Lists in Beamer – Complete Guide

 By Admin June 22, 2021

Learn how to create and customize ordered and unordered lists in beamer using itemize and enumerate environments

Contents :

Lists are an important building block in a presentation. The method to create lists in beamer presentations is similar to the method in a LaTeX article document.

There are two types of lists in LaTeX and beamer, they are broadly classified as ordered lists and unordered lists. Let us discuss how to create an ordered and unordered list in our presentation :

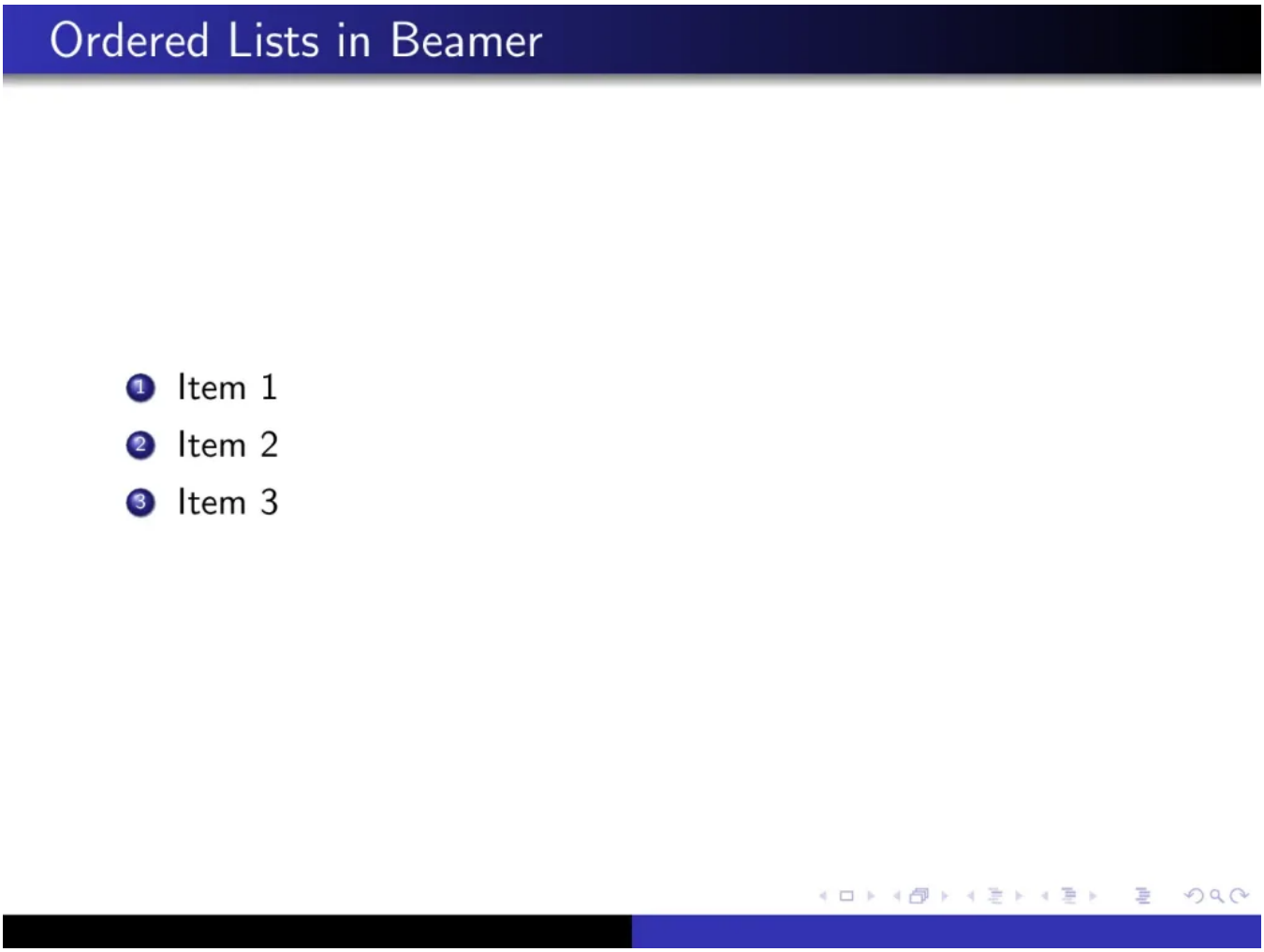
1. Ordered lists

Ordered lists have a numbering before every list item. To create an ordered list in beamer, we use enumerate environment. Inside this environment, the list entries can be updated using the **\item** command. A simple ordered list example is presented below.

```
% Ordered Lists in beamer
\documentclass{beamer}

% Theme choice:
\usetheme{Warsaw}

\begin{document}

\begin{frame}{Ordered Lists in Beamer}

\begin{enumerate}
    \item Item 1
    \item Item 2
    \item Item 3
\end{enumerate}

\end{frame}

\end{document}
```

Copy

Compiling this code yields the following frame:



In this illustrative example, we have used **`Warsaw`** theme and created an **`enumerate`** environment inside a frame environment. The latter has the title “Ordered Lists in Beamer” which has been done by adding it between curly braces.

2. Unordered lists

Unordered lists have a marker, such as a bullet, before every list item. To create an unordered list in beamer, we use the **`itemize`** environment. Inside this environment, the list entries can be updated using the **`\item`** command.

