

tabularray로 표 그리기

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도입

혜성처럼 등장한...

- Overleaf users must download from
<https://ctan.org/tex-archive/macros/latex/contrib/tabularray> and put it in the project directory.
- `sudo tlmgr update tabularray`
- 2022A 기준

표를 그리자

입력	출력
1	5
2	7
3	9

기본

열 타입 i

colspec

참고: Tabularray[†] 매뉴얼 ???

a_i	b
	text
x_i	text

```
\begin{tblr}{%
  vlines, hlines,
  colspec = {Q[$]l},
}
  a_i & b & \\
    & text & \\
  x_i & text & \\
\end{tblr}
```

[†]버전 2022A (2022-03-01)

칸 정렬 i

tbhf h: text in the head of the cell

f: foot of the cell

b: bottom line in the middle

t: top line in the middle

참고: Tabularray[†] 매뉴얼 ???

row head	top line	middle	line bottom	row foot
row head	top line	11 22 mid 44	line bottom	row foot

칸 정렬 ii

```
\begin{tblr}[t]{hlines, colspec={c}, baseline=T}
  \hline
  {row\\head} & {top\\line} & {middle} & {line\\bottom}
    & {row\\foot} \\
  \hline
  {row\\head} & {top\\line} & {11\\22\\mid\\44\\55} & {
    line\\bottom} & {row\\foot} \\
  \hline
\end{tblr}
```

[†]버전 2022A (2022-03-01)

문장과 정렬 ii

```

Lorem ipsum
\begin{tblr}[t]{hlines, colspec={c}, baseline=T}
dolor \\\ sit \\\ amet,
\end{tblr}
consectetur
\begin{tblr}[b]{hlines, colspec={c}, baseline=B}
adipiscing \\\ elit. \\\
\end{tblr}
```

[†]버전 2022A (2022-03-01)

열 너비 비율 i

참고: Tabulararray[†] 매뉴얼 ???

Category	Operation	Description
Arithmetic Operations	Addition	$C \leftarrow A + B$
	Subtraction	$C \leftarrow A - B$
Bitwise Boolean Operations	NAND	$C \leftarrow \neg(A \& B)$
	NOR	$C \leftarrow \neg(A B)$
	XNOR	$C \leftarrow A \equiv B$
	AND	$C \leftarrow A \& B$
	OR	$C \leftarrow A B$
	XOR	$C \leftarrow A \oplus B$
Shifting Operations	Logical Right Shift	$C \leftarrow A \gg 1$
	Arithmetic Right Shift	$C \leftarrow A \ggg 1$
	Logical Left Shift	$C \leftarrow A \ll 1$
	Arithmetic Left Shift	$C \leftarrow A \lll 1$

열 너비 비율 ii

```
\begin{tblr}{colspec={X[4,c]X[5,l]X[3,l,f]},rulesep=.8pt
}
\hline[1pt]
Category & Operation & Description \\
\hline
\hline
\SetCell[r=2]{m} {Arithmetic\\Operations} & Addition &
    $C \asgn A + B$ \\
    & Subtraction & $C \asgn A
    - B$ \\
\hline
\SetCell[r=6]{m} {Bitwise\\Boolean\\Operations} & NAND
    & $C \asgn \neg(A \mathbin{\&} B)$ \\
    & NOR & $C \asgn \neg(A \mathbin{|} B)$
```

열 너비 비율 iii

```

& XNOR & $C \asgn A \
    mathbin{\equiv} B$ \\
& AND & $C \asgn A \
    mathbin{\&} B$ \\
& OR & $C \asgn A \mathbin
    {|} B$ \\
& XOR & $C \asgn A \oplus
    B$ \\
\hline
\SetCell[r=4]{m} {Shifting\Operations} & Logical
    Right Shift & $C \asgn A \gg 1$ \\
    & Arithmetic Right Shift &
        $C \asgn A \ggg 1$ \\
& Logical Left Shift & $C \
    asgn A \ll 1$ \\

```

열 너비 비율 iv

```
\hline[1pt]
\end{tblr}
```

```
& Arithmetic Left Shift & $C
\asgn A \l1l 1$ \\\
```

[†]버전 2022A (2022-03-01)

심화

특별한 구분자 i

vline & hline

참고: Tabularray[†] 매뉴얼 **2.2 Hlines and Vlines**

Equation : $\text{CH}_4 + 2\text{O}_2 \longrightarrow \text{CO}_2 + 2\text{H}_2\text{O}$				
Initial	n_1	n_2	0	0
Final	$n_1 - x$	$n_2 - 2x$	x	$2x$

