5 Characters in LaTeX

5.1 Simple Characters

- a–z, A–Z
- 0–9
- , ; . : ? ! ‘ ’ ( ) / * @
- [ ]

Table 1: Characters treated normally

All alphabetic characters that are not part of a command name are treated normally. The digits are always treasted normally.

- [ ]
- # $ % & _ { }
- ^ \ ~
- -

Table 2: Special characters

Most punctuation is treated normally, but the rest needs special treatment.

Square brackets are normally treated as ordinary characters, except when they follow a command that takes optional arguments. If they do, enclose them in curly brackets. For example, under certain circumstances there is a command called "`\item`" which takes an optional argument. So, to follow it with a square bracket one would use "`\item{[}`". `\item` takes no ordinary arguments and so does not process the contents of the curly brackets as an argument.

The set of characters "`#`", "`$`", "`%`", "`&`", "`_`", "`{`" and "`}`" all have special significance in LaTeX, as will be explained later, but can be generated by by the LaTeX commands "`\#`", "`\$`", "`\%`", "`\&`", "`\_`", "`\{`" and "`\}`".

The set of characters "`^`", "`\`" and "`~`" are not available in simple text mode. See section 7.4 on "verbatim" input for a description on how to get at these characters.

5.2 LaTeX commands that generate characters

There are certain character combinations that have special meaning. For example "`‘‘`", "`’’`", "`?‘`" and "`!‘`" give quotation marks, and the Spanish inverted question and exclamation marks.

LaTeX is capable of three distinct "dashes". The simple hyphen is the shortest of the three and is obtained by simply typing a dash: `co-operate` gives "co-operate". The slightly longer "n-dash" is used for ranges and is given by a double dash in the input. The "m-dash" used for parenthetical comments is given by a triple dash. Consider:

`a-a`	a-a
`a--a`	a–a
`a---a`	a—a

Table 3: The three dashes: hyphen, n-dash and m-dash

Other special characters are generated by other standard LaTeX commands. Table 4 contains a list of those that appear in conventional text.

`\dag`	†	`\ddag`	‡
`\S`	§	`\P`	¶
`\pounds`	£	`\ss`	ß
‘‘	“	’’	”
?‘	¿	!‘	¡
--	–	---	—
`\aa`	å	`\AA`	Å
`\ae`	æ	`\AE`	Æ
`\l`	ł	`\L`	Ł
`\o`	ø	`\O`	Ø
`\oe`	œ	`\OE`	Œ
`\i`	ı	`\j`	ȷ

Table 4: Commands giving special characters

The "backslash" commands all need a trailing space or other special attention.

```
encyclop\ae␣dia
```

```
encyclop{\ae}dia
```

encyclopædia

5.3 Accented Characters

`\'{o}`	ó	`\`{o}`	ò
`\^{o}`	ô	`\"{o}`	ö
`\~{o}`	õ	`\.{o}`	ȯ
`\={o}`	ō	`\H{o}`	ő
`\u{o}`	ŏ	`\v{o}`	ǒ
`\t{oo}`	o͡o	`\c{o}`	o̧
`\d{o}`	ọ	`\b{o}`	o̲

Table 5: Commands giving accented characters

- Table 5 gives a list of accent instructions.
- Accents can be placed over arbitrary characters.
- Use `\i` and `\j` with accents:

  `\"i` gives ï

  `\"\i` gives ï
- Stacking is not generally possible:

  `\c{\'{o}}` gives ó̧

  `\'{\c{o}}` gives ´o̧

5.4 Horizontal White Space in Output

LaTeX has two principal types of break in its linear text:

word breaks are caused by one or more spaces or by the end of the input line

sentence breaks are caused by a word break after a "!", "?" or "." *unless* the punctuation follows a capital letter (because LaTeX then assumes it is a word break after an abbreviation).

There are three commands to influence the breaks:

`~` creates a word break that may not be used to split a line.

```
Dr.~Livesey
```

`\␣` creates a word break.

```
\LaTeX\␣is␣a␣good␣thing.
```

`\@` before a punctuation character forces a sentence break.

```
...the␣C.U.S\@.␣But␣some...
```

5.5 Vertical White Space in Output

LaTeX has a very good line-splitting algorithm for plain text. The single line breaks in the input text have no effect on the final output's line breaks.

The `\\` command will force a line break. The `\\*` command will force a line break but not allow it to be used for a page break. (c.f. the use of `~` for a non-splitting horizontal break.)

A blank line (including lines consisting solely of whitespace) in the input will cause a paragraph break and the `\newpage` command will force a page throw.