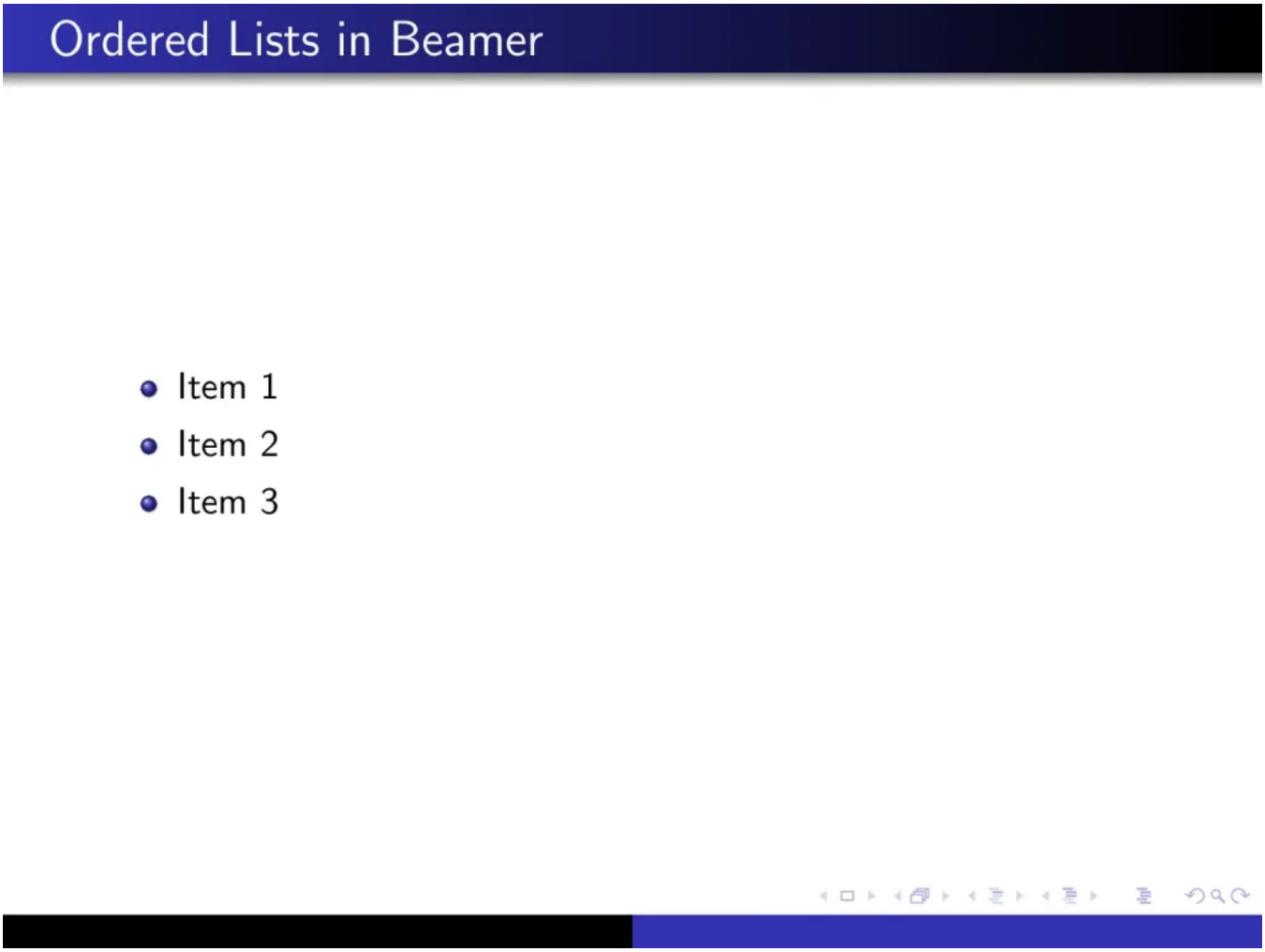
A simple unordered list example is presented below.

```
% Unordered Lists in beamer
\documentclass{beamer}

% Theme choice:
```

Copy

```
5.  \usetheme{Warsaw}
6.
7.  \begin{document}
8.
9.  \begin{frame}{Unordered Lists in Beamer}
10.
11.  \begin{itemize}
12.      \item Item 1
13.      \item Item 2
14.      \item Item 3
15.  \end{itemize}
16.
17.  \end{frame}
18.
19.  \end{document}
```

Output:



3. Nested lists

Sometimes you also have to list things, which have some kind of sub-category. For this reason, LaTeX allows you to nest list environments and it will fix the indentation and numbering accordingly.

A simple nested list example is presented below.

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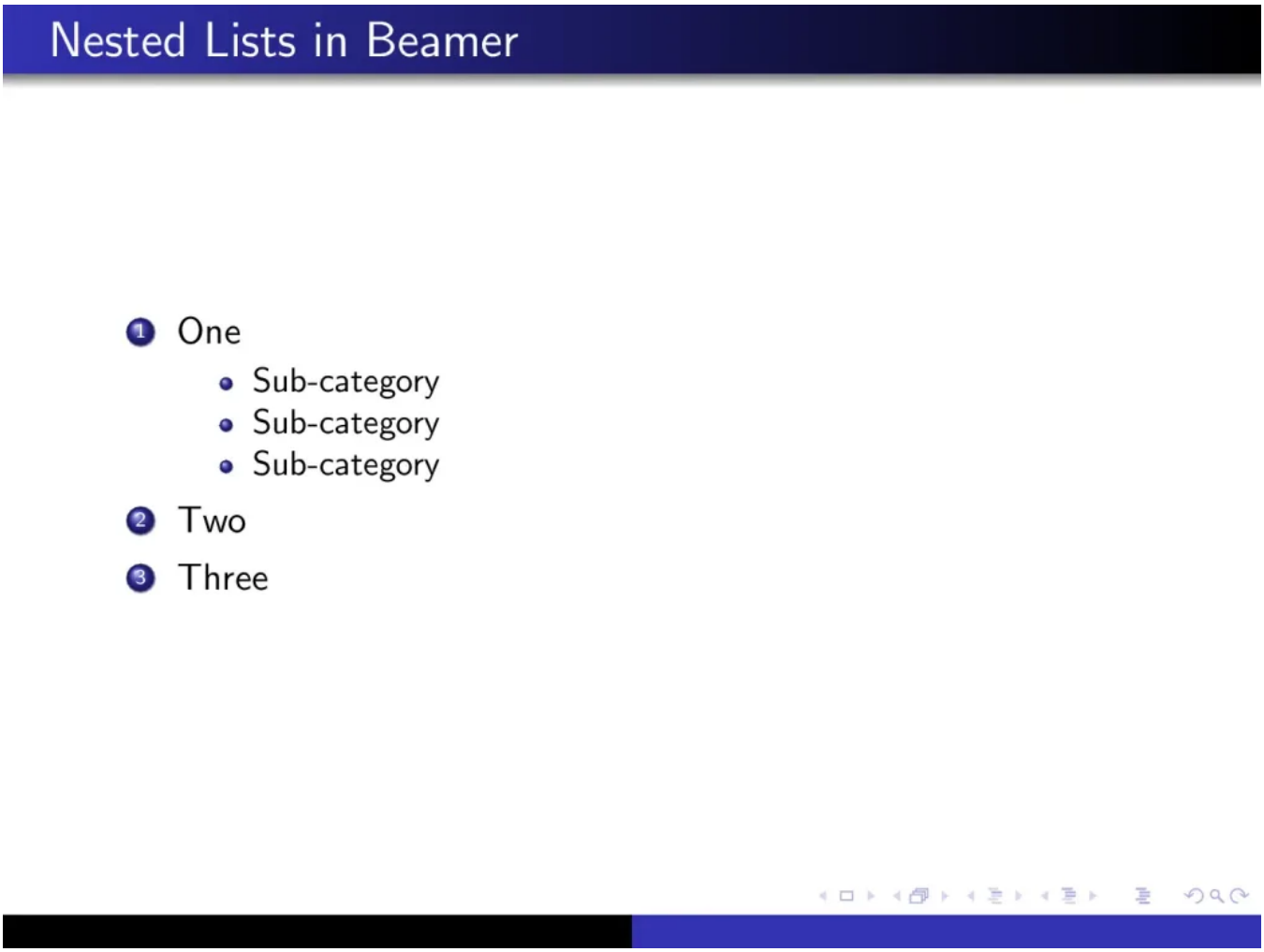
```
% Nested Lists in beamer
\documentclass{beamer}

% Theme choice:
\usetheme{Warsaw}

\begin{document}

\begin{frame}{Nested Lists in Beamer}

\begin{enumerate}
    \item One
    \begin{itemize}
        \item Sub-category
        \item Sub-category
        \item Sub-category
    \end{itemize}
    \item Two
    \item Three
\end{enumerate}

\end{frame}

\end{document}
```

