# LaTex Lab 3: Article

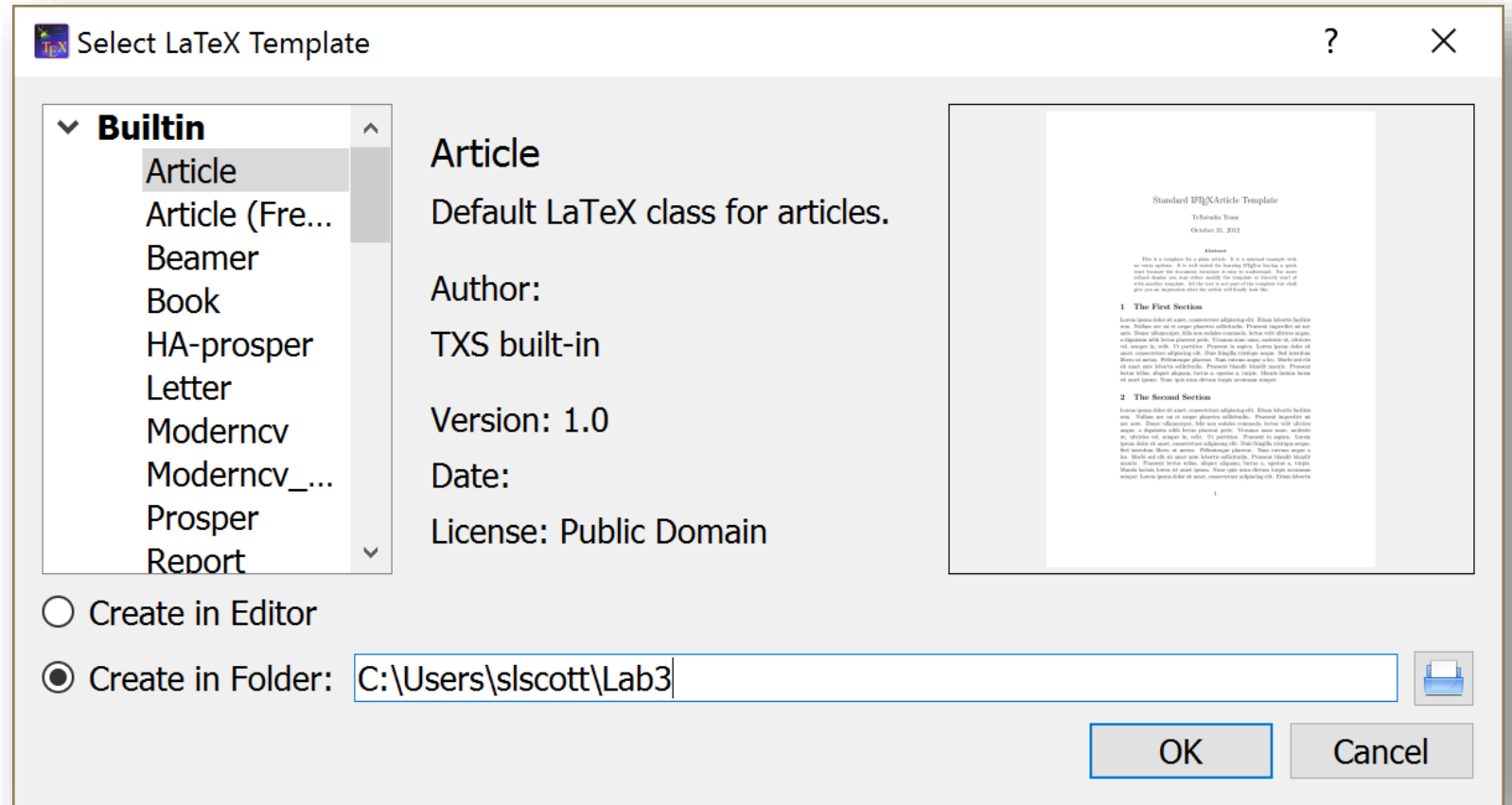## CSI 500

Course material derived from:

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

# Article

- Let's make another LaTex document

- Make a new folder called "Lab3"

- In TexStudio, File, New From Template

- Select "Article"

