

Beamer

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- *Beamer* is a \LaTeX document class for making presentations in a professional way.
- It was developed by *Till Tantau*.
- A *Beamer* document is created like any other \LaTeX document.

Advantage with working with Beamer

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- It can easily create animation and dynamic effects.
- It can change the appearance of your presentation using different theme templates.
- With the aid of in-built themes, you can make the presentation more professional looking and easier for the audience to follow.
- You can create presentations using the same source, wrote for $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ document.

Structure

The beamer source file has following basic structure:

```
\documentclass[options]{beamer}
\begin{document}
\begin{frame}
...
\end{frame}
...
\begin{frame}
...
\end{frame}
\end{document}
```

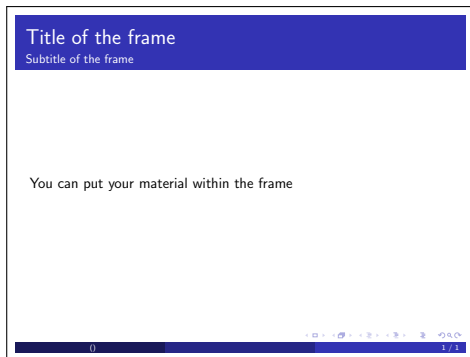
Frame

Each slide of the presentation starts with ‘`\begin{frame}`’ and ends with ‘`\end{frame}`’.
The frame can be titled using the command ‘`\frametitle{frameTitle}`’.

```
\documentclass[12pt]{beamer}
\usetheme{Madrid}
\begin{document}
\begin{frame}

\frametitle{Title of the frame}
\framesubtitle{Subtitle of the frame}
You can put your material
within the frame

\end{frame}
\end{document}
```



Title Page

To create the title page, use ‘\titlepage’ command between ‘\begin{frame}’ and ‘\end{frame}’. The structure to create title page is:

```
\documentclass[options]{beamer}
\title[short form]{long title}
\author[short form]{full name}
\institute[short form]{full name of the institute}
\date{yourDate}
\begin{document}
\begin{frame}

\titlepage

\end{frame}
\end{document}
```

Title Slide

```
\documentclass[12pt]{beamer}
\usetheme{Madrid}
\title[Latex]{LATEX and Web Designing}
\author[S.K.]{Sandeep Kumar}
\institute[DU]{Delhi University}
\date{August 11-12, 2016}

\begin{document}
\begin{frame}

\titlepage

\end{frame}
\end{document}
```

LATEX and Web Designing

Sandeep Kumar

Delhi University

August 11-12, 2016

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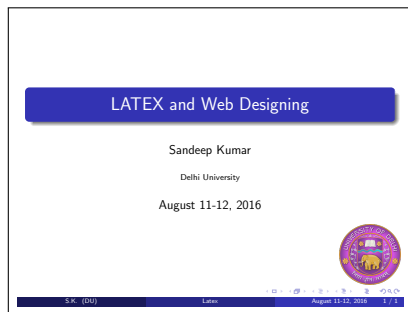
Inserting Logo

Command to insert logo : `\logo{\includegraphics[options]{logoImage}}`

```
\documentclass[12pt]{beamer}
\usetheme{Madrid}
\title[Latex]{LATEX and Web Designing}
\author[S.K.]{Sandeep Kumar}
\institute[DU]{Delhi University}
\date{August 11-12, 2016}
\logo{\includegraphics[height=2cm]{dulogo}}
\begin{document}
\begin{frame}

\titlepage

\end{frame}
\end{document}
```



Sectioning and Table of Contents

```
\documentclass[11pt]{beamer}
\begin{document}
\begin{frame}
\frametitle{\textbf{Table of Contents}}
\tableofcontents
\end{frame}
\section{First section}
\subsection{First subsection}
\begin{frame}
Inside first subsection.
\end{frame}
\subsection{Second subsection}
\begin{frame}
Inside second subsection.
\end{frame}
\section{Second section}
\begin{frame}
Inside second section.
\end{frame}
\end{document}
```