Compiling this code yields:



4. Shifting the list entries to next frame

The idea is to define a counter **currentenumi** that stores the value of the last enumerated item in a given frame. Then on the next frame, the **enumi** counter can easily be set to the value of **currentenumi** to continue numbering.

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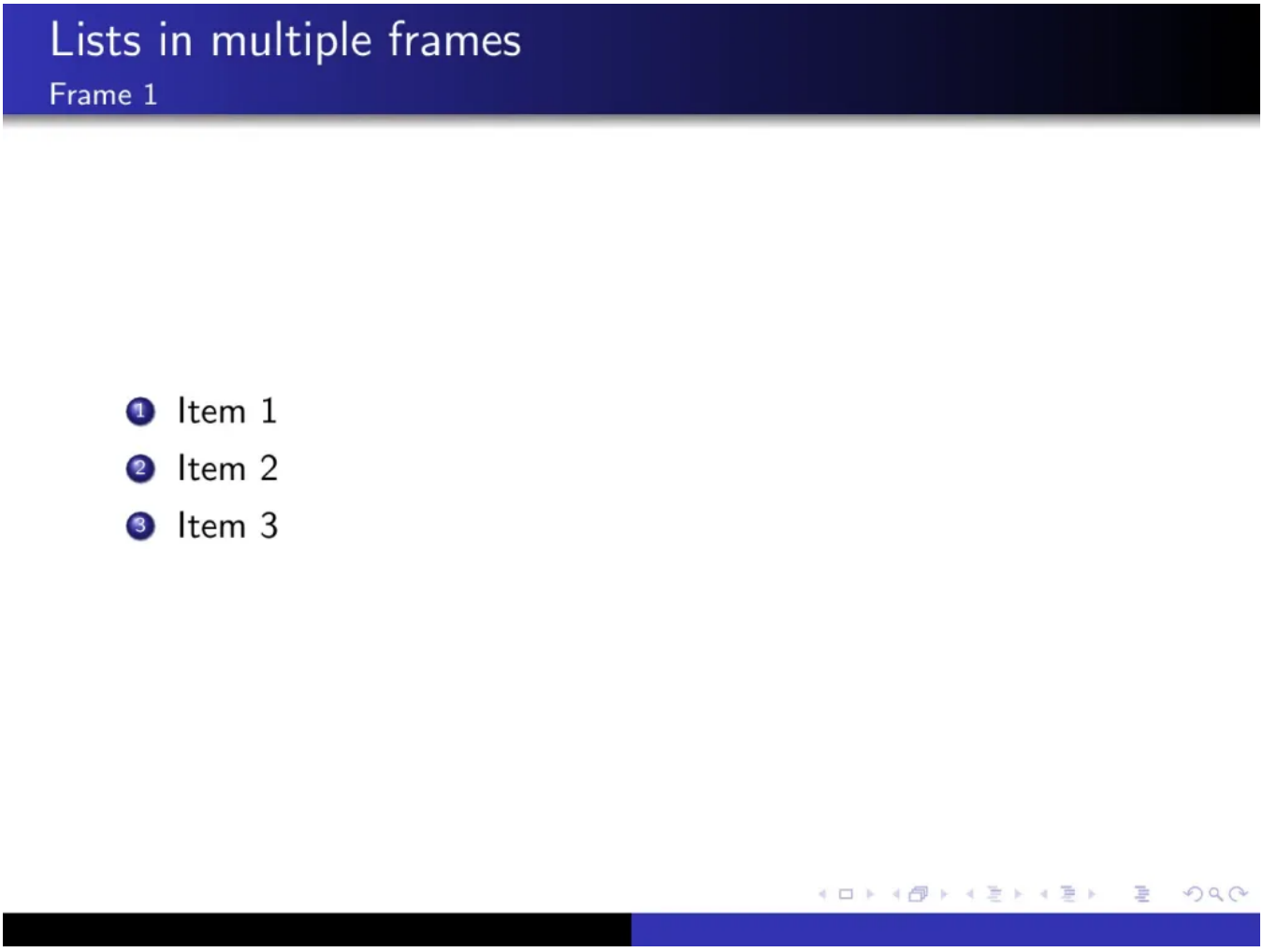
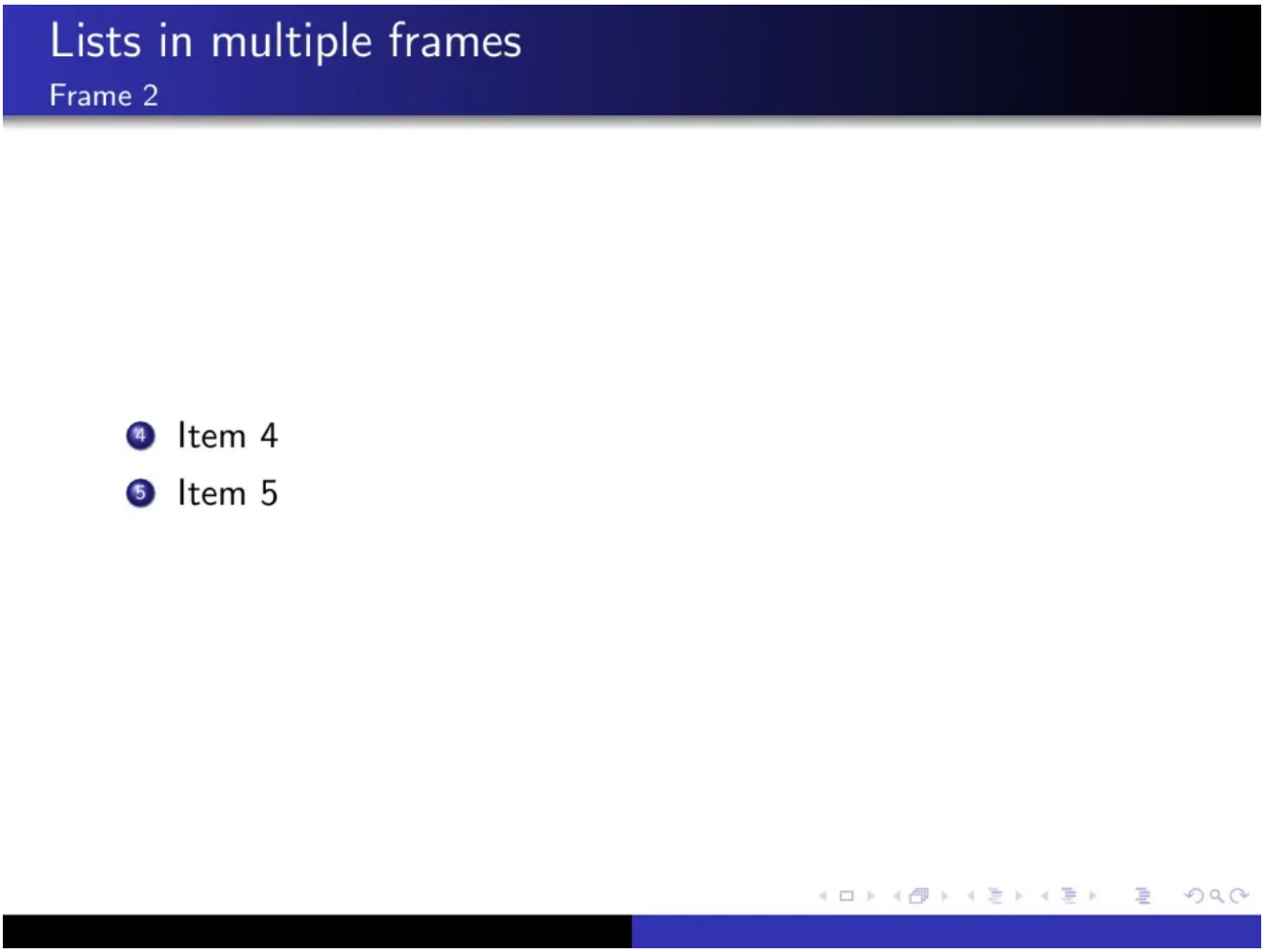
```
% Shifting the list entries to next frame
\documentclass{beamer}

% Theme choice:
\usetheme{Warsaw}

% Define a counter
\newcounter{currentenumi}

\begin{document}

\begin{frame}{Lists in multiple frames}{Frame 1}
\begin{enumerate}
    \item Item 1
```

```
15.         \item Item 2
16.         \item Item 3
17.     % Store the actual item number
18.         \setcounter{currentenumi}{\theenumi}
19.     \end{enumerate}
20.     \end{frame}
21.
22.     \begin{frame}{Lists in multiple frames}{Frame 2}
23.     \begin{enumerate}
24.     % Use the previous stored item number
25.     \setcounter{enumi}{\thecurrentenumi}
26.         \item Item 4
27.         \item Item 5
28.     \end{enumerate}
29.     \end{frame}
30.
31.     \end{document}
```

which yields the following result:





5. Spacing between list items

The spacing between the list items can be easily altered using the **\vspace** command. The other way to change the spacing globally is to use the following command **\setbeamertemplate**. Here is an illustrative example:

