

L^AT_EX



LaTeX Lab 2: Report

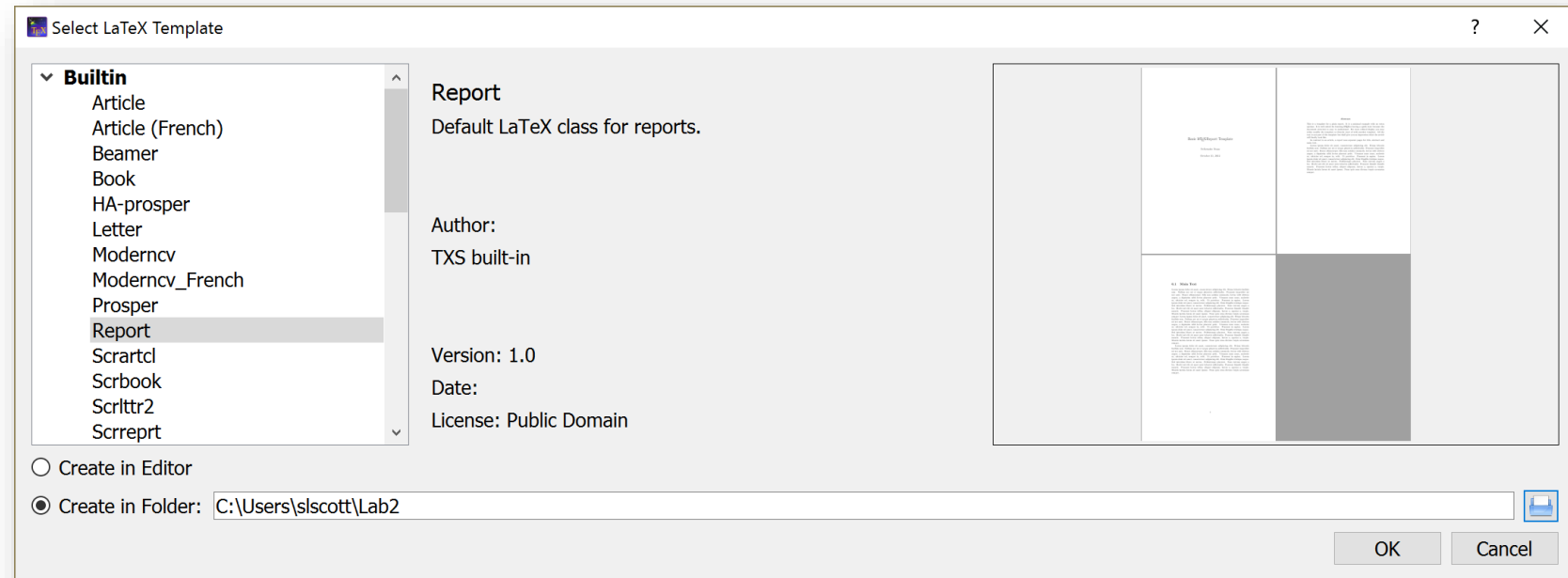
CSI 500

Course material derived from:


Lamport, L. (1994). *L^AT_EX: a document preparation system: user's guide and reference manual*. Addison-Wesley.

Report

- Let's make another LaTeX document
- Make a new folder called "Lab2"
- In TexStudio, File, New From Template
- Select "Report"
- Select "Create in Folder", and navigate to your "Lab2" folder.
- Press OK



