UTHM **LATEX** THESIS TEMPLATE

STUDENT GUIDE 2026

A PRACTICAL GUIDE FOR MASTER'S AND PHD STUDENTS

PREPARED BY

Abdinasir Hirsi, PhD

FACULTY OF ELECTRICAL AND ELECTRONIC ENGINEERING (FKEE)

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

DEVELOPED UNDER THE ACADEMIC SUPERVISION OF

ASSOCIATE PROFESSOR DR. LUKMAN HANIF BIN MUHAMMAD AUDAH

CHECKED AND APPROVED BY:

CENTRE FOR GRADUATE STUDIES (CGS)

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

UTHM LATEX THESIS TEMPLATE

SOFTWARE REQUIREMENTS

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SOFTWARE REQUIREMENTS

Students may use any LaTeX editor to write their thesis. The template works with both online and offline LaTeX environments. The two recommended options are listed below.

## TEXSTUDIO (RECOMMENDED FOR SERIOUS THESIS WRITING)

TeXstudio is strongly recommended for writing large theses because it provides better performance, full control of compilation, and does not depend on internet connectivity.
Students using TeXstudio must first install a complete LaTeX distribution such as:
- MiKTeX (Windows)
- TeX Live (Windows, Linux, macOS)

After installation, ensure that all required packages are installed automatically by the distribution. Most modern LaTeX distributions install missing packages when compiling for the first time.
When compiling the thesis, the compiler must be set to XeLaTeX.

$i = \sqrt{-1}$

$e^{i\pi} + 1 = 0$
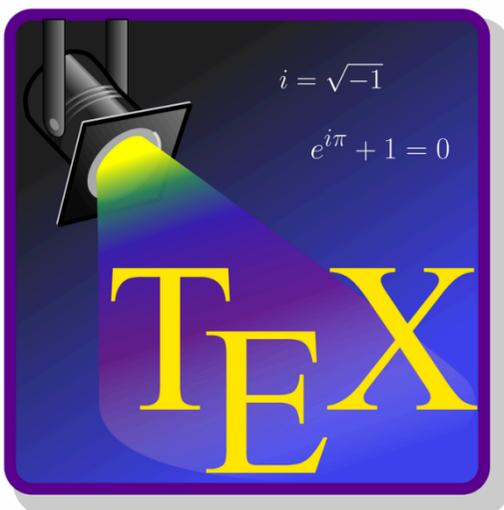
Text Studio Installation Recommend Video from Youtube

Please watch this video Link:
https://www.youtube.com/watch?v=Smd9Fnsy00U

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OVERLEAF (ALTERNATIVE ONLINE OPTION)

Overleaf can also be used for this template. It is suitable for students who prefer working in a web browser or collaborating with supervisors. To use Overleaf:

1. Upload the entire template folder.
2. Open the project settings.
3. Set the compiler to XeLaTeX.
4. Compile the file main.tex.

