but \stackrel{\rm def}{=} in LaTeX.

Since MaTalX converts command into UTF characters. Some expressions are impossible to build. As an example, $x^{x^{x}}$ couldn't work since everything as to fit in a line. The same goes for $\frac{1}{x^{x}}$ b} ${c}$ which can't work. If you need an expression like that, you can write $x^{x^{x}}$ and (a/b)/c/d respectively.

$$\sum_{x} x^{x^{x^{x}}} \text{ vs } \sum_{x} x^{x}(x^{x}(x^{x}(x)))$$

Contact

If you find a bug or have any suggestion, please tell me via https://github.com/samueleblanc/MatTalX/issues

Tutorial

MatTalX is a simple extension, there are only four buttons.

- 1. If you press **Convert**, the text written in the first area will be translated and the output will appear in the second area.
- 2. If you press **Copy text**, the text of the second area will be automatically copied on your clipboard, so that you can paste and send it afterwards.
- 3. If you press **Clear**, it will erase both areas.
- 4. If you hover over the question mark ② you will be able to see this document under "Documentation", the code under "Code (GitHub) and you can uncheck "Adjust spaces".

With "Adjust spaces" checked

Input: $x>y \setminus y \in 0 \setminus x>0$

Output: $x > y \land y \ge 0 \Longrightarrow x > 0$

Input: $Gamma(k) = \sum_{k=1}^{k=1} (2k^{2}+4)$

Output: $\Gamma(k) = \sum_{k=1}^{\infty} (2k^2 + 4)$

Input: x \equiv_{5} y

Output: $x \equiv 5 y$

With "Mathematical font" checked, every characters will be converted to their mathematical counterpart. For instance, f(x) = y outputs f(x) = y. If you do not want that, you can uncheck the button. Please note that it will also affect the greek alphabet, since the letters alpha and beta will be α,β and α,β with the button checked and unchecked respectively.

Finally, the button "Math mode" unchecked requires the user to manually enter math mode, with "\$", "\$\$" and "\[". It is therefore useful if one wants to embbed symbols in text, and not only output various symbols.

Example with "Math mode" unchecked:

Input: Let \$A \in M {mxn}(F)\$ be a matrix over a field \$F\$

Output: Let $A \in M_{m \times n}(F)$ be a matrix over a field F

To write subscript or superscript characters, start with "_" or "^" respectively. For instance, abc gives " abc " and ijk gives " ijk ".

Other commands starts with "\" (e.g. \subset gives " c ")

Shortcuts

Chrome	Firefox
$\mathbf{Ctrl} + \mathbf{M}$ opens and closes $\underline{\mathbf{M}}$ atTalX	Alt+M opens and closes <u>M</u> atTalX
Alt+I copies the text in the first box (<u>i</u> nput)	Alt+I copies the text in the first box (<u>i</u> nput)
Alt+O copies the text in the second box (output)	Alt+O copies the text in the second box (output)
Alt+S opens and closes the <u>s</u> uggestion box	Alt+C opens and closes the suggestion box (<u>c</u> ompletion)

Mathematics Unary and binary operators

+, -, \dotminus, \times	+, -, ÷, ×
\fracline, /, \div, \longdiv	/, /, ÷,)
\divideontimes, \smashtimes	₩,
\rtimes, \ltimes	$ ightarrow$, \ltimes
\rthree, \lthree	Κ, λ
#	#
!	!
\neg	٦

\sqrt[n]{x}, \sqrt{x}	$\int_{1}^{n} x, \sqrt{x}$
\prod, \sum	Π, Σ
\cdot, \cdotp, \bullet	., ., •
\ast, \star, \circ, \diamond	*, ★, ∘, ◊
\pm, \mp	±, ∓

\wr	₹
\bowtie	M

\sin, \cos, \tan	sin, cos, tan
\arcsin, \arccos, \arctan	arcsin, arccos, arctan
\cot, \csc, \sec	cot, csc, sec
\arccot, \arccsc, \arcsec	arccot, arcsc, arcsec

\ln, \log	In, log
\ln, \log	In, log

\det	det
\rank	rank
\hermitian	+

\grad	grad
\div	div
\curl	curl

\mod, \bmod	mod, mod
\pmod{n}	(mod n)

\cup, \cap	U, n
\sqcup, \sqcap	⊔, □
\Cup, \Cap	⋓, ⋒
\sqCup, \sqCap	,
\cupplus	(+)
\setminus	\
\amalg	П

