

*argument*

1

**argument.** An *argument* contains text that is passed to a command. The arguments of a command complete the description of what the command is supposed to do. The command can either be a primitive command or a macro.

Each primitive command has its own convention about the form of its arguments. For instance, the sequence of tokens:

```
\hskip 3pc plus 1em
```

consists of the command ‘\hskip’ and the arguments ‘3pc plus 1em’. But if you were to write:

```
\count11 3pc plus 1em
```

you’d get an entirely different effect. T<sub>E</sub>X would treat ‘\count11’ as a command with argument ‘3’, followed by the ordinary text tokens ‘pc plus 1em’ (because count registers expect a number to be assigned to them)—probably not what you intended. The effect of the command, by the way, would be to assign 3 to count register 11 (see the discussion of \count, p. ‘\count’).

Macros, on the other hand, all follow the same convention for their arguments. Each argument passed to a macro corresponds to a parameter in the definition of that macro. A macro parameter is either “delimited” or “undelimited”. The macro definition determines the number and nature of the macro parameters and therefore the number and nature of the macro arguments.

The difference between a delimited argument and an undelimited argument lies in the way that T<sub>E</sub>X decides where the argument ends.

- A delimited argument consists of the tokens from the start of the argument up to, but not including, the particular sequence of tokens that serves as the delimiter for that argument. The delimiter is specified in the macro definition. Thus you supply a delimited argument to a macro by writing the argument itself followed by the delimiter. A delimited argument can be empty, i.e., have no text at all in it. Any braces in a delimited argument must be paired properly, i.e., every left brace must have a corresponding right brace and vice versa.
- An undelimited argument consists of a single token or a sequence of tokens enclosed in braces, like this: ‘{Here is {the} text.}’. Despite appearances, the outer braces don’t form a group—T<sub>E</sub>X uses them only to determine what the argument is. Any inner braces, such as the ones around ‘the’, must be paired properly. If you make a mistake and put in too many right braces, T<sub>E</sub>X will complain about an unexpected right brace. T<sub>E</sub>X will also complain if you put in too many left braces, but you’ll probably get *that* complaint long after the place where you intended to end the argument (see p. ‘mismatched’).

**2**

\ §0

See “macro” (p. ‘macro’) for more information about parameters and arguments. You’ll find the precise rules pertaining to delimited and unlimited arguments in pages 203–204 of *The T<sub>E</sub>Xbook*.