특별한 구분자 ii

```
% \usepackage{chemmacros} in the preamble
\begin{tblr}{%
  vlines, hlines,
  colspec = {lX[c]X[c]X[c]X[c]},
  vline{2} = {1}{ text = \clap{:} },
  vline{3} = {1}{ text = \clap{\ch{+}} },
  vline{4} = {1}{ text = \clap{\ch{->}} },
  vline{5} = {1}{ text = \clap{\ch{+}} },
}
Equation & \ch{CH4} & \ch{2 O2} & \ch{CO2} & \ch{2 H2O}
        } \\
Initial   & $n_1$      & $n_2$      & 0          & 0 \\
Final     & $n_1-x$    & $n_2-2x$   & $x$        & $2x$ \\
\end{tblr}
```

[†]버전 2022A (2022-03-01)

표 명령어 i

- `\NewTableCommand`를 사용하여 표 안에서 명령 사용 가능
- `\NewTableCommand` 안에는 텍스트 입력 불가
- `expand` 옵션으로 타협

참고: `Tabularray`[†] 매뉴얼 **3.2.3 Expand Macros First, 3.6 New Table Commands**

1	Beta	Gamma	Delta
2	Beta	Gamma	Delta
3	Beta	Gamma	Delta

표 명령어 ii

```
% \NewTableCommand\SC{\SetCell{bg=red8}} in the preamble
\begin{tblr}{%
  hlines, vlines,
  cell{1}{2-4} = {bg=gray9},
}
  1 & Beta & Gamma & Delta & \\\
  2 & Beta & Gamma & Delta & \\\
  3 & \SC Beta & \SC Gamma & Delta & \\\
\end{tblr}
```

[†]버전 2022A (2022-03-01)

표 환경 i

- \NewTblrEnviron를 사용하여 새로운 표 환경 정의 가능
- 내부 설정 (inner specifications)
- 외부 설정 (outer specifications)

참고: Tabularray[†] 매뉴얼 **3.1 Inner Specifications, 3.2 Outer Specifications, 3.4 New Tabularray Environments, 3.5 New General Environments**

1	Beta	Gamma	Delta
2	Beta	Gamma	Delta
3	Beta	Gamma	Delta

표 환경 ii

```
% \NewTableCommand\SC{\SetCell{bg=red8}} in the preamble
\begin{tblr}{%
  hlines, vlines,
  cell{1}{2-4} = {bg=gray9},
}
  1 & Beta & Gamma & Delta & \\\
  2 & Beta & Gamma & Delta & \\\
  3 & \SC Beta & \SC Gamma & Delta & \\\
\end{tblr}
```

[†]버전 2022A (2022-03-01)

siunitx i

참고: Tabularray[†] 매뉴얼 ???

V_s [mV]	V_R [mV]	V_D [mV]	I_D [μ A]
100.47	0.035	100.002	0.035
199.67	0.144	199.46	0.145
296.41	0.974	295.17	0.983
400.26	7.470	392.57	7.539
500.13	36.904	463.48	37.247
602.24	94.535	507.65	95.413
703.92	168.73	535.10	170.30
801.07	248.07	552.89	250.37
899.73	332.25	567.62	335.34
1008.14	428.76	579.35	432.74
1104.33	514.13	589.49	518.90
1200.23	602.45	597.38	608.04

siunitx ii

```
% \UseTblrLibrary{booktabs}
% \UseTblrLibrary{siunitx} in the preamble
\begin{tblr}{S[table-format=4.2]S[table-format=3.3]S[
  table-format=3.3]S[table-format=3.3]}
  \toprule
  {{{$V_s$ [mV]}}} & {{{$V_R$ [mV]}}} & {{{$V_D$ [mV]}}}
    & {{{$I_D$ [ $\mu$ A]}}} \\
  \midrule
  100.47      & 0.035      & 100.002    & 0.035\\
  199.67      & 0.144      & 199.46     & 0.145\\
  296.41      & 0.974      & 295.17     & 0.983\\
  400.26      & 7.470      & 392.57     & 7.539\\
  500.13      & 36.904     & 463.48     & 37.247\\
  602.24      & 94.535     & 507.65     & 95.413\\
  703.92      & 168.73     & 535.10     & 170.30\\
  801.07      & 248.07     & 552.89     & 250.37\end{tblr}
```

siunitx iii

899.73	& 332.25	& 567.62	& 335.34\\
1008.14	& 428.76	& 579.35	& 432.74\\
1104.33	& 514.13	& 589.49	& 518.90\\
1200.23	& 602.45	& 597.38	& 608.04\\

\bottomrule
\end{tblr}

[†]버전 2022A (2022-03-01)