Report LaTeX code

- Type in the following in the editor window.
 - Your additions are shown in **RED** font color
 - the "%" indicates comments
- Save the document
- Press the green arrowhead titled "Build and View" on the menu bar - it looks like this 
- At the dialog box, press F5 and OK

```
% Report.tex
% example of TexStudio built-in Report
\documentclass[11pt]{report}
% Title Page
\title{Example Report}
\author{Your Name\\Your University\\Your Location}

\begin{document}
\maketitle

\begin{abstract}
This example uses the default "report" template
supplied with the TexStudio IDE.
\end{abstract}

\section{Background}
\paragraph{}

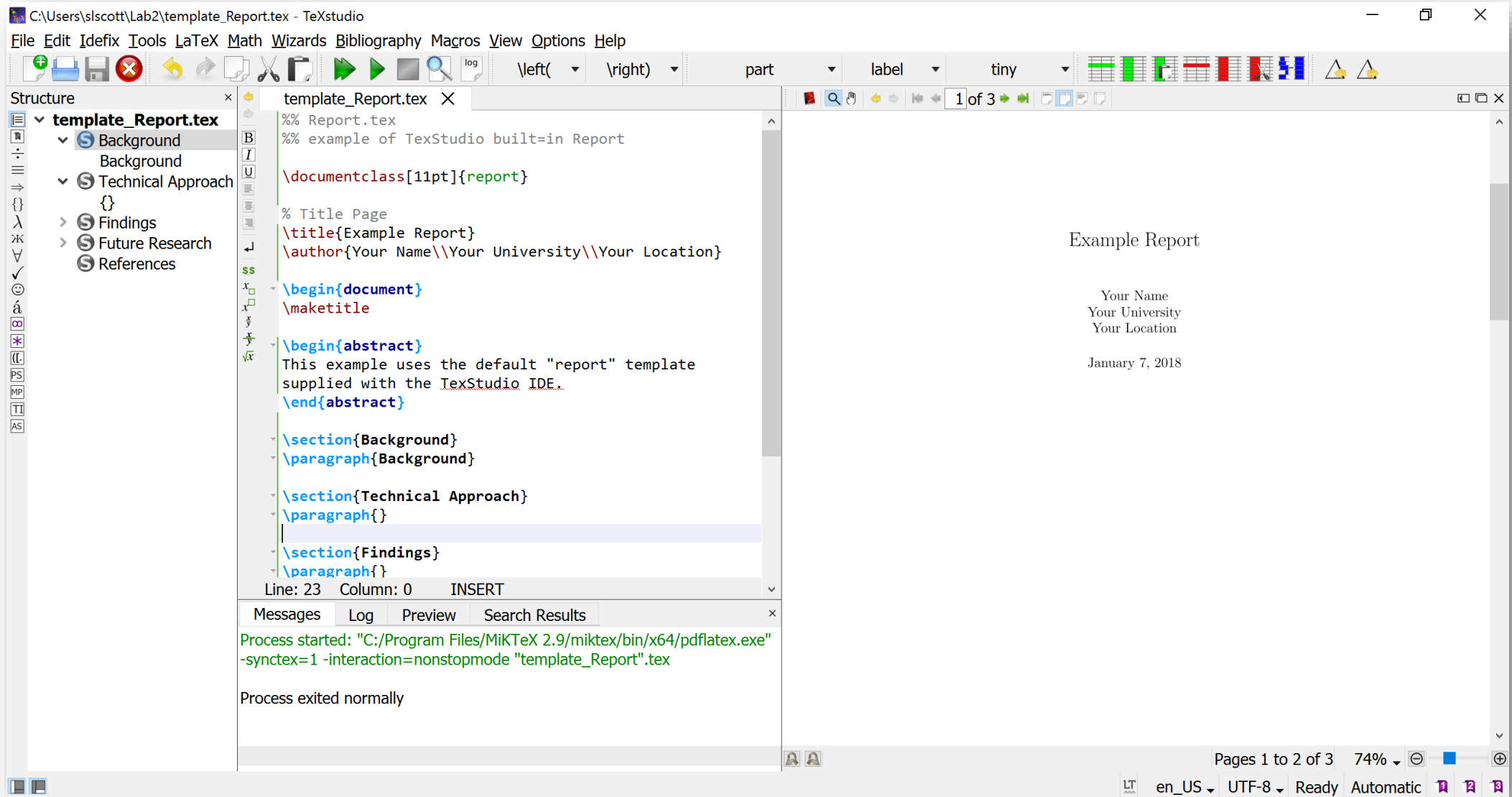
\section{Technical Approach}
\paragraph{}

\section{Findings}
\paragraph{}

\section{Future Research}
\paragraph{}

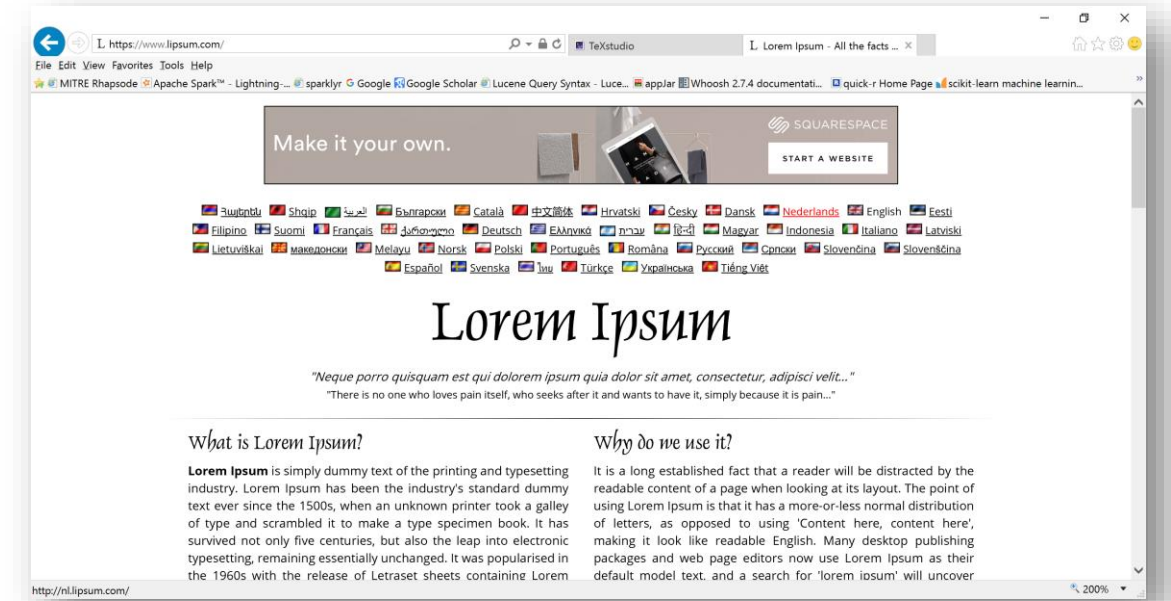
\end{document}
```

