Beamer Features

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1. What is Beamer?

2. Some Math

3. Overlay Specifications

4. Graphics
A Latex package to create structured powerpoint style presentations.
What is Beamer?

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- A ‘Beamer’ is the thing that takes video input from say a computer.
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- The package has article, and handout modes as well.
- Works entirely inside of Latex!
- And is freely available. Google latex beamer
- Get the TeX file for this presentation to see how things work.
Easy overlays, creates slides and handouts as well. Read the beamer manual.
Features of the Beamer Class

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- Predefined styles and looks of a wide type.
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Fully supports hypertext features.
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And is actively being developed, by Till Tantau.
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Math Displays

Single Line Displays operate in the Usual Way

\[ \sum_{i,j=1}^{\infty} \otimes_{k=1}^{a_{i,j}} M_{k,j} \]
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\[
\sum_{i,j=1}^{\infty} \bigotimes_{k=1}^{a_{i,j}} M_{k,j}
\]

Multiline displays *with no tags* can be revealed line by line.

\[ A = B \]
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\[ = C \]
Math Displays

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\[
\sum_{i,j=1}^{\infty} a_{i,j} \otimes M_{k,j}
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Multiline displays \textit{with no tags} can be revealed line by line.

\[
A = B \\
= C \\
\leq D
\]
Theorem (Name of the Theorem Comes as Optional Argument)

$H$ is bounded iff there is a bounded function $\beta$ such that $P + H = P + \beta$.

And a second part of the Theorem was revealed on the next slide.
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$H_b$ is bounded iff there is a bounded function $\beta$ such that $P_+ b = P_+ \beta$. 
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$H_b$ is bounded iff there is a bounded function $\beta$ such that $P_+ b = P_+ \beta$.

And a second part of the Theorem

Notice how the second part of the Theorem was revealed on the next slide.
The "theorem like examples" include as predefined formats theorem, corollary, proof, example, examples, definition. Usage is
**Corollary**

Theorems, Corollaries, and Definitions have the Presentations.

Proof.

Proofs put the little QED boxes at the end.

Examples

\[ h \text{ is bounded iff there is a bounded function } \beta \text{ such that} \]

Your Name Goes Here

Use the \textit{beginblock} command.

A Key Point

Use \textit{alertblock} for those key points and examples.
**Corollary**

*Theorems, Corollaries, and Definitions have the Presentations.*

**Proof.**

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Examples

\( H_b \) is bounded iff there is a bounded function \( \beta \) such that \ldots
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$H_b$ is bounded iff there is a bounded function $\beta$ such that \ldots

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Examples

$H_b$ is bounded iff there is a bounded function $\beta$ such that . . .

Your Name Goes Here

Use the beginblock command.

A Key Point

Use alertblock for those key points and examples.
Overlay specifications are given in side of <  >. Examples are:

- <+> Means that this material should appear on the next slide. <+-> means that this appears on the next slide, and all subsequent slides.
Overlay specifications are given in side of <  >. Examples are:

- gives us shown on 2, 3, 4 slides, and alerted on the 3rd slide.
Overlay specifications are given in side of < >. Examples are:

- This will appear on the 3rd and 5th slide, with the command <3,5>
- gives us shown on 2, 3, 4 slides, and alerted on the 3rd slide.
Overlay specifications are given in side of `< >`. Examples are:

- gives us shown on 2, 3, 4 slides, and alerted on the 3rd slide.
Overlay specifications are given in side of < >. Examples are:
And this only appears on the 5th slide.

- This will appear on the 3rd and 5th slide, with the command <3,5>

- And use <+-> for incremental uncoverings. Very handy, especially when you move things around as you write the file.
Some first words for the slide \textbf{only}: Only appearing on this slide.

textbf, textcolor: Some words randomly repeated.
Some first words for the slide \textbf{uncover}: Some words uncovered, and occupying the previous places. \textbf{textbf}, \textbf{textcolor}: \textbf{Some words randomly repeated}. 
Some first words for the slide uncover: Some words uncovered, and occupying the previous places. textbf, textcolor: Some words randomly repeated.
Some first words for the slide \textbf{uncover}: Some words uncovered, and occupying the previous places. \textcolor{blue}{textbf}{textbf}{textcolor}{Some words randomly repeated}. \textbf{alert}: Heads up!
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enumerate

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There are three options for Boxed Text: (1) You can use \LaTeX\’s `fbox` command, (2) the commands created by `fancybox`. See the \LaTeX\ Companion for more details. (3) beamerboxes, see the beamer user guide. These two examples use beamerboxes.

\texttt{beamerboxesrounded, with option shadow=true}

\[
\int f(x - y)g(x + y) \frac{dy}{y}
\]

Some important point on a postit.
An important illustration goes here.

Typically some text should go on the right
You’ll probably want to include some graphics.

If you are familiar with the graphics package, it works in beamer. The basic command is \texttt{includographics}.

The graphics/drawing package \texttt{pgf} is loaded automatically, and it’s basic command is \texttt{pgfuseimage}.

Both of these commands are overlay aware!
The LaTeX package color and xcolor are automatically loaded. Some colors are automatically defined: red, green, blue, cyan, magenta, yellow, gray, lightgray.
The LaTeX package \texttt{color} and \texttt{xcolor} are automatically loaded. Some colors are automatically defined: \texttt{red}, \texttt{green}, \texttt{blue}, \texttt{cyan}, \texttt{magenta}, \texttt{yellow}, \texttt{gray}, \texttt{lightgray}.

To go beyond this, you’ll need to define some additional colors, and get a little more comfortable with the \texttt{color} and \texttt{xcolor} packages. Some examples: \texttt{softred}, \texttt{softblue}, \texttt{softgreen}, \texttt{softrg}, \texttt{softrb}, \texttt{softgb}.
The pgf package has some nice features for drawing illustrations, all compatible with the uncover and only features of beamer.
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Toeplitz
The pgf package has some nice features for drawing illustrations, all compatible with the uncover and only features of beamer.
Another \texttt{pgf} example

See the code to see how this was done.

\begin{center}
\begin{tikzpicture}
    
ode [draw, rounded corners, fill=gray!50, inner sep=1em] (a) {
        \begin{tabular}{ccc}
        $A \times B$ & $A \times A$ & $B \times B$
        \end{tabular}
    };
\end{tikzpicture}
\end{center}
See the code to see how this was done.