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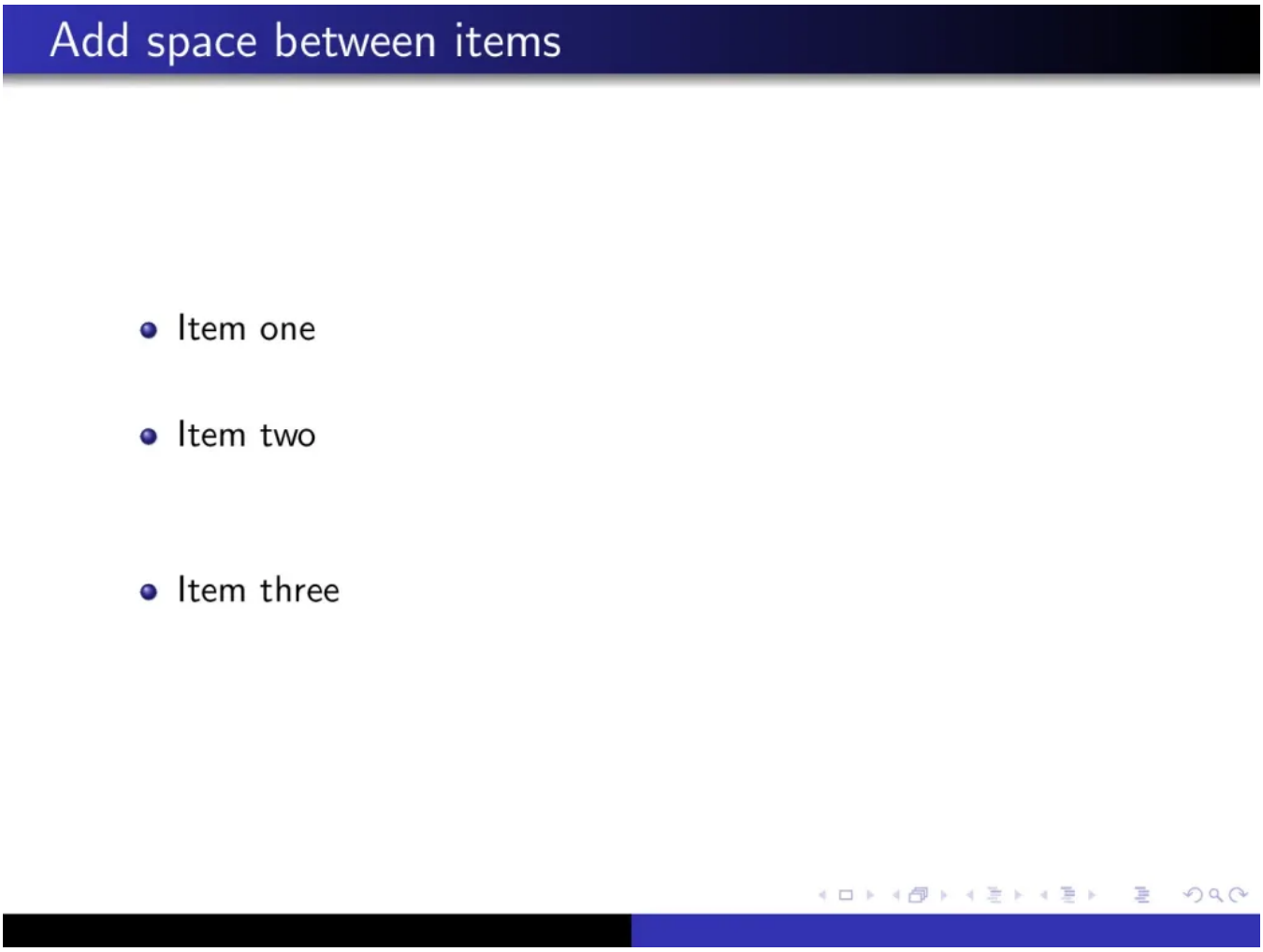
```
% Add space between items
\documentclass{beamer}

% Theme choice:
\usetheme{Warsaw}

\begin{document}

\begin{frame}{Add space between items}
\begin{itemize}
    \item Item one
    \vspace{0.5cm}
    \item Item two
    \vspace{1cm}
    \item Item three
\end{itemize}
```

```
\end{frame}


\end{document}
```

Output:



Here is another version of spacing between nested lists:

```
% Add space between items
\documentclass{beamer}

% Theme choice:
\usetheme{Warsaw}

% Item spacing
\setbeamertemplate{itemize/enumerate subbody begin}{\vspace{0.5cm}}
\setbeamertemplate{itemize/enumerate subbody end}{\vspace{1cm}}

\begin{document}

\begin{frame}
```

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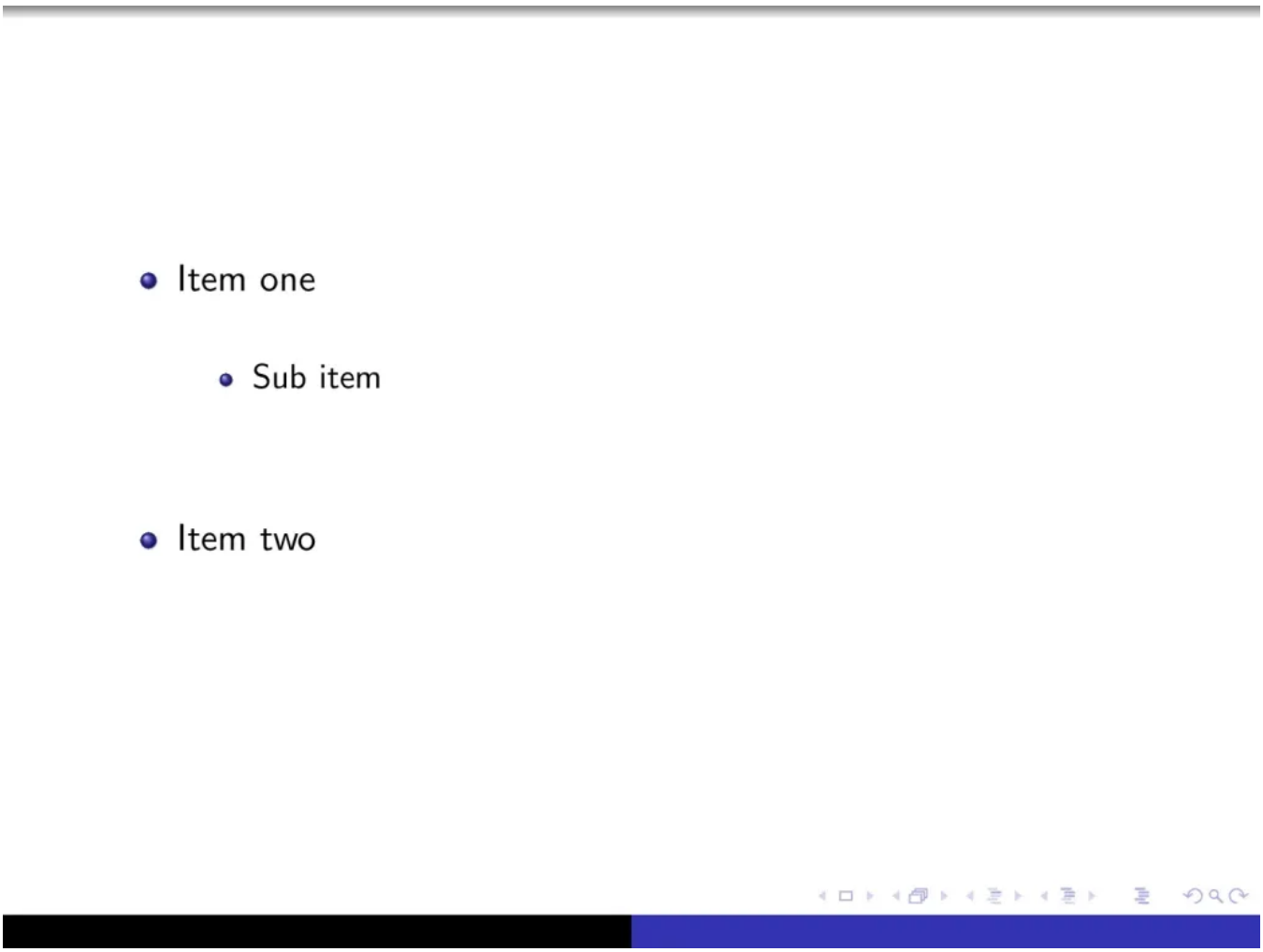
```
14.
15.   \begin{itemize}
16.       \item Item one
17.       \begin{itemize}
18.           \item Sub item
19.       \end{itemize}
20.   \item Item two
21.   \end{itemize}
22.   \end{frame}
23.
24.   \end{document}
```

