Cool Latex

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Table 1: List of special notations

Name	Dependencies	Code	Illustration
Bracket	stmaryrd	\llbracket	$[\![$

0.1 Notation

0.2 Arrow

0.2.1 Squiggle arrow

Required packages: tikz, amsmath, amssymb

The squiggle arrow is drawn by tikz [**?**], and the code is as follows:

```
\documentclass{...}
\usepackage{tikz}
\usepackage{amsmath,amssymb}

\usetikzlibrary{calc,decorations.pathmorphing,shapes}
\newcounter{sarrow}
\newcommand\xrsquigarrow[1]{%
\stepcounter{sarrow}%
\mathrel{\begin{tikzpicture}[baseline= {( $ (current bounding box.south) + (0,-0.5ex) $ )}]
\node[inner sep=.5ex] (\thesarrow) {$\scriptstyle #1$};
\path[draw,<-,decorate,
  decoration={zigzag,amplitude=0.7pt,segment length=1.2mm,pre=lineto,pre length=4pt}]
    (\thesarrow.south east) -- (\thesarrow.south west);
\end{tikzpicture}}%
}

\begin{document}
\[ s_1 \xrsquigarrow{e} s_2 \]
\end{document}
```

With the above code, you can draw a squiggle arrow as follows:

$$s_1 \xrightsquigarrow{e} s_2$$

With the following code, you can draw more styles of arrows as follows:

```
\[
A\xrightarrow{f} B\quad A\rightsquigarrow B\quad A\xrsquigarrow{f}B\quad A\xrsquigarrow{(f\
     circ g)\circ h}B
\]
```

$$A \xrightarrow{f} B \quad A \rightsquigarrow B \quad A \xrightsquigarrow{f} B \quad A \xrightsquigarrow{(f\circ g)\circ h} B$$

0.3 Saving Space

0.3.1 Reduce marginal space

```
\ifdefined \ReduceSpace
    \addtolength{\parskip}{-1mm}
    \addtolength{\floatsep}{-6mm}
    \addtolength{\textfloatsep}{-6mm}
    \addtolength{\abovecaptionskip}{-0.5mm}
    \addtolength{\belowcaptionskip}{-0.5mm}
\fi
```

0.3.2 Remove ACM permission

Required Packages: etoolbox

```
\documentclass[xxx]
\usepackage{etoolbox}

\makeatletter
\patchcmd{\maketitle}{\@copyrightspace}{}{}{}
\makeatother

\maketitle
\begin{document}
...
\end{document}
```

0.4 Code Snippet

Required packages: listtings, xcolor

The latex code below is to define the style for "lstset". If you want to import a code snippet, you need to write the code as Listing 4 and refers it by "$\backslash ref\{list:lst\}$".

Listing 1: Style definition for lstset

```
\definecolor{pblue}{rgb}{0.13,0.13,1}
\definecolor{pgreen}{rgb}{0,0.5,0}
\definecolor{pred}{rgb}{0.9,0,0}
\definecolor{pgray}{rgb}{0.46,0.45,0.48}
\definecolor{ppurple}{rgb}{1,0.2,1}
\definecolor{pblack}{rgb}{0,0,0}
\lstset{
    basicstyle=\scriptsize\tt,
    tabsize=4,
    showstringspaces=false,
    columns=flexible,
    commentstyle=\color{pgreen},
    keywordstyle=\color{pblue},
    stringstyle=\color{ppurple},
    breaklines=true,
    language=Java,
    showspaces=false,
    numbers=left,
    numbersep=5pt,
    numberstyle=\tiny\color{pblack},
    frame=single
}
```

Listing 2: Example for lstset

```
\begin{lstlisting}[label=list:lst,caption=Example for lstset]
Your code here
\end{lstlisting }
```

0.4.1 Putting your code into figure

```
\begin{figure}
\begin{center}
    \lstinputlisting{code/example.java}     %the location of your code
    \caption{An example of Java program}\label{fig:example}
\end{center}
\end{figure}
```

0.4.2 Setting width of frame

Listing 3: Setting width of frame

```
\begin{lstlisting}[label=list:lst,caption=Setting with of frame,linewidth
     =0.8\textwidth]
Your code here
\end{lstlisting }
```

You can set "xleftmargin" and "xrightmargin" properties to adjust the position in the page.

0.4.3 Frame style of code

The style of frame can be adjusted by the property "frame". The frame is not shown by default or setting the property "frame" to "none".

Listing 4: Frame style of the code

```
\begin{lstlisting}[label=list:lst,caption=Frame style of the code,frame=shadowbox]
Your code here
\end{lstlisting }
```

0.5 Equation

0.5.1 Aligning equations

If you are going to list more than one equation in an aligned manner, you can use the *split* or *aligned* in the package *amsmath*. Two samples are shown as below:

```
\begin{equation} \label{eq:align_sample_1}
a = \sum_{i=1}^{n} i \\
b = \frac{(n+1)(n+2)}{n!}
\end{equation}
```

$$
\begin{aligned}
a &= \sum_{i=1}^{n} i \\
b &= \frac{(n+1)(n+2)}{n!}
\end{aligned}
\tag{1}
$$

```
\begin{equation} \label{eq:align_sample_2}
\begin{aligned}
F ={} & \{F_{x} \in F_{c} : (|S| > |C|) \\
     & \cap (\mathrm{minPixels} < |S| < \mathrm{maxPixels}) \\
     & \cap (|S_{\mathrm{conected}}| > |S| - \epsilon)\}
\end{aligned}
\end{equation}
```

$$
\begin{aligned}
F = \{&F_x \in F_c : (|S| > |C|) \\
&\cap (\mathrm{minPixels} < |S| < \mathrm{maxPixels}) \\
&\cap (|S_{\mathrm{conected}}| > |S| - \epsilon)\}
\end{aligned}
\tag{2}
$$