1 Document Creation (PDF)

1.1 To build on a machine with linux or Mac OS X

1. Open terminal and go to the project's directory

2. Type

   ```
   make slides
   ```

3. Type

   ```
   make notes
   ```

4. Type

   ```
   make refs
   ```

5. Type

   ```
   make
   ```

1.2 To build using a LaTeX IDE (e.g., texniccenter or texshop)

1. Build main.notes.tex (pdflatex) to get notes.

2. Build main.slides.tex (pdflatex) to get slides.

3. Build textbookrefs.tex (pdflatex) to get slides.

2 Maintenance of latex files

PREREQUISITES: A working knowledge of latex and beamer.

Please familiarise yourself with this file hierarchy description before editing.

Almost all of your favourite beamer and article mode luxuries should be usable using this build system.

The files are mostly organised into blocks for things affecting both notes and slides, slides only, and notes only.

2.1 File Hierarchy

`main.tex` - chapter creation, rearrangement of content order should happen here.

`packages.tex` - contains the packages to be loaded.

`formatting.tex` - edit the formatting rules of the notes and slides (margins, themes, etc).

`commands.tex` - put all your custom \newcommands and \defs etc in here.

`environments.tex` - put all your custom latex environments in here.

`variables.tex` - put all your custom latex variables here.

`precontent.tex` - title pages, table of contents, and anything before actual content should go here.

`textbookrefs.tex` - contains an independent file of textbook references.

`main.notes.tex` - necessary to setup lecture note building. Mostly leave alone.

`main.slides.tex` - necessary to setup slide building. Mostly leave alone.

`Makefile` - responsible for the 'make' commands. Mostly leave alone.

2.2 Adding chapters

1. Open up main.tex

2. Add the following:

```
%----------------------------------------------------------
% YOURCHAPTERNAME
%----------------------------------------------------------
\chapter*{YOURCHAPTERNAME}
%----------------------------------------------------------
% Fix counters etc and add table of contents entry
%----------------------------------------------------------
\addtocounter{chapter}{1}
```

```
    \setcounter{section}{0}
    \addtocontents{toc}{{\bf YOURCHAPTERNAME}}

    %----------------------------------------------------------
    % Add material here
    %----------------------------------------------------------
```

e.g.,

```
%----------------------------------------------------------
% CALCULUS
%----------------------------------------------------------
\chapter*{Calculus}
%----------------------------------------------------------
% Fix counters etc and add table of contents entry
%----------------------------------------------------------
\addtocounter{chapter}{1}
\setcounter{section}{0}
\addtocontents{toc}{{\bf Calculus}}

%----------------------------------------------------------
% Add material here
%----------------------------------------------------------
```

2.3 Adding topics

1. Create a new file called nameoftopic.tex, e.g., hilbertspaces.tex in an appropriate place. e.g., in the calculus subdirectory.

2. Add

   ```
   \mode*
   ```

   it is the first line.

3. Write latex as per usual afterwards.

4. Open up main.tex and find the chapter you want to add it under. If chapter does not exist, then see the section on adding chapters.

5. Go to the

   ```
   %----------------------------------------------------------
   % Add material here
   %----------------------------------------------------------
   ```

   part of the chapter.

6. Add the following after the dotted line:

```
\mode<all> \input{/path/to/new/texfile},
```

e.g.,

```
\mode<all> \input{./calculus/hilbertspaces.tex}
```

in that path, the "." refers to the current directory, and so

```
./calculus/
```

look in the calculus directory contained in the current directory.

2.4 Content: notes and slides

By default, content from your tex files will be put into the lecture notes. If you wish for some content to appear on slides, then you want to encapsulate it inside a frame environment, e.g.,

```
\begin{frame}
This text will appear in both notes and slides.
\begin{theorem}
This theorem will be in both notes and slides.
\end{theorem}
\end{frame}
```

2.5 Content: slides only

Sometimes you want some slide only content. You can achieve this by adding:

```
\mode<presentation> {
Stuff in here will only appear in slides.
}
```

e.g.,

```
\begin{frame}
\mode<presentation> {
\frametitle{This slide title is only relevant for slides.}
}
This text will appear in both notes and slides.
\begin{theorem}
This theorem will be in both notes and slides.
\end{theorem}
\end{frame}
```

2.6   Content: notes only

By default, unless you have a frame environment around something, it will only appear in the notes.

In case you ever need to guarantee notes only things where the default may not kick in, then use

```
\mode<article> {
stuff in here will be notes only
}
```

For content, this should never need to be used. It's more useful for editing the control flow of the latex templates before the content.