Table of Contents

- 1 First section
 - First subsection
 - Second subsection
- 2 Second section

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Dividing slides into Columns

Beamer provides 'column' environment to divide whole frame into two or more than two columns of desired width. The structure is:

```
\begin{columns}
\column{.x\textwidth}
First column text
\column{.x\textwidth}
Second column text
\column{.x\textwidth}
Third column text
\end{columns}
```

Dividing slides into Columns

```
\begin{frame}  
  
\frametitle{Column environment}  
\begin{columns}  
\column{.5\textwidth}  
First column you can  
write your text here.  
\column{.5\textwidth}  
Second column you can  
write your text here.  
\end{columns}  
  
\end{frame}
```

Column environment

First column
you can
write your
text here.

Second column
you can
write your
text here.

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Creating Block

Blocks are best option for highlighting the paragraphs (like theorem, formula, example etc.).

| Content Type | Corresponding Environment |
|---------------------|----------------------------------|
| General | block |
| Theorem | theorem |
| Lemmas | lemma |
| Proofs | proof |
| Corollaries | corollary |
| Examples | example |
| Hilghted Title | alertblock |

Creating Block

```
\begin{frame}  
\frametitle{Types of blocks}  
\begin{block}{Title of Block}  
Put your important information.  
\end{block}  
\begin{alertblock}{Alert block}  
Some important information.  
\end{alertblock}  
\begin{exampleblock}{Example}  
This is an example  
\end{exampleblock}  
\begin{block}{}  
Block without title.  
\end{block}  
\end{frame}
```

The slide displays the visual output of the LaTeX code on the left. It features a blue header bar with the title "Types of blocks". Below it, four distinct block styles are shown, each with a colored header bar and a light background for the content:

- Title of Block** (blue header): Put your important information.
- Alert block** (red header): Some important information.
- Example** (green header): This is an example
- Block without title.** (light blue header)

At the bottom of the slide, there is a navigation bar with the text "S.K. (DU)", "Latex", and "August 11-12.", along with navigation icons.

Pause Command

The command `\pause` is used to display the different portions (It may be different paragraphs or list of items) of slide one by one.

Just put this command before the slide portion.

Slide Transition

The *Beamer* provides commands for transition effects to move from one slide to next slide. To apply a transition effect, include the corresponding command just after `\begin{frame}`.

| Command | Purpose |
|-------------------------------------|---|
| <code>\transblindshorizontal</code> | Horizontal blinds pulled away |
| <code>\transblindsvvertical</code> | Vertical blinds pulled away |
| <code>\transboxin</code> | Move to center from all sides |
| <code>\transboxout</code> | Move to all sides from center |
| <code>\transdissolve</code> | Slowly dissolve what was shown before |
| <code>\transglitter</code> | Glitter sweeps in specified direction |
| <code>\transslipverticalin</code> | Sweeps two vertical lines in |
| <code>\transslipverticalout</code> | Sweeps two vertical lines out |
| <code>\transhorizontalin</code> | Sweeps two horizontal lines in |
| <code>\transhorizontalout</code> | Sweeps two horizontal lines out |
| <code>\transwipe</code> | Sweeps single line in specified direction |

Presentation Themes

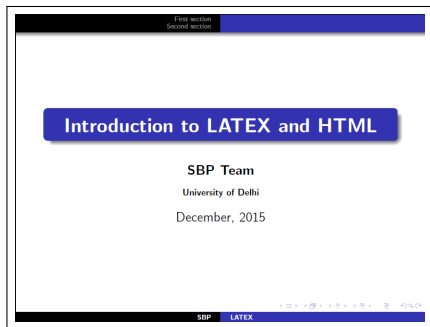
Beamer provides different in-built themes to change the look and feel of the presentation. One can choose any one of the theme, given in table, according to their need.