\oplus, \ominus	⊕, ⊖
\otimes, \odot, \oslash	\otimes , \odot , \oslash
\ocirc, \obullet, \oast	⊚, ⊙, ⊛
\operp, \oparallel, \oeq	$\mathbb{O},\mathbb{O}, riangleright$

\opluslhrim, \oplusrhrim	,
\otimeslhrim, \otimesrhrim	,
\boxplus, \boxminus	⊞, ⊟
\boxtimes, \boxdot	⋈, ⊡

Calculus

\int, \iint \iiint, \iiiint	∫, ∬, ∭, ∭
\oint, \oiint, \oiiint	∮, ∯, ∰
\intclockwise	∱
\ointclockwise, \ointctrclockwise	∲ , ∳
\sqint, \timesint	∯, ≸
\cupint, \capint	∮, ∱
\fint	f
\overbarint, \underbarint	Ţ, <u>ſ</u>

\sum, \osum, \sumint	Σ, ,
----------------------	------

', ", \tprime	, ,,
\partial	д
\nabla	∇

\lim	lim
------	-----

Relation

=, \neq	=, ≠
\equiv, \superequiv	≡, ≣
\cong, \ncong	≅, ≇
\approx	≈
\sim, \nsim, \simeq	~, ≁, ≌
\doteq, \eqdot, \def, \equest	≐, , ^{def} , ?
\triangleq, \mquest, \dotequiv	$\stackrel{\Delta}{=}$, $\stackrel{\mathrm{m}}{=}$,
<,>	<,>
\nless, \ngtr	≮,≯
\II, \gg, \III, \ggg	«,»,««,»»
\lquest, \rquest	,
\leq, \geq, \leqslant, \geqslant	≤, ≥, ≤, ≽
\lnsim, \gnsim	≲, ≳
\Inapprox, \gnapprox	≨, ≩
\lneq, \gneq, \lneqq, \gneqq	\leq , \geq , \leq , \geq
\propto	\propto
:, \colon, \because, \therefore	:, :, ·, .

\prec, \succ, \nprec, \nsucc	≺, ≻, ∤ , ∤
\preceq, \succeq	≼, ≽
\precneqq, \succneqq	≨ , ≩
\precnsim, \succnsim	⋨,⋩
\precnapprox, \succnapprox	⋨ , ⋩

\in, \ni, \notin	€, ∋, ∉
\subset, \supset	⊂, ⊃
\nsubset, \nsupset	⊄,⊅
\subseteq, \supseteq	⊆, ⊇
\nsubseteq, \nsupseteq	⊈,⊉
\Subset, \Supset	€, ∋
\sqsubset, \sqsupset	⊏, □
\sqsubseteq, \sqsupseteq	⊑, ⊒
\subsetplus, \supsetplus	,
\osubset, \osupset	ত, ত
\pitchfork, \toppitch	π,

\originalof, \imageof	⊶, ⊷
\multimap, \leftmultimap	⊸, ⊶
\uptack	î

\triangleleft, \triangleright	\lhd , \rhd
\ntriangleleft, \ntriangleright	⊅, ⋫
\ntrianglelefteq, \ntrianglerighteq	⊉, ⊭

, \nmid	[,
\emptyset	Ø
\min, \max	min, max

Delimiters

(,)	(,)
\llparenthesis, \rrparenthesis	(,)
{, }	{, }
\IBrace, \rBrace	{ , }
[,]	[,]
\llbracket, \rrbracket	[,]
	[
\langle, \rangle	⟨, ⟩
\llangle, \rrangle	$\langle\!\langle , \rangle\!\rangle$
\lceil, \rceil, \lfloor, \rfloor	[,], [,]

Logic

\exists, \nexists, \exists!	∃, ∄, ∃!
\land or \wedge, \lor or \vee	∧, ∨
\sqland, \sqlor	፟, ₪
\doublewedge, \doublevee	,
\curlywedge, \curlyvee	人, 丫
\forall	A
\invamp	28

\vdash, \dashv, \nvdash	⊣, ⊢, ⊁
\Dashv, \vDash, \nvDash	, ⊨, ⊭
\dashV, \Vdash, \nVdash	, ⊩, ⊁

\DashV, \VDash, \nVDash	, ⊫, ⊭
\top, \bot	⊤, ⊥
\xor, \nand, \nor	$\underline{\vee}, \overline{\wedge}, \overline{\vee}$

\qed	
\blacksquare, \square	■, □
\lightning	4

Geometry

\parallel, \nparallel, \vvvert, \nvvvert	, ∦, , #
\asymp	\simeq
\perp, \not{\perp}, \Perp	⊥, ⊥/,
\angle, \rightangle	∠,
\measuredangle, \sphericalangle	∡,∢
\mid <i>or</i> , \nmid	[, ∤
\between	Ŏ