- Select "Create in Folder", and navigate to your "Lab3" 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

```
% Article example
\documentclass[11pt]{ article }
\usepackage{ fullpage }

%opening
\title{ An Example of a LaTex Article }
\author{ Your Name }

\begin{ document }

\maketitle

\begin{ abstract }
This is an example of a LaTex Article.  It
has an abstract and several sections.
\end{ abstract }

\section{ Background }
\section{ Methods }
\section{ Data }
\section{ Findings }
\section{ Discussion }
\section{ Conclusions and Future Work }

\end{ document }
```
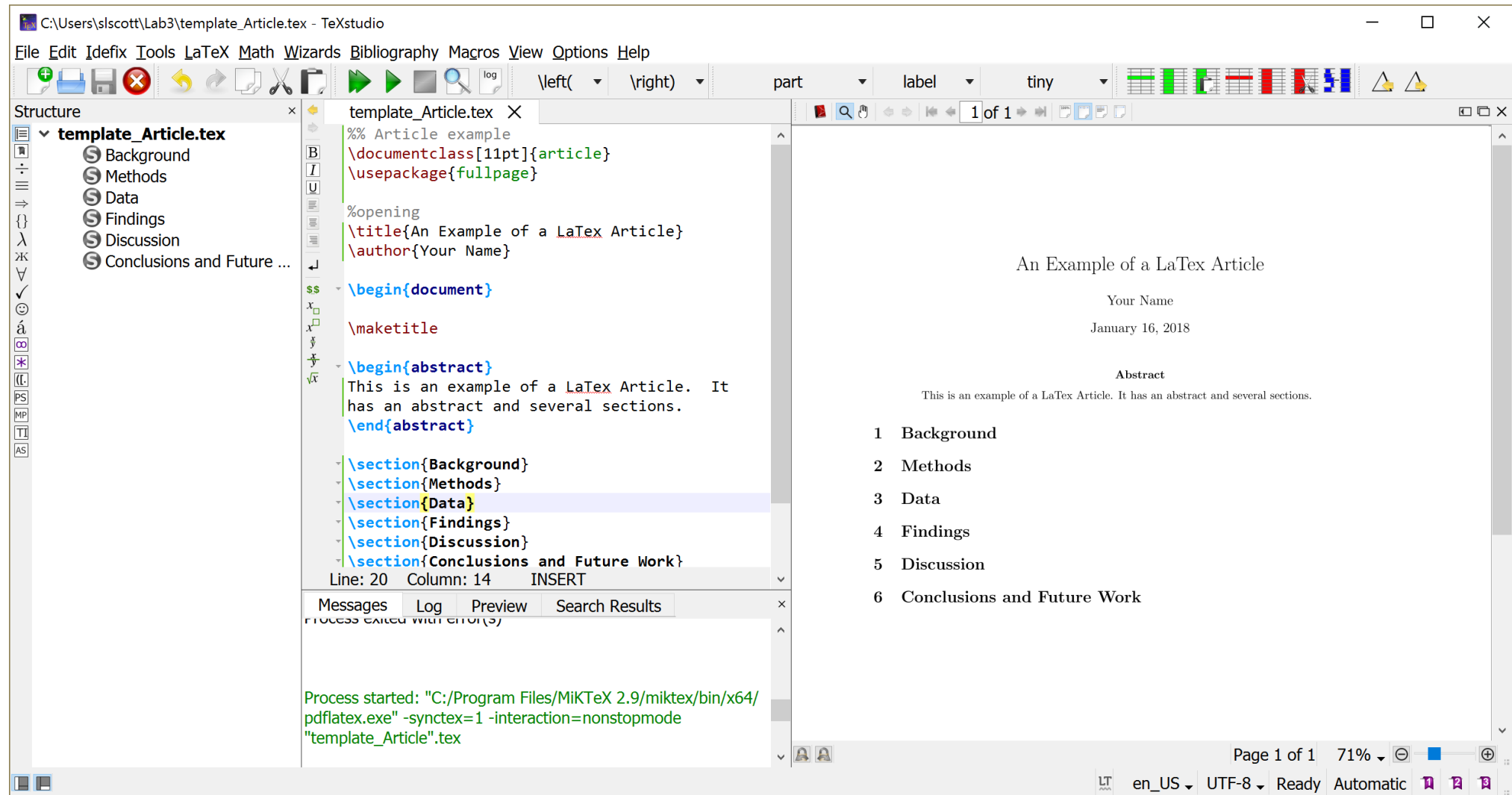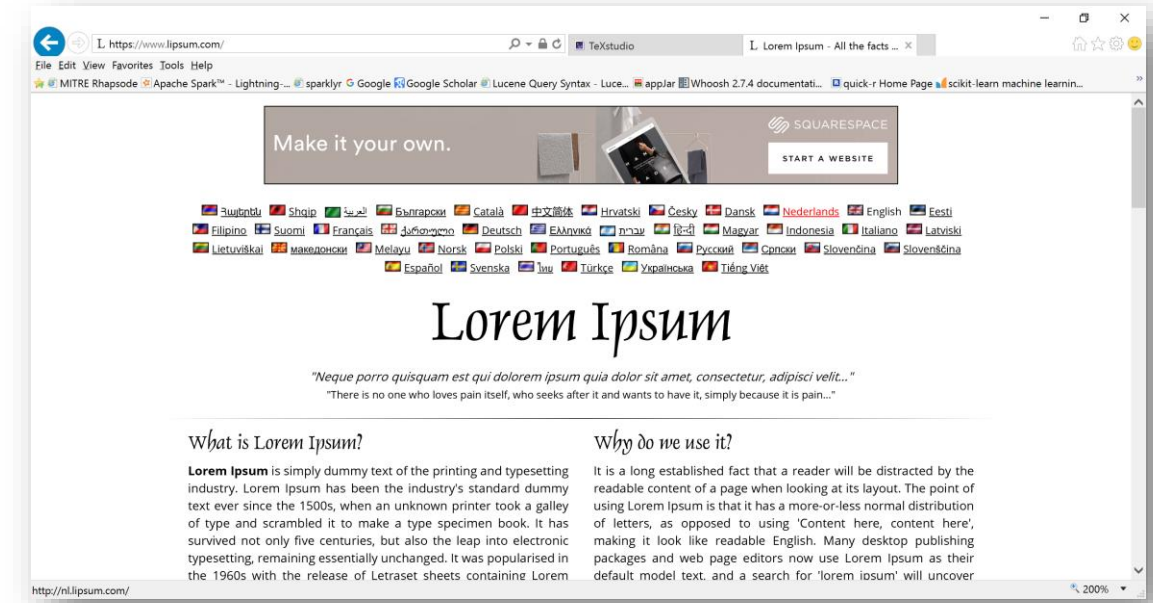
# What it should look like