Compiling this code yields:

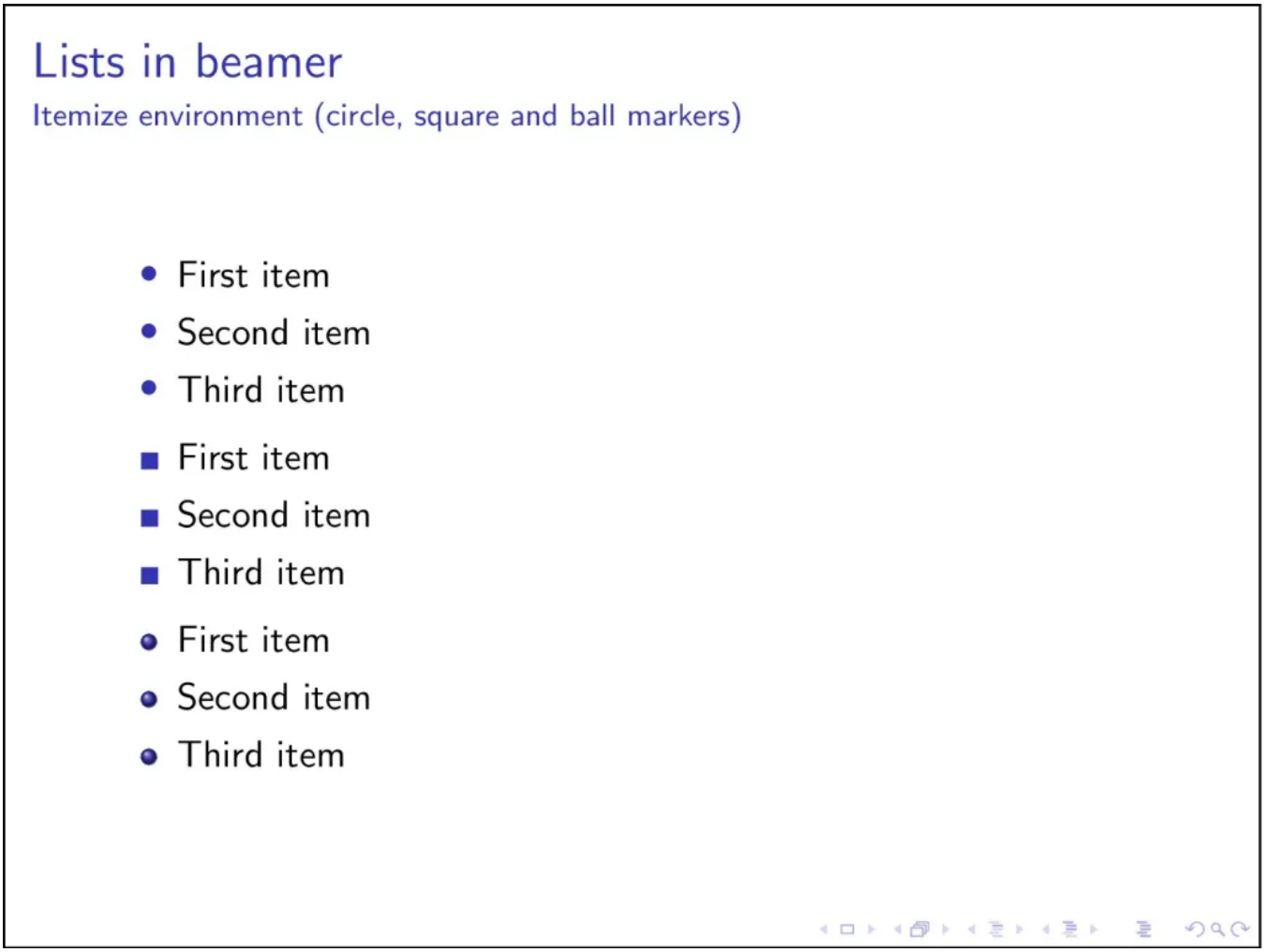


6. Changing the marker appearance

There are various templates in beamer to change this itemized list appearance. The most important template is `Parent Beamer-Template { itemize items}`. This template deals with the appearance of marker symbols of the itemized list. The command

`\setbeamertemplate{itemize items}[default]` is used on itemize items to change the shape of item markers.

The `[default]` item marker is triangle. `[circle]` uses little circles (or dots) , `[square]` uses little squares, and `[ball]` uses little balls as item markers. Please refer to this example below for better understanding.



