MTH 459, LaTeX Tutorial #1, Spring 2025

One of the technical aspects of this course will be to learn some basic elements of working with LaTeX. LaTeX is a markup language for documents that can handle mathematical code, styles, citations and bibliographies, graphs and more. But working with the code language does take some practice. We are going to start by setting up an account on Overleaf, a free website for working with LaTeX that can compile your documents for you and convert them into pdfs.

1. **Set Up an Account on Overleaf**
   a. **Visit Overleaf**: Go to https://www.overleaf.com.
   b. **Sign Up**:
      - Click on the **"Register"** button at the top right corner of the page.
      - You can sign up using your email address or via Google or institutional credentials (if applicable).
      - Choose a secure password if registering with email.
   c. **Verify Your Email**:
      - If you signed up with an email address, Overleaf will send a verification link to your inbox.
      - Open the email and click the link to verify your account.
   d. **Login**: After verifying, log in using your credentials.
   e. **Explore Overleaf**:
      - You'll be taken to your project dashboard where you can see templates, create a new project, or open an existing one.
   f. **Recommended Starter Template**:
      - Begin with the "Learn LaTeX in 30 Minutes" from Overleaf's gallery.

2. **First Assignment: Creating a Basic LaTeX Document**
   a. **Objective**
      - Create a short document using LaTeX that includes:
      - Text paragraphs
      - Headers (section and subsection)
      - A bullet-point list
      - A numbered list
   b. **Steps**
      - **Log in to Overleaf**:
        Use your Overleaf account and create a new blank project.
      - **Structure Your Document**:
        Copy and paste the following LaTeX starter code into your new document to understand the basic structure:

```
\documentclass[12pt]{article} % Use the article class
\usepackage[utf8]{inputenc}   % Support for special characters
\usepackage{lipsum}           % For placeholder text (optional)

\title{My First LaTeX Document}
\author{Your Name}
\date{\today}
```

\begin{document}

\maketitle % Creates the title, author, and date section

\section{Introduction}
This is the introduction section. Here, you can write about the purpose of your document or project.

\subsection{Background}
This subsection provides more detail on the background information. You can also use placeholder text, such as:
\lipsum[1-2] % Optional: Generates placeholder paragraphs

\section{Lists and Bullets}

Here is a bullet-point list:
\begin{itemize}
    \item First item
    \item Second item
    \item Third item
\end{itemize}

Here is a numbered list:
\begin{enumerate}
    \item First item
    \item Second item
    \item Third item
\end{enumerate}

\section{Conclusion}
Write a brief conclusion about what you've learned in this exercise.

\end{document}

   c. **Customize the Document**:
- Replace "Your Name" with your name.
- Edit the sections to include your own text instead of the placeholder content.
- Add at least three bullet points and three numbered items.

   d. **Compile the Document**:
- Click the **"Recompile"** button to generate the PDF.
- Review your work and fix any errors.

3. **Submission**: Once the document has been customized to your satisfaction, submit the pdf in the dropbox for the assignment in Blackboard.