# 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 12 paragraphs of text, and copy the text into your clipboard

- In your TexStudio, open a new blank file in your Lab3 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 \section{  } commands, enter in two paragraphs of Lorum Ipsum text.
- Separate paragraphs by double <cr>
- 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 }

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

# Using 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.

```
% Article example
\documentclass[11pt,twocolumn]{ article }
\usepackage{ fullpage }

%opening
\title{ An Example of a LaTex Article }
\author{ Your Name }

\begin{ document }
```

# Build and view



new "twocolumn" document class

results

# Add Sections

- LaTex supports hierarchical sections in documents
  - We've already defined \section
  - Let's define \subsections
- In each of your \sections, add in a couple of \subsection{ name } commands
- Move text around so there are some lines in each subsection

% example of what your \section
% and \subsection should look like

\section{ 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 fringilla consequat nibh eu semper.

**\subsection{ Background subsection 1 }**
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.

**\subsection{ Background subsection 2 }**
Maecenas vitae dui facilisis, vulputate arcu id, laoreet metus. Quisque et tincidunt ante, a laoreet odio. Etiam ac tellus congue, sagittis lacus at, tempor est.

# Here's what our subsections should look like

This is an example of a LaTex Article. It has an abstract and several sections.

## 1 Background

Lorem ipsum dolor sit amet, consectetur adipiscing elit. In vel lacus massa. Nulla vel mauris at purus imperdiet placerat. Suspendisse nec velit consequat, tincidunt massa et, faucibus arcu. Maecenas turpis nibh, tincidunt at turpis at, scelerisque malesuada quam. Aliquam semper convallis nunc, eget luctus dui interdum vel.

### 1.1 Background subsection 1

Morbi ut interdum dolor. Morbi vestibulum, eros sit amet interdum lobortis, nulla dui condimentum enim, eget scelerisque odio arcu sed odio. Sed lobortis gravida elit, nec blandit mi cursus et. Cras eget nunc nec massa laoreet finibus. Sed vel luctus ligula. Donec vitae arcu sed lorem ullamcorper tristique. Donec eleifend arcu nec pulvinar mollis. Vestibulum ornare ligula eu sagittis finibus. Vestibulum eleifend et enim quis pharetra.