Arrows

\leftarrow, \rightarrow	←, →
\longrightarrow	\longrightarrow
\leftrightarrow	\leftrightarrow
\uparrow, \downarrow	↑,↓
\updownarrow	1
\nleftarrow, \nrightarrow	<i>↔</i> , <i>→</i>
\nleftrightarrow	

\Leftarrow, \Rightarrow	⇐ , ⇒
\Leftrightarrow, \iff	⇔, ⇔
\Longleftarrow, \implies	⇐,⇒
\Uparrow, \Downarrow	↑,↓
\Updownarrow	\$
\nLeftarrow, \nRightarrow	⟨≠, ≠⟩
\nLeftrightarrow	*
\mapsto	\mapsto

\rightharpoonup, \rightharpoondown	→, →
\leftharpoonup, \leftharpoondown	∠, —
\leftrightharpoons, \rightleftharpoons	<u></u> , <u></u>
\upharpoonleft, \upharpoonright	1,
\downharpoonleft, \downharpoonright	↓, ↓

\twoheadleftarrow, \twoheadrightarrow	≪-, ->>
\twoheaduparrow, \twoheaddownarrow	* , ↓
\leftleftarrows, \rightrightarrows	\Leftarrow , \Rightarrow
\upuparrows, \downdownarrows	↑↑, ↓↓
\leftrightarrows, \rightleftarrows	\iff , \rightleftharpoons
\hookleftarrow, \hookrightarrow	\leftrightarrow , \hookrightarrow
\looparrowleft, \looparrowright	←, +>
\Lsh, \Rsh	⟨1, >
\nwarrow, \nearrow	ベ , ブ
\searrow, \swarrow	``' √

\Lleftarrow, \Rrightarrow	∉, ⇒
\leftarrowtail, \rightarrowtail	\leftarrow , \rightarrowtail
\leftsquigarrow, \rightsquigarrow	⟨∿, ∿⟩
\leftrightsquigarrow	{ \}
\circlearrowleft, \circlearrowright	J, D
\curvearrowleft, \curvearrowright	∽, ∼
\tildeabovearrow, \tildebelowarrow	≃, ⇒
\equalabovearrow	≕

Fractions

\frac{1}{2}, \frac*{1}{2}	1/2, 1/2
\frac{f(x)}{g(x)}	(f(x)/g(x))

The difference between $\frac{a}{b}$ and $\frac{a}{b}$ is that $\frac{s}{ac}$ will first look for a single character fraction, if it doesn't exist, it will act as if you wrote $\frac{a}{b}$ is that $\frac{ac}{ac}$ will first look for a single character fraction, if it doesn't exist, it will act as if you wrote $\frac{ac}{ac}$ and output at least three characters (numerator, division, denominator). Embedded fractions (e.g. $\frac{ac}{ac}$ for a single character fraction has to fit in a line. Use $\frac{ac}{ac}$ is that $\frac{ac}{ac}$ will first look for a single character fraction, if it doesn't exist, it will act as if you wrote $\frac{ac}{ac}$ for a single character fraction, if it doesn't exist, it will act as if you wrote $\frac{ac}{ac}$ for a single character fraction, if it doesn't exist, it will act as if you wrote $\frac{ac}{ac}$ for a single character fraction, if it doesn't exist, it will act as if you wrote $\frac{ac}{ac}$ for a single character fraction, if it doesn't exist, it will act as if you wrote $\frac{ac}{ac}$ for a single character fraction fraction fraction fractions (e.g. $\frac{ac}{ac}$ for a single character fraction fraction

Chemistry

Introduction

To write a chemistry equation, you can start by writing **!chem** as the first word of the text. It won't automatically turn every letter in italic or "math style" (i.e. $f \rightarrow f$ instead of f) and it won't add spaces around "-, =, \equiv , \equiv " to allow the *drawing* of molecules.

ex:

 $\label{linear_condition} \emph{Input: } $$ \operatorname{CO}_{2}\longrightarrow O\above{:}\below{:}=C=O\above{:}\below{:} $$$

Output: $CO_2 \rightarrow \ddot{Q} = C = \ddot{Q}$

Also, ":" is equivalent to "\colon" with !chem, if you want it to be the same as without "! chem", use "\ratio" instead.

