The **list** environments are [description](http://latex.wikia.com/wiki/Description_(LaTeX_environment)?veaction=edit&redlink=1), [enumerate](http://latex.wikia.com/wiki/Enumerate_(LaTeX_environment)?veaction=edit&redlink=1), [itemize](http://latex.wikia.com/wiki/Itemize_(LaTeX_environment)?veaction=edit&redlink=1), and the generic [list](http://latex.wikia.com/wiki/List_(LaTeX_environment)), which is seldom used in text, but often in macros. Within a list environment [item](http://latex.wikia.com/wiki/Item_(LaTeX_command)?action=edit&redlink=1) commands are used to identify the items in the list.

**description environment**[**Edit**](http://latex.wikia.com/wiki/List_of_LaTeX_environments?action=edit&section=5)

The **description** environment produces a labeled list.

\begin{description}  
\item [label] First item  
\item [label] Second item

...

\end{description}

**enumerate environment**[**Edit**](http://latex.wikia.com/wiki/List_of_LaTeX_environments?action=edit&section=6)

The **enumerate** environment produces a numbered list. At least one item is needed. Enumerate lists can be nested inside other enumerate lists, up to four levels deep.

\begin{enumerate}  
\item First item  
\item Second item

...

\end{enumerate}

**itemize environment**[**Edit**](http://latex.wikia.com/wiki/List_of_LaTeX_environments?action=edit&section=7)

The **itemize** environment creates an unnumbered, or "bulleted" list.

\begin{itemize}   
\item First item   
\item Second item

...

\end{itemize}

**list environment**[**Edit**](http://latex.wikia.com/wiki/List_of_LaTeX_environments?action=edit&section=8)

\begin{list}{label}{fmt-params}   
\item First item   
\item Second item

...

\end{list}

**label**

specifies how items should be labeled. This argument is a piece of text that is inserted in a box to form the label. This argument can and usually does contain other LaTeX commands.

**fmt-params**

contains commands to change the spacing parameters for the list. An empty argument will select all default spacing which should suffice for most cases.

The format parameters are: (See external reference for a diagram of these)

\itemsep

\labelsep

\labelwidth

\leftmargin

\listparindent

\parsep

\parskip

\partopsep

\rightmargin

\topsep

# [How do you change the image of a bullet point in LaTeX Beamer](http://stackoverflow.com/questions/2822345/how-do-you-change-the-image-of-a-bullet-point-in-latex-beamer)

You can simply set a symbol of your choice. Let me assume you'd like the \checkmark symbol, just write:

\begin{itemize}

\item[\checkmark] one

\item[\checkmark] two

\item[\checkmark] three

\end{itemize}

Furthermore, if it's too long to write, you can set a new command:

\newcommand{\myitem}{\item[\checkmark]}

and the whole thing becomes:

\begin{itemize}

\myitem one

\myitem two

\myitem three

\end{itemize}

Otherwise, you can use the enumitem package as stated in the [answer below](http://stackoverflow.com/questions/2822345/how-do-you-change-the-image-of-a-bullet-point-in-latex-beamer/2823479#2823479).

For document classes other than beamer, there are two more ways to do the trick:

In the preamble, write:

\def\labelitemi{\checkmark}

If you want to change the symbol in only one itemize environment, write:

\begin{itemize}

\newcommand{\labelitemi}{\checkmark}

\item one

\item two

\item three

\end{itemize}

# *LaTeX: itemize bullet characters*

Itemized lists in LaTeX automatically use a closed bullet point; first-level nested lists use dashes, followed by open bullets, etc. But what if you want to use different bullet characters?

First, specify which nested layer you want to change. {labelitemi} refers to the outermost nested list, followed by {labelitemii}, and so on. Then specify the character you want to use with its LaTeX command.

Here’s how to specify a closed bullet (the LaTeX default) in the outermost nested list:  
begin{itemize}{labelitemi}{$bullet$}  
item First item in the list  
item Second item  
item and so on  
end{itemize}

Any character can be used as a bullet character by writing its command in place of bullet. Some characters that might be particularly useful:

circ — An open circle  
cdot — A centered dot  
star — A five-pointed star  
ast — A centered asterisk  
rightarrow — A short right-pointing arrow  
diamondsuit — An open diamond

Greek letters

|  |  |  |  |
| --- | --- | --- | --- |
| \alpha A | \alpha A | \nu N | \nu N |
| \beta B | \beta B | \xi\Xi | \xi\Xi |
| \gamma \Gamma | \gamma \Gamma | o O\; | o O |
| \delta \Delta | \delta \Delta | \pi \Pi | \pi \Pi |
| \epsilon \varepsilon E\; | \epsilon \varepsilon E | \rho\varrho P\; | \rho\varrho P |
| \zeta Z | \zeta Z | \sigma \,\! \Sigma\; | \sigma \Sigma |
| \eta H | \eta H | \tau T | \tau T |
| \theta \vartheta \Theta | \theta \vartheta \Theta | \upsilon \Upsilon | \upsilon \Upsilon |
| \iota I | \iota I | \phi \varphi \Phi | \phi \varphi \Phi |
| \kappa K | \kappa K | \chi X | \chi X |
| \lambda \Lambda\; | \lambda \Lambda | \psi \Psi | \psi \Psi |
| \mu M | \mu M | \omega \Omega | \omega \Omega |

Arrows

|  |  |  |  |
| --- | --- | --- | --- |
| \leftarrow | \leftarrow | \Leftarrow | \Leftarrow |
| \rightarrow | \rightarrow | \Rightarrow\; | \Rightarrow |
| \leftrightarrow | \leftrightarrow | \rightleftharpoons | \rightleftharpoons |
| \uparrow | \uparrow | \downarrow | \downarrow |
| \Uparrow\; | \Uparrow | \Downarrow | \Downarrow |
| \Leftrightarrow\; | \Leftrightarrow | \Updownarrow | \Updownarrow |
| \mapsto | \mapsto | \longmapsto\; | \longmapsto |
| \nearrow | \nearrow | \searrow | \searrow |
| \swarrow | \swarrow | \nwarrow | \nwarrow |
| \leftharpoonup | \leftharpoonup | \rightharpoonup | \rightharpoonup |
| \leftharpoondown | \leftharpoondown | \rightharpoondown | \rightharpoondown |
| \rightleftharpoons | \rightleftharpoons |  |  |

Miscellaneous symbols

|  |  |  |  |
| --- | --- | --- | --- |
| \infty\;\; | \infty | \forall\; | \forall |
| \Re | \Re | \Im | \Im |
| \nabla | \nabla | \exists | \exists |
| \partial | \partial | \nexists | \nexists |
| \emptyset | \emptyset | \varnothing\; | \varnothing |
| \wp | \wp | \complement | \complement |
| \neg | \neg | \cdots | \cdots |
| \square | \square | \surd | \surd |
| \blacksquare | \blacksquare | \triangle | \triangle |

Binary Operation/Relation Symbols

|  |  |  |  |
| --- | --- | --- | --- |
| \times | \times | \otimes | \otimes |
| \div | \div | \cap | \cap |
| \cup | \cup | \neq\; | \neq |
| \leq | \leq | \geq | \geq |
| \in | \in | \perp\; | \perp |
| \notin | \notin | \subset | \subset |
| \simeq | \simeq | \approx | \approx |
| \wedge | \wedge | \vee | \vee |
| \oplus\; | \oplus | \otimes | \otimes |
| \Box | \Box | \boxtimes | \boxtimes |
| \equiv | \equiv | \cong | \cong |