Pifont package: You can use the optional argument of `\item[]` to set the marker. With this method we can use the pifont package which provides several symbols that can be used as item markers. Check the following code:

```
% Change bullets style
\documentclass{beamer}

% Theme choice:
\usetheme{Warsaw}

% Custom bullets
```

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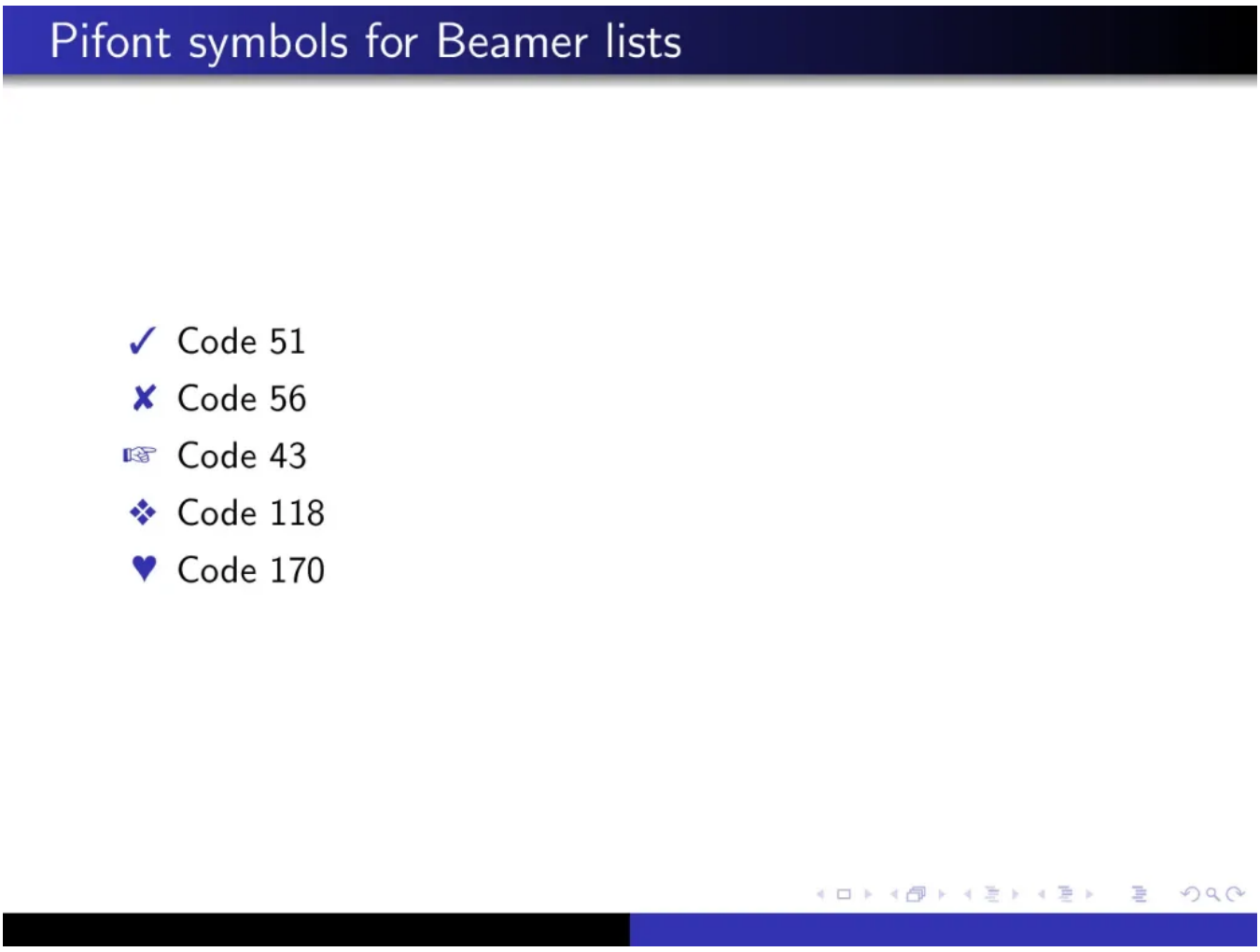
```
8.  \usepackage{pifont}
9.
10. \begin{document}
11.
12. \begin{frame}{Pifont symbols for Beamer lists}
13.
14. \begin{itemize}
15.     \item[\ding{51}] Code 51
16.     \item[\ding{56}] Code 56
17.     \item[\ding{43}] Code 43
18.     \item[\ding{118}] Code 118
19.     \item[\ding{170}] Code 170
20. \end{itemize}
21.
22. \end{frame}
23.
24. \end{document}
```

Output:



- We used `\ding{}` as an option inside brackets of `\item[]` command. `\ding{51}` creates the correct symbol, `\ding{56}` creates the false

symbol, etc.

Here is a full list of symbols provided by pifont package and can be used in itemize environment:

32		33	✁	34	✂	35	✃	36	✄	37	☎	38	✆	39	✇								
40	✈	41	✉	42	☛	43	☞	44	✌	45	✍	46	✎	47	✏								
48	✐	49	✑	50	✒	51	✓	52	✔	53	✕	54	✖	55	✗								
56	✘	57	✙	58	✚	59	✛	60	✜	61	✝	62	✞	63	✟								
64	✠	65	✡	66	✢	67	✣	68	✤	69	✥	70	✦	71	✧								
72	★	73	☆	74	✪	75	✫	76	✬	77	✭	78	✮	79	✯								
80	✰	81	✱	82	✲	83	✳	84	✴	85	✵	86	✶	87	✷								
88	✸	89	✹	90	✺	91	✻	92	✼	93	✽	94	✾	95	✿								
96	❀	97	❁	98	❂	99	❃	100	❄	101	❅	102	❆	103	❇								
104	❈	105	❉	106	❊	107	❋	108	●	109	❍	110	■	111	❑								
112	❒	113	❑	114	❒	115	▲	116	▼	117	◆	118	❖	119	◗								
120	|	121	❙	122	❚	123	❛	124	❜	125	❝	126	❞										
		161	❡	162	❢	163	❣	164	❤	165	❥	166	❦	167	❧								
168	♣	169	♦	170	♥	171	♠	172	①	173	②	174	③	175	④								
176	⑤	177	⑥	178	⑦	179	⑧	180	⑨	181	⑩	182	❶	183	❷								
184	❸	185	❹	186	❺	187	❻	188	❼	189	❽	190	❾	191	❿								
192	①	193	②	194	③	195	④	196	⑤	197	⑥	198	⑦	199	⑧								
200	⑨	201	⑩	202	❶	203	❷	204	❸	205	❹	206	❺	207	❻								
208	❼	209	❽	210	❾	211	❿	212	➔	213	→	214	↔	215	↕								
216	↘	217	➙	218	➚	219	➛	220	➜	221	→	222	⟶	223	➟								
224	➠	225	➡	226	➢	227	➢	228	➤	229	➥	230	➦	231	➧								
232	➨	233	➩	234	➪	235	➫	236	➬	237	➭	238	➮	239	➯								
		241	➱	242	➲	243	➳	244	➴	245	➵	246	➶	247	➷								
248	➸	249	➹	250	➺	251	➻	252	➼	253	➽	254	➾										