Symbols

lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:	:Ë:
\mid: Ca \longrightarrow Ca ^{2-}	:Ca → Ca²⁻

\mid. $\approx \dot and \mid: = \colon$ $x\above{.} = \dot{x} and x\above{:} = \dot{x}$

For arrows, see table of content.

Matrix

\id1	[1]
\id2	$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$
\id3	$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$
\id4	\[\begin{bmatrix} 1000 \\ 0100 \\ 0010 \\ 0001 \end{bmatrix} \]
\idn	$\begin{bmatrix} 1 & 0 & \cdots & 0 \\ 0 & 1 & \cdots & 0 \\ \vdots & \vdots & \ddots & \vdots \\ 0 & 0 & \cdots & 1 \end{bmatrix}$

To make the matrix of your choice, write !matrix as the first word, and then write the matrix that you want. As an example, "\id2" could be written as !matrix[1,0][0,1]

Other examples:

!matrix ...

[a,b,c][d,e,f][g,h,i]	$\begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix}$
[1,2,3][a,b,c]	$\left[\begin{array}{c} 1 \ 2 \ 3 \\ a \ b \ c \end{array}\right]$
[10,200,300][a,b,c-1]	10 200 300 a b c-1

If you want symbols in the matrix, you could do

Input : !matrix [2,3,\sigma][\frac*{1}{2}, 0,1]

Output:

$$\left[\begin{array}{cc}2&3&\sigma\\\frac{1}{2}&0&1\end{array}\right]$$

It is however recommended to uncheck "Mathematical font", since the automatic spacing will be better with the regular font.

Greek letters

\Alpha, \alpha	A , α
\Beta, \beta	B , β
\Gamma, \gamma	Γ , γ
\Delta, \varDelta \delta	Δ, Δ, δ
\Epsilon, \epsilon, \varepsilon	Ε, ε, ε
\Zeta, \zeta	Z , ζ
\Eta, \eta	H , η
\Theta, \theta, \vartheta	Θ, θ, ϑ
\lota, \iota	I , ι
\Kappa, \kappa, \varkappa	Κ, κ, κ

\Lambda, \lambda	Λ, λ
\Nu, \nu	Ν, ν
\Xi, \xi	Ξ, ξ
\Omicron, \omicron	О, о
\Pi, \pi, \varpi	Π , π , ϖ
\Rho, \rho, \varrho	Ρ, ρ, φ
\Sigma, \sigma, \varsigma	Σ , σ , ς
\Tau, \tau	Τ, τ
\Upsilon, \upsilon	Υ, υ
\Phi, \phi, \varphi	Φ, φ, φ
\Chi, \chi	Χ, χ
\Psi, \psi	Ψ , ψ
\Omega, \omega	Ω , ω

NB. The font will change if "Mathematical font" is unchecked.

Hebrew letters

\aleph	*
\beth	ב
\gimel	۵
\dalet	Т

Fonts

ABC abc 123	ABC abc 123
\mathbf{ABC abc 123}	$ABC\ abc\ 123$
\mathbf{\Alpha\alpha \Beta\beta}	Αα Ββ
\mathbb{ABC abc 123}	ABC abc 123
\mathfrak{ABC abc}	ABC abc
\mathcal{ABC abc}	\mathcal{ABC} abc
\mathbf{\mathfrak{ABC abc}}	ABC abc
\mathbf{\mathcal{ABC abc}}	\mathcal{ABC} abc
ABC abc 123	ABC abc 123
\textit{ABC abc 123}	
\textbf{ABC abc 123}	ABC abc 123
\texttt{ABC abc 123}	ABC abc 123
\textbf{\textit{ABC abc 123}}	ABC abc 123

\mathbb{\Pi \pi}	П ш
\mathbb{\Gamma \gamma}	LQ
\mathbb{\Sigma}	\Sigma

These are the only greek letters in \mathbb as of v 2.0.3

Combining symbols

\hat{x}, \overline{y}, \underline{z}	$\hat{x}, \bar{y}, \underline{z}$
\acute{o}, \grave{u}	ó, ù
\overfrown{nm}	$n\widehat{m}$
\oversmile{\rho\tau}	$\widecheck{o} au$
\undersmile{\mathbf{A}\mathbf{B}}	ĄB
\underarrow{xz}	<u>xz</u>
\underharpoon{\textbf{k}}	ķ
\tilde{\pi}	$ ilde{\pi}$
\tilde{uv}	\widetilde{uv}
\vec{e}	$ec{e}$
\hvec{\alpha}	$ec{lpha}$
\not{\perp}	Ш
\dot{x}, \ddot{y}	х, ÿ
p \above{x}	Ď
n \below{x}	ņ

Please note that \above{} and \below{} contains only a few possible arguments, most aren't available in unicode. But you can still do cool things like:

\sum_{i=}\above{n}_{0}k=(n+1)k $\rightarrow \sum_{i=0}^{n}k=(n+1)k$ (\above{} will be assigned to the character before it.)

