Latex Certificate Course Instructions

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1 LaTeX Options

LaTeX is qutie advanced these days. There are standard ways for doing things in LaTeX. For example, if you make a psudeo-heading \\

\textbf{\large 2 LATEX Fonts } \\

instead of \section{\LaTeX{} Fonts} you will get

2 LATEX Fonts

Such psudeo-headings have some defects :

1. section and subsection dynamic numbering won't work

2. LaTeX table of contents would ignore it.

3. and the spacing is different.

There are many such minute details that are automatically managed by LaTeX. Thus, read manuals and online forums until you get used to the way LaTeX does things.

In general, temporary solutions and adjustments won't flow well with the LaTeX documentation process. If you don't use the available commands and environments, then you will have to customize everything on your own. Things will get complicated as your document size increases. On the other hand, if you apply the standard solutions, LaTeX will always generate a beautiful document with minimal effort from your end.

2 LaTeX Fonts

Font defined how each character is printed on the screen/paper. There are few things to learn about LaTeX's Fonts. Before that, I would like to remind that you should not think about font related commands before completing the entire content for your document. There are two reasons for that

1. There are environments and commands suitable for bulk customization.

2. Font details are quite a distraction for content preparation.

The other documentation softwares might have a bad influence on you. You might tend to boldface a word or two. Better you keep an control on that urge of yours.When you are using LaTeX try to follow original flow of document preparation. If you can overcome the urge to highlight words on the go, then you will always have to make corrections every time and spend a lot of time on corrections.

There are five details for each font :

1. encoding - the order in which characters appear

2. family - the collection of fonts of a common nature/source

3. series - the weight/span of characters

4. shape - the different forms of characters

5. size - the size of the characters

We will focus more on font families, series, shapes and sizes.

2.1 Font Families

\textrm (Roman), \textsf (San Sherif), \texttt (Typewritter) are a few font families. Many more font families are available in different packages.

2.2 Font Series

The font series specifies the weight (boldness) and span(width) of characters. \textbf (**bold**), \text are a few font series.

2.3 Font Shapes

\textit *(italics)*, \textsl *(slanted)*, \textsc (Smallcap) are a few font shapes.

2.4 Font Sizes

\tiny, \scriptsize, \footnotesize, \small,\normalsize, \large, \Large, \LARGE, \huge, \Huge are different font sizes available.

3 Typesetting

3.1 Readability

LaTeX typesetting algorithms, stretches the spaces in between characters and words automatically to enhance readability of the document.

3.2 Ligatures

LaTeX combines a few characters to form a single glyph. You probably won't recognize them at first. For example, fi,fl,ffl,ff.

3.3 Bad Emphasis

Underlining makes the document look ugly, instead use *italics* or *slanted* text. And, the 'use of quotes' to emphasis a word or phrase **affects** readability. It is better to use the bold weight.

4 Symbols

The following table has the commands for commonly used symbols,

Command	Symbol	Command	Symbol
\textbackslash	\	\dots	. . .
\textasciicircum	ˆ	\&	&
\textasciitilde	˜	\S	§
\textcopyright	©	\%	%

Table 1: LaTeX Symbols

4.1 Quotes and Dashes

LaTeX offers two different quote characters ' and '. For left quote character, use the key below Esc on your keyboard. And for double quotes use them twice. It is better not to use the double quote key on your keyboard.

There are three different dashes available in LaTeX. You will have to use the dash once(-) for compound words, twice(–) for numerical ranges or thrice(—) for parenthetical phrases. And they are called hyphen, en dash, and em dash respectively.

4.2 Line Break

\\is used for line breaks. Leaving blank lines in between will also produce a line break. LaTeX will consider multiple **white spaces** as a single one. Thus, multiple blank lines won't make any difference.