The command to select a theme is ‘`\usetheme{themeName}`’. This command should be placed in the preamble of document.

| | | | |
|-------------|------------|------------|-----------|
| Antibes | Bergen | Berkeley | Berlin |
| Boadilla | Copenhagen | Darmstadt | Dresden |
| Frankfurt | Goettingen | Hannover | Ilmenau |
| Juanlespins | Madrid | Malmoe | Marburg |
| Montpellier | Paloalto | Pittsburgh | Rochester |
| Singapore | Warsaw | | |

Presentation Themes

Warsaw Theme



First section
Second section

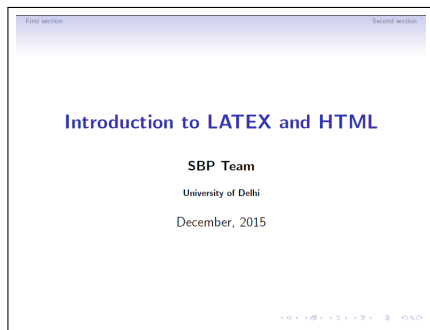
Introduction to LATEX and HTML

SBP Team
University of Delhi
December, 2015

SBP LATEX

The slide features a dark blue header with two sections labeled 'First section' and 'Second section'. The main content is centered, with the title 'Introduction to LATEX and HTML' in a large, bold, white font on a dark blue background. Below the title, the text 'SBP Team', 'University of Delhi', and 'December, 2015' is displayed in a smaller white font. At the bottom, there is a navigation bar with icons and the text 'SBP LATEX'.

Singapore Theme.



First section
Second section

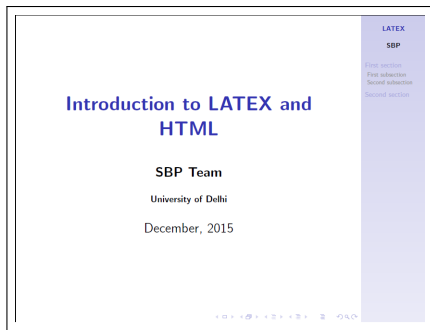
Introduction to LATEX and HTML

SBP Team
University of Delhi
December, 2015

The slide features a light blue header with two sections labeled 'First section' and 'Second section'. The main content is centered, with the title 'Introduction to LATEX and HTML' in a large, bold, blue font. Below the title, the text 'SBP Team', 'University of Delhi', and 'December, 2015' is displayed in a smaller blue font. At the bottom right, there is a navigation bar with icons.

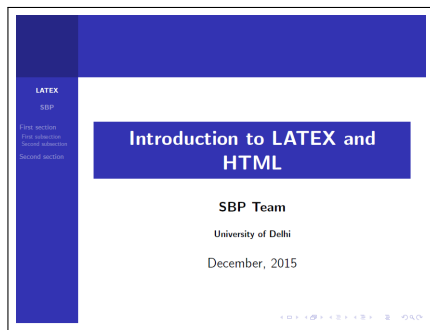
Presentation Themes

Goettingen Theme



The Goettingen theme slide features a white background with a light blue vertical sidebar on the right. The sidebar contains the text "LATEX SBP" and a list of sections: "First section", "First subsection", "Second subsection", and "Second section". The main content area is centered and contains the title "Introduction to LATEX and HTML" in blue, followed by "SBP Team", "University of Delhi", and "December, 2015". At the bottom right, there is a set of navigation icons.

Berkeley Theme.



The Berkeley theme slide features a white background with a dark blue vertical sidebar on the left and a dark blue horizontal header bar at the top. The sidebar contains the text "LATEX SBP" and a list of sections: "First section", "First subsection", "Second subsection", and "Second section". The main content area is centered and contains the title "Introduction to LATEX and HTML" in white, followed by "SBP Team", "University of Delhi", and "December, 2015". At the bottom right, there is a set of navigation icons.

Mathematical Typesetting, Graphics, Table and List

All the math typesetting packages and commands of \LaTeX also work for *Beamer*.

Environments for inserting Graphics, Table and List works the same way as they work in a \LaTeX document.

Exercise:

Create a presentation on Prime Numbers.