LaTeX Notes

K

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Contents

1 Page Setup

2 Comments

Comments are lines parts of code that are not compiled.
This can be done as a line or as an environment.

```
1   % This line would not show up on the compiled PDF.
```

Comment by Line

```
1   \begin{comment}
2     This line would not show up on the compiled PDF.
3     This would not be in the final document either.
4     Nor would this one.
5   \end{comment}
```

Comment by environment

3 Preamble

4 Text Formatting

4.1 Font Styles

Type	Format	Result
Bold	\textbf{Text}	**Text**
Italics	\textit{Text}	*Text*
Underline	\underline{Text}	<u>Text</u>

Source

- https://latex-tutorial.com/symbols/text-formatting/

Further Study

- https://www.overleaf.com/learn/latex/Bold%2C_italics_and_underlining

- https://latex-tutorial.com/changing-font-style/

4.2 Font Sizes

Type	Format	Result
tiny	{\tiny Text}	Text
scriptsize	{\scriptsize Text}	Text
footnotesize	{\footnotesize Text}	Text
small	{\small Text}	Text
normalsize (default)	{\normalsize Text}	Text
large	{\large Text}	Text
Large	{\Large Text}	Text
LARGE	{\LARGE Text}	Text
huge	{\huge Text}	Text
Huge	{\Huge Text}	Text

Source

- https://texblog.org/2012/08/29/changing-the-font-size-in-latex/

- https://latex-tutorial.com/symbols/text-formatting/

4.3 Verbatim

- https://www.overleaf.com/learn/latex/Code_listing

5 Symbols

5.1 Degrees Symbol

The \degree command is provided by the gensymb package, so if you add:

\usepackage{gensymb}

to your preamble, that should enable the command.

Another alternative is the \textdegree command, which is provided by the textcomp package. And finally, $^{\circ}$ is another way of obtaining roughly the right symbol.

6 Tables

Tables are Included in LaTeX there are no packages are required to be used.

6.1 Table with no Borders

```
1  \begin{center}
2    \begin{tabular}{ c c c }
3      cell1 & cell2 & cell3\\
4      cell4 & cell5 & cell6\\
5      cell7 & cell8 & cell9
6    \end{tabular}
7  \end{center}
```

cell1	cell2	cell3
cell4	cell5	cell6
cell7	cell8	cell9

6.2   Table with Borders

```
1  \begin{center}
2    \begin{tabular}{|c|c|c|}
3      \hline
4      cell1 & cell2 & cell3\\
5      cell4 & cell5 & cell6\\
6      cell7 & cell8 & cell9\\
7      \hline
8    \end{tabular}
9  \end{center}
```

cell1	cell2	cell3
cell4	cell5	cell6
cell7	cell8	cell9

6.3   Table with Double Borders

```
1  \begin{center}                    11      \hline
2    \begin{tabular}{||c c c||}      12    \end{tabular}
3      \hline                        13  \end{center}
4      cell1 & cell2 & cell3\\ [0.5
       ex]
5      \hline \hline
6      cell4 & cell5 & cell6\\
7      \hline
8      cell7 & cell8 & cell9\\
9      \hline
10     cell10 & cell11 & cell12\\
       [1ex]
```

cell1	cell2	cell3
cell4	cell5	cell6
cell7	cell8	cell9
cell10	cell11	cell12

Source

- https://www.overleaf.com/learn/latex/Tables

7   Columns

Include the following in the preamble:

```
1  \usepackage{multicol}          %Package for columns
2  \setlength{\columnsep}{1cm}    %Initialize spacing between columns
```

Preamble

7.1 Column Separation

```
1  \begin{multicols}{2}
2    [
3    \noindent \textbf{First Section}\\
4    All things are subject to decay. And when fate summons, Monarchs
       must obey.
5    ]
6    \blindtext
7  \end{multicols}
8  Thanks to the genius of the authors of life itself this occurs and
       will continue until the cycle ends.
```

First Section
All things are subject to decay. And when fate summons, Monarchs must obey.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Thanks to the genius of the authors of life itself this occurs and will continue until the cycle ends.
Source

- https://www.overleaf.com/learn/latex/Multiple_columns

8 Tikz

8.1 circuitikz

Source

- https://www.overleaf.com/learn/latex/LaTeX_Graphics_using_TikZ%
  3A_A_Tutorial_for_Beginners_(Part_4)%E2%80%94Circuit_Diagrams_
  Using_Circuitikz

9 Including Files

9.1 Image Files

9.2 Coding Files

```
1  bool Graph::isCycle() {    //similar to DFS
2  for(int i = 0; i < size; i++) {
3    parents[i] = i;
4    colors[i] = i;
5    colors[i] = 'W';
6  }
7  int t = 0;
8
9  for(int i =0; i < size; i++) {
10    //nodes are either White or Black in here
11    if(colors[i] == 'W'){
12      //color[i] = 'G';
13      bool res = isCycleVisit(i, t);
14      if(res)
15        return res;
16    }//if
17  }//for
18  return false;
19  }
```

Function: Graph::isCycle()

Source

- https://www.overleaf.com/learn/latex/Code_listing