### 1.2 Background subsection 2

Maecenas vitae dui facilisis, vulputate arcu id,

risus a commodo. Sed sed orci congue, vestibulum lectus a, mollis elit. Aliquam id turpis elementum lectus sodales lacinia. Vivamus eleifend libero condimentum, blandit orci nec, iaculis massa. In ut magna libero. Suspendisse potenti. Nulla facilisi. Proin feugiat diam auctor maximus semper. Nullam metus risus, lacinia at dolor in, ultricies malesuada justo.

## 2 Methods

Donec tincidunt enim nec eros volutpat, pharetra convallis neque pellentesque. Donec in dui auctor, sodales odio et, luctus nisi.

### 2.1 Methods subsection 1

Proin in dictum ante. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer ultrices justo eget erat pretium, eu convallis mi interdum. Phasellus at justo ut metus ullamcorper consectetur nec et lacus. Integer eu tortor ac enim maximus fringilla. Pellentesque ante odio, auctor sed enim sed, porta sollicitudin elit. Phasellus at leo vitae urna interdum efficitur eu vel erat. Cras mattis lacus dui, nec auctor turpis facilisis at. Ut volutpat elit elit.

### 2.2 Methods subsection 2

Subsections automatically numbered

Subsections automatically numbered

# LaTex Font Families

- LaTex supports several major font families

- type in the following to exercise various font families

- the \\ indicate hard line returns, which makes this example easier to read

\section{ Background }
Lorem ipsum dolor sit amet, consectetur adipiscing elit. In vel lacus massa.

\textrm{ This is Roman font }\\
\textsf{ This is Sans serif font }\\
\texttt{ this is typewriter font, often used for computer code }\\
\textmd{ This is medium series font }\\
\textbf{ this is bold font }\\
\textup{ this is upright shape font }\\
\textit{ this is italic font }\\
\textsl{ this is slanted font. note difference from italic }\\
\textsc{ this is small caps font }\\
\emph{ this is emphasized font }\\
\textnormal{ this is the default, or text normal font }\\
\underline{ this is underline font }\\

# LaTex Font Sizes

- LaTex supports font sizing for emphasis or effect

- type in the following to exercise various font sizes

- Note: you must restore the normal size fonts by issuing a \normalsize{} command

\section{ Background }
Lorem ipsum dolor sit amet, consectetur adipiscing elit. In vel lacus massa.

\tiny{ this is tiny font }\\
\scriptsize{ this is scriptsize font }\\
\footnotesize{ this is footnote size font }\\
\small{ this is small font }\\
\normalsize{ this is the default, normal size font }\\
\large{ this is large font }\\
\Large{ this is Large, which is larger font }\\
\LARGE{ this is LARGE font }\\
\huge{ this is huge font }\\
\Huge{ this is Huge font }\\

\subsection{ Background subsection 1 }
**\normalsize{ }**
Nulla vel mauris at purus imperdiet placerat. Suspendisse nec

# Here's how the font families and sizes look



**Abstract**

This is an example of a LaTex Article. It has an abstract and several sections.

this is large font

this is Large, which is larger font

this is LARGE font

this is huge font

**1  Background**

this is Huge font

Lorem ipsum dolor sit amet, consectetur adipiscing elit. In vel lacus massa.

This is Roman font
This is Sans serif font
this is typewriter font, often used for computer code
This is medium series font
**this is bold font**
this is upright shape font
*this is italic font*
*this is slanted font.* note difference from italic
THIS IS SMALL CAPS FONT
*this is emphasized font*
this is the default, or text normal font
this is underline font

**1.1  Background subsection 1**

Nulla vel mauris at purus imperdiet placerat. Suspendisse nec velit consequat, tincidunt massa et, faucibus arcu. Maecenas turpis nibh, tincidunt at turpis at, scelerisque malesuada quam. Aliquam semper convallis nunc, eget luctus dui interdum vel.

Morbi ut interdum dolor. Morbi vestibulum, eros sit amet interdum lobortis, nulla dui condimentum enim, eget scelerisque odio arcu sed odio. Sed lobortis gravida elit, nec blandit mi cursus et. Cras eget nunc nec massa laoreet finibus. Sed vel luctus ligula. Donec vitae arcu sed lorem ullamcorper tristique. Donec eleifend arcu nec pulvinar mollis. Vestibulum ornare ligula eu sagittis finibus. Vestibulum eleifend et enim quis pharetra.

this is tiny font

this is scriptsize font

this is footnote size font

this is small font

this is the default, normal size font

Font families

Font sizes

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