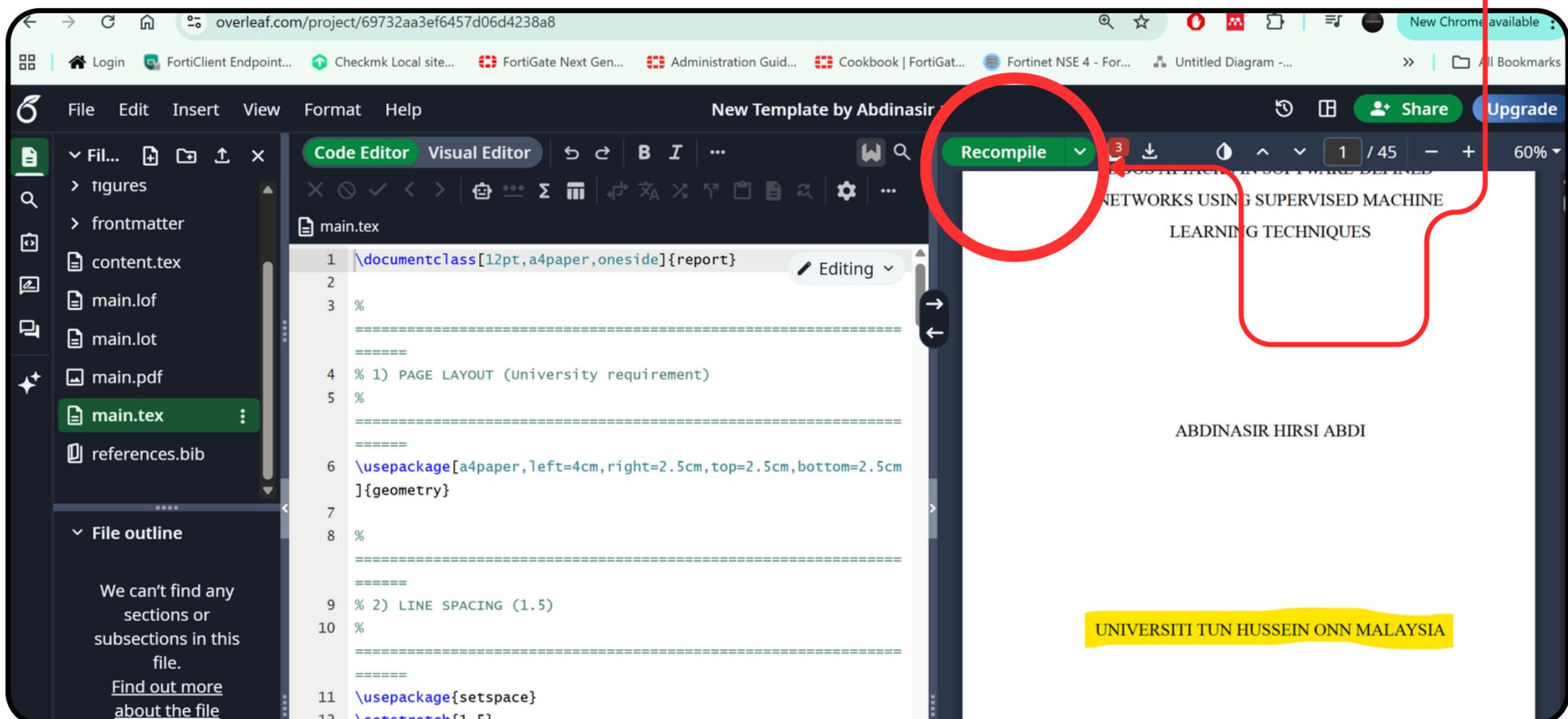A stable internet connection is required when using Overleaf.

how to upload latex template in overleaf?

Please watch this video
Link:https://www.youtube.com/watch?v=ubVHUtT5nlE

UTHM **LATEX** THESIS TEMPLATE

IMPORTANT – READ BEFORE YOU START

UTHM LATEX THESIS TEMPLATE

IMPORTANT: READ BEFORE YOU START

This **LaTeX thesis template** is designed to automatically handle formatting according to Universiti Tun Hussein Onn Malaysia (UTHM) postgraduate requirements. Students only need to focus on writing their thesis content. All layout, spacing, numbering, and Table of Contents behavior are controlled by the template.

WHERE TO WRITE YOUR CONTENT

Students should write their thesis only inside the following folders:
- **chapters/**
- **frontmatter/**
- **appendices/**
- **references.bib**

📁 appendices

📁 chapters

📁 figures

📁 frontmatter

🖼️ content
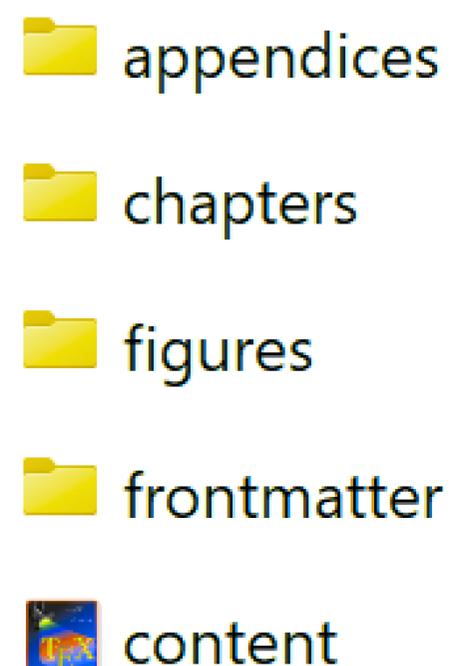
REQUIRED COMPILER

This template must be compiled using XeLaTeX.
- **Do not use pdfLaTeX or LuaLaTeX.**
- **Using the wrong compiler may cause font errors, incorrect formatting, or compilation failure.**
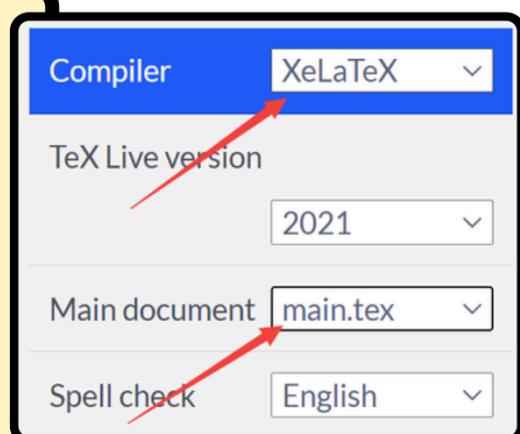
Compiler	XeLaTeX ⌄
TeX Live version	
	2021 ⌄
Main document	main.tex ⌄
Spell check	English ⌄