Some will give a bad rendering (e.g. $hat{A} \rightarrow A$). However, the symbol might be positioned adequately in some app or website. I recommend the use of the "regular" alphabet if the goal is to add hat, overline, etc. You can do so by doing $hat{text{A}}$ instead $\rightarrow \hat{A}$ vs \hat{A} .

Subscript and superscript

To write regular characters as subscript or superscript, simply start the word with a $"_"$ or $"^"$ respectively.

x ^{abc123}, o ^{1+2=3}	$x^{abc123}, o^{1+2=3}$
y _{ijk456}, i _{2(3)=6}	$y_{ m ijk456},~i_{2(3)=6}$

Some characters are missing because they do not exist in unicode

ββ
Гүү
Δ δ
3
^
θ
I
υ
Q
σ
φ φ
Хχ

^{\int}	l
^{\neq}	=
^{\circ} or °	o
^{\$} <i>or</i> ^{\dollar}	\$
_{\rightarrow}	_
^{\infty}_{\infty}	∞ ∞
^{\emptyset}	Ø

Chess & card games

\wking, \bking	.
\wqueen, \bqueen	≝, ¥
\wrook, \brook	I, I
\wbishop, \bbishop	Â, 1
\wknight, \bknight	₺, 🛦
\wpawn, \bpawn	Å, Å

\wspade, \bspade	♠,♠
\wheart, \bheart	♡,♥
\wclub, \bclub	ಧಿ, ♣
\wdiamond, \bdiamond	♦, ♦

Money and currency

\dollar, \cent	\$, ¢
\euro, \franc, \ruble, \pound, \hryvnia	€, F, ₽, £, ₴
\yen, \rupee, \won, \baht	¥, ₹, ₩, ₿
\lira, \tlira	เบ, ₩
\peso	₽
\austral	A
\bitcoin	₿

Music

\halfnote, \fullnote, \doublenote	ار, م
\flat, \sharp, \natural	৳, ♯, ≒
\eightnote, \sixteenthnote, \quarternote	ا بر بر
\trebleclef	ķ

Box drawings

\boxur, \boxul, \boxdr, \boxdl	L, J, F, 7
\boxvr, \boxvl, \boxuh, \boxdh, \boxvh	├ , ┤ , ┴ , ┬ , ┼
\boxbfur, \boxbful, \boxbfdr, \boxbfdl	L, J , F, 7
\boxbfvr, \boxbfvl, \boxbfuh, \boxbfdh, \boxbfvh	├ , ┥, ┸, ┰, ┿
\boxUR, \boxUL, \boxDR, \boxDL	Ľ, ᆁ, ┏, ╗
\boxVR, \boxVL, \boxUH, \boxDH, \boxVH	╠,╣,╩,╦,╬

Other symbols

\infty	∞
\iinfin, \tieinfty, \nvinfty	, ,
\acidfree	@
\radioactive, \biohazard	❖, ﴿
\atom	288
\hbar	\hbar
\wp	80
\ell	ę
\angstrom	Å

\dagger, \ddagger	†, ‡
\section, \paragraph	§, ¶
\textbullet, \bigbullet	•, ●
\copyright, \registered	©, ®
/dc	Ą
\smile, \frown	∵ ,
\emdash	_
\squaredots	::
\ldots, \cdots, \udots, \vdots, \ddots	,,, i,
\male, \female	♂, ♀
\Hermaphrodite, \neuter	ợ ", γ
\femalemale	φ'
\malemale, \femalefemale	ॐ , ₽
\^, _	^,_

Space, line break, tab

```
Space : "\: "
Double spaces : "\; "
Triple spaces : "\quad "
Quadruple spaces : "\qquad "
Remove space : "\!" (usefull to cancel automatic spacing with "Adjust spaces")
Line break : "\\" or "\linebreak "
Tab : "\tab "

To skip multiple line, use "\vskip{1} ", "\vkip{2} ", ... "\vskip{n} "
To add multiple spaces, use " hspace{1} ", "\hspace{2} ", ... "\hspace{n} "
```

Also note that it's possible to uncheck "Adjust spaces" (more info in "Tutorial") and to make modifications, including adding or removing spaces, skipping a line, etc., once the converted text is in the second area.