

**Title of script: New Environments**

**Author: Ambika Vanchinathan**

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Visual Cue	Narration
Slide	Welcome to the spoken tutorial on creating new <b>environments</b> in <b>LaTeX</b> .
Slide: <b>Learning Objectives</b>	This tutorial will help the learners to <ul style="list-style-type: none"> <li>• create or define new <b>environments</b> to get customized output.</li> <li>• redefine the existing <b>environments</b>.</li> </ul>
Slide: <b>Pre-requisites</b>	To follow this tutorial, <ol style="list-style-type: none"> <li>1. You should have knowledge of <b>commands</b> that are necessary to create a document in <b>LaTeX</b>.</li> <li>2. You should also have knowledge of <b>compiling</b> and producing a <b>PDF output</b> in <b>LaTeX</b>.</li> <li>3. If not, please go through the relevant <b>LaTeX</b> spoken tutorials on this website.</li> </ol>
Slide: <b>System Requirements</b>	To record this tutorial, I am using <ul style="list-style-type: none"> <li>• <b>Ubuntu Linux 14.04</b> operating system</li> <li>• <b>TeXWorks 0.5</b></li> </ul>
slide: <b>New Environment</b>	Just like new <b>commands</b> , we can define new <b>environments</b> .  As the name suggests the command <b>newenvironment</b> is used to create/define a new <b>environment</b> .  It is used to format blocks of text, generally.
slide: <b>New Environment</b>	New environment is a variation of executing few existing commands put together in a sequence.  Ensure that the custom <b>environment</b> you create, is not an already existing <b>LaTeX environment</b> .
slide: <b>New environment</b>	The syntax to define a new <b>environment</b> is <b>\newenvironment{environment name}{start commands}{end commands}</b>

	<p>Here the <b>start commands</b> are done whenever the environment starts.</p> <p>And <b>end commands</b> are performed whenever the environment ends.</p>
Open the <b>TeXWorks</b> editor	Let us open the <b>TeXWorks</b> editor.
<p>(copy/paste the following in TeXWorks)</p> <pre>\documentclass{article} \usepackage{color} \newenvironment{bluetext} {\begin{center}\color{blue}} {\end{center}} \begin{document} This text is outside the new environment. This text is outside the new environment. This text is outside the new environment. \begin{bluetext} Testing to see whether this text is in blue colour. \end{bluetext} some more text \end{document}</pre>	Type the code as shown here into the <b>tex</b> file.
Point to the exact line as per narration	Here <b>\newenvironment{bluetext}</b> means that we are defining a new <b>environment</b> called <b>bluetext</b> .
Point to the exact line as per narration	<p>Here in the definition we center the text and colour it with blue using</p> <pre><b>{\begin{center}\color{blue}}</b> <b>{\end{center}}</b></pre> <p>While using it, we just give <b>\begin{bluetext}</b> and <b>\end{bluetext}</b> with the intended text between the two.</p>
Save as <b>newEnv.tex</b>	Save the file as <b>newEnv.tex</b>
Compile >> Point to the pdf output	Let us compile and see the output.

	Observe the <b>blue text</b> in the output.
	<<PAUSE>>
	We will now see how to use <b>parameters</b> in the <b>environments</b> .
slide: <b>New environment with parameters</b>	New environment with parameter is defined as <code>\newenvironment{environment name}[parameters]{start commands}{end commands}</code>
open a new file in TeXWorks	Let's open a new file in <b>TeXWorks</b> .
(copy/paste the following)  <pre>\documentclass{article} \usepackage{color} \newenvironment{bluetext}[1] {\begin{center}\color{blue} \textbf{\textit{#1}}\}[12pt] } {\end{center}} \begin{document} This text is outside the new environment. This text is outside the new environment. This text is outside the new environment. \begin{bluetext}{My text in blue} Testing to see whether this text is in blue colour. \end{bluetext} some more text \end{document}</pre>	Now, we will copy the code given here into our <b>TeX</b> file.
Point to the exact line as per narration	Let us understand the code now.  Here in the given code, we are adding a title to the <b>blue text</b> by getting the title as an <b>input parameter</b> .
Point to the exact line as per narration	We have just added <code>\textbf{\textit{#1}}\}[12pt]</code> to the code given for the <b>environment</b> without <b>parameter</b>

Point to the exact line as per narration	<ul style="list-style-type: none"> <li>• We use it as “<code>\begin{bluetext}{My text in blue}</code>”</li> <li>• and the text,</li> <li>• and then “<code>\end{bluetext}</code>”</li> </ul>
Save file as <b>newEnvp1.tex</b>	Save the file as <b>newEnvp1.tex</b>
Compile >> point to the pdf	Now compile and see the output.
	<<PAUSE>>
	We shall see the <b>renewenvironment</b> now.
slide: <b>renewenvironment</b>	<p><b>renewenvironment</b> is used to change or overwrite the existing environment.</p> <p>The syntax for <b>renewenvironment</b> is  <code>\renewenvironment{env}{start commands}{end commands}</code></p> <p>It's quite similar to newcommand.</p>
Open a new <b>tex</b> file.	Open a new <b>tex</b> file.
<p>(copy/paste the following)</p> <pre>\documentclass{article} \renewenvironment{itemize}{\begin{center}\large} \end{center}} \begin{document} This text is outside the new environment. This text is outside the new environment. This text is outside the new environment. \begin{itemize} Text inside itemize  Lets check the output \end{itemize} \end{document}</pre>	Type the code as given here.
Point to the exact line as per narration	<p>Let us understand the code.</p> <p><b>\renewcommand{itemize}</b> redefines the <b>itemize environment</b>.</p>

	<p>It is defined as <code>\begin{center}\large</code> and <code>\end{center}</code></p> <p>This means that the text should be centered and made to <b>large</b> size.</p>
	<p>Recall that the <b>itemize environment</b> creates a list according to the original definition.</p>
<p>Point to the exact line as per narration</p>	<p>Let's see the usage.</p> <p>The text given within <code>\begin{itemize}</code> and <code>\end{itemize}</code> should be</p> <ul style="list-style-type: none"> <li>• converted to large size</li> <li>• and centered according to our definition</li> </ul>
<p>Save code to <b>renewEnv.tex</b></p>	<p>Let us save the file as <b>renewEnv.tex</b> and compile the <b>tex</b> file.</p>
<p>Point to the <b>PDF</b> output</p>	<p>Observe the output.</p>
<p>Slide: <b>Summary</b></p>	<p>To summarise, we have learnt</p> <ul style="list-style-type: none"> <li>• <b>newenvironment</b></li> <li>• <b>newenvironment</b> with <b>parameters</b></li> <li>• <b>renewenvironment</b></li> </ul>
<p>slide: <b>Assignment</b></p>	<p>Create an environment <b>itemizecolor</b>, which takes the color (red, blue, yellow, green) as input and creates a list in that color.</p>
<p><b>Slide: Acknowledgement</b></p>	<p>The video at the following link summarises the Spoken Tutorial project.</p> <p>Pls watch it.</p>
<p>Slide</p>	<p>The Spoken Tutorial Project Team :</p> <p>Conducts workshops using spoken tutorials and</p> <p>Gives certificates to those who pass an online test</p> <p>For more details, please write to us.</p>
<p>Slide</p>	<p>Spoken Tutorial Project is funded by the NMEICT, MHRD, Government of India.</p> <p>More information on this Mission is available at <a href="#">this link</a>.</p> <p>This is Ambika Vanchinathan signing off.</p> <p>Thanks for joining.</p>