Alphabet, Roman and Arabic style

Under the enumerate environment, the numbering style can be changed using the enumitem package. From the next example, you can notice that three different styles, alphabet, Roman, and Arabic are used to denote the list item numbers. Meanwhile, you can also separate the enumeration from the item content by enclosing them inside bracket/brackets or a dot.

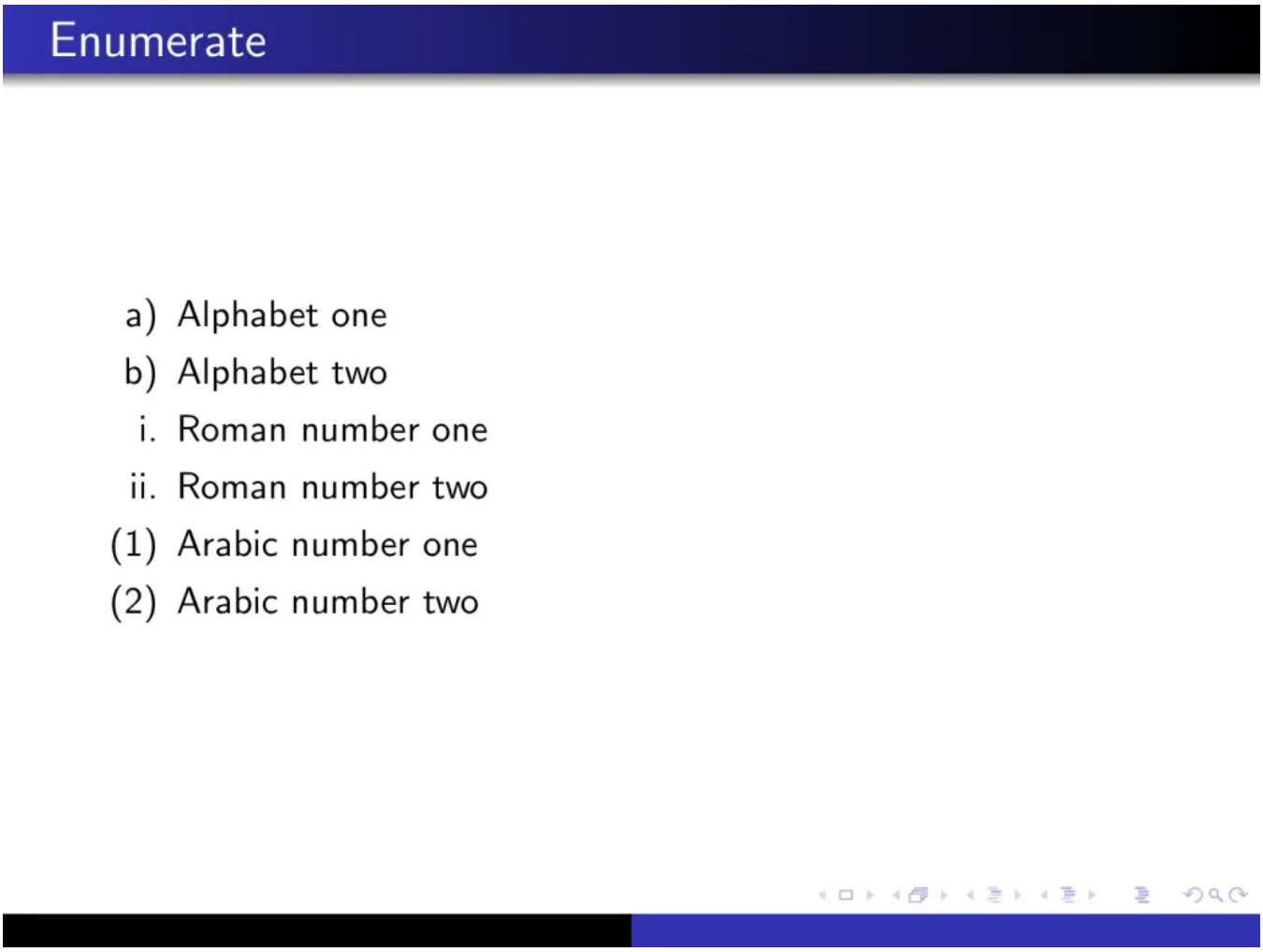
Example:

```
% Enumeration styles
\documentclass{beamer}
```

Copy

```
3.
4.  % Theme choice:
5.  \usetheme{Warsaw}
6.
7.  % Change numbers style
8.  \usepackage{enumitem}
9.
10. \begin{document}
11.
12. \begin{frame}{Enumerate}
13.
14. \begin{enumerate}[label={\alph*)}]
15.     \item Alphabet one
16.     \item Alphabet two
17. \end{enumerate}
18.
19. \begin{enumerate}[label={\roman*.}]
20.     \item Roman number one
21.     \item Roman number two
22. \end{enumerate}
23.
24. \begin{enumerate}[label={(\arabic*)}]
25.     \item Arabic number one
26.     \item Arabic number two
27. \end{enumerate}
28. \end{frame}
29.
30. \end{document}
```

Output:



Summary

- In this lesson, we have learned how to create lists in Beamer LaTeX.
- `Itemize` environment is used for creating an unordered list.
- `Enumerate` environment is used for creating an ordered list.
- We have learned how to change bullets' style and access to more than 150 symbols provided by `pifont` package.
- Alphabet, roman and arabic styles can be used thanks to the `enumitem` package.

Next Lesson: 06 Create and Customize Columns in Beamer

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