What it should look like (cover sheet pg 1)



Generate Lorum Ipsum content

- Typesetters often use dummy content to visualize the page layouts
- The "Lorum Ipsum" text is an example
 - <https://www.lipsum.com/>
- Visit this web site, and generate 5 paragraphs of text, and copy the text into your clipboard
- In your TexStudio, open a new blank file in your Lab2 folder, call it "Lorum_Ipsum.tex", and paste the copied text into it. We'll use this file as content for this lab.



Add dummy content

- Below each of the `\paragraph{}` commands, enter in a paragraph of Lorum Ipsum text.
- Cut and paste from your content document that you just created (Lorum Ipsum.tex)

% example of what your `\section`
% and `\paragraph` should look like

```
\section{Background}  
\paragraph{}
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris convallis a ante a gravida. Integer quis neque id elit ullamcorper finibus. Mauris convallis et libero et aliquet. Aliquam erat volutpat. Praesent fringilla consequat nibh eu semper. Mauris sodales odio in quam molestie, vitae condimentum ante mattis. Cras purus nulla, hendrerit quis mauris non, auctor venenatis nulla. Sed maximus dictum dignissim. Fusce bibendum tristique neque quis tristique.

Build and view results

Dummy text

The screenshot shows the TeXstudio interface with the following components:

- Structure Pane (Left):** A tree view showing the document structure. The 'Background' section is selected, and 'Lorum Ipsum' is listed as a sub-section.
- Editor (Center):** Displays the source code of 'template_Report.tex'. The code includes LaTeX commands like `\section{Background}`, `\paragraph{}`, and `\section{Technical Approach}`. The text is dummy text (Lorem ipsum).
- Messages Pane (Bottom):** Shows the compilation process. It indicates that the process started with `"C:/Program Files/MiKTeX 2.9/miktex/bin/x64/pdflatex.exe"` and exited normally.
- Typeset Text (Right):** Displays the rendered output of the document. It shows the '0.1 Background' section with its corresponding dummy text.

Typeset
text

Let's fix the section numbering

- For "report" class documents, the sections are managed as components of higher-level "chapter" or "part".
- Let's just add in a chapter command to get the sections numbered nicely.
- In your code, after the `\abstract` but before the first `\section`, enter the `\chapter` command code as shown to the left in **RED** font

```
\begin{document}  
\maketitle
```

```
\begin{abstract}  
This example uses the default "report" template  
supplied with the TexStudio IDE.  
\end{abstract}
```

```
\chapter{Basic Research}
```

```
\section{Background}  
\paragraph{}  
Lorem ipsum dolor sit amet, consectetur  
adipiscing elit. Mauris convallis a ante a gravida.  
Integer quis neque id elit ullamcorper finibus.  
Mauris convallis et libero et aliquet. Aliquam erat  
volutpat. Praesent fringilla consequat nibh eu  
semper. Mauris sodales
```


Build and view

results

new
\\chapter
command

The screenshot displays the TeXstudio interface. On the left, the 'Structure' pane shows the document hierarchy: 'template_Report.tex' containing 'Basic Research', 'Background', 'Technical App.', 'Findings', and 'Future Research'. The main editor shows the LaTeX source code for 'template_Report.tex', with the '\\chapter{Basic Research}' command highlighted. A red arrow points from the text 'new \\chapter command' to this command. The status bar at the bottom indicates 'Line: 18 Column: 0 INSERT'. The 'Messages' pane shows the build process: 'Process started: "/>

Fun extension: two column format

- Some journals use single column, and others use two or more columns.
- LaTeX supports this feature.
- At the very first line of your document, add in the use of the "twocolumn" document class.

```
% Report.tex
% example of TexStudio built-in Report

\documentclass[11pt, twocolumn]{report}


% Title Page
\title{Example Report}
\author{Your Name\\Your University\\Your Location}
```

Build and view

results

new
"twocolumn"
document
class

The screenshot displays the TeXstudio interface with the file `C:\Users\slscott\Lab2\template_Report.tex` open. The left sidebar shows the document structure, including sections like `Basic Research`, `Background`, `Technical App...`, `Findings`, and `Future Research`. The main editor window shows the LaTeX source code, which includes the `\documentclass[11pt, twocolumn]{report}` command. A red arrow points from the text "new 'twocolumn' document class" to this line. The right pane shows the rendered PDF output, which includes the title page and the first chapter, `Chapter 1 Basic Research`. A red circle highlights the `Basic Research` section in the PDF, and a red arrow points from the word "results" to this circle. The bottom status bar indicates the process started and exited normally.

```
%% Report.tex
%% example of TeXstudio built-in Report

\documentclass[11pt, twocolumn]{report}

% Title Page
\title{Example Report}
\author{Your Name\Your University\Your Location}

\begin{document}
\maketitle

\begin{abstract}
This example uses the default "report" template
supplied with the TeXstudio IDE.
\end{abstract}

\chapter{Basic Research}

\section{Background}
\paragraph{}
Lorem ipsum dolor sit amet, consectetur adipiscing
elit. Mauris convallis a ante a gravida. Integer quis
Line: 13 Column: 0 INSERT
```

Chapter 1

Basic Research

1.1 Background

>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris convallis a ante a gravida. Integer quis neque id elit ullamcorper finibus. Mauris convallis et libero et aliquet. Aliquam erat volutpat. Praesent tringilla consequat nibh eu semper. Mauris sodales odio in quam molestie, vitae condimentum ante mattis. Cras purus nulla, hendrerit quis mauris non, auctor venenatis nulla. Sed maximus dictum dignissim. Fusce bibendum tristique neque quis tristique. Duis semper risus et felis elementum commodo a sed nulla. Phasellus sit amet sapien eu felis ultricies scelerisque non a sapien. Praesent mauris turpis, porta eget nulla at, lobortis euismod erat. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Pellentesque dignissim scelerisque dolor, blandit gravida purus posuere quis. Nullam in mollis magna. Interdum et malesuada fames ac ante ipsum primis in faucibus.

1.3 Findings

...

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