UTHM LATEX THESIS TEMPLATE

FILES THAT MUST NOT BE EDITED

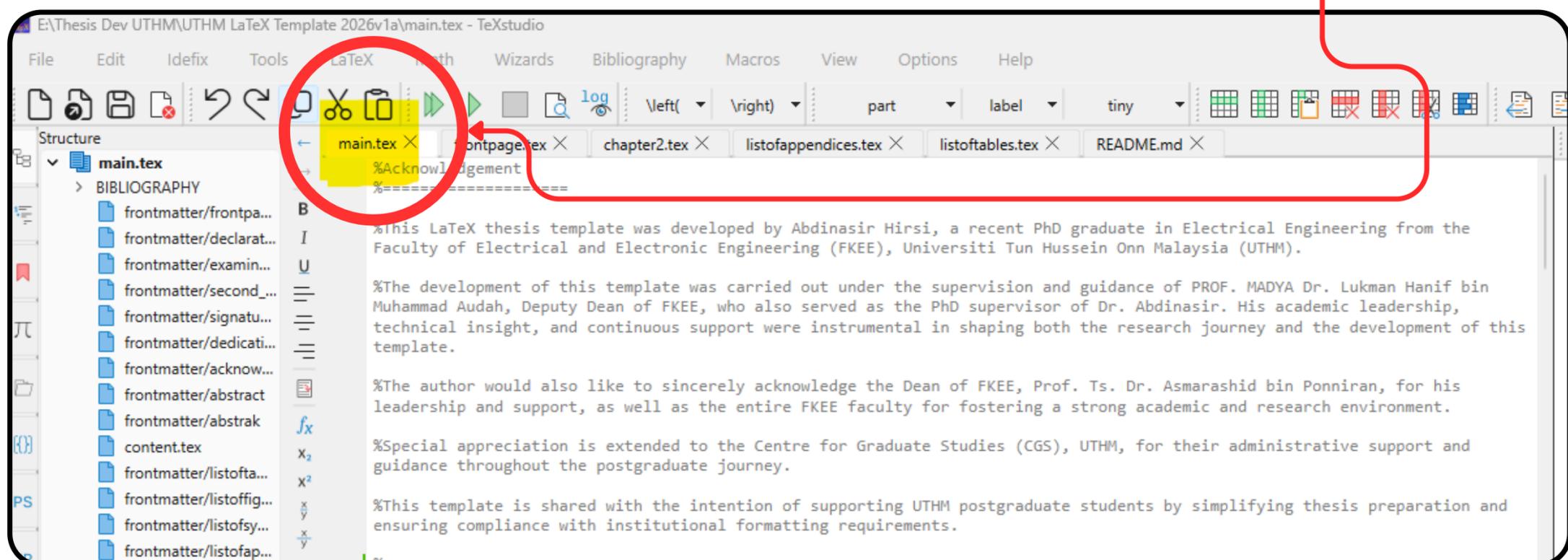To maintain compliance with UTHM formatting rules, students must not modify:
- **The main template structure**
- **content.tex**
- **page numbering logic**
- **font configuration**
- **spacing settings**

Editing these files may break the formatting of the thesis.

HOW TO COMPILE THE THESIS

Always compile the file main.tex.
Do not compile individual chapter files.

E:\Thesis Dev UTHM\UTHM LaTeX Template 2026v1a\main.tex - TeXstudio

File   Edit   Idefix   Tools   LaTeX   ...th   Wizards   Bibliography   Macros   View   Options   Help

Structure
- main.tex
  - BIBLIOGRAPHY
  - frontmatter/frontpa...
  - frontmatter/declarat...
  - frontmatter/examin...
  - frontmatter/second_...
  - frontmatter/signatu...
  - frontmatter/dedicati...
  - frontmatter/acknow...
  - frontmatter/abstract
  - frontmatter/abstrak
  - content.tex
  - frontmatter/listofta...
  - frontmatter/listoffig...
  - frontmatter/listofsy...
  - frontmatter/listofap...

main.tex   ...ntpage.tex   chapter2.tex   listofappendices.tex   listoftables.tex   README.md

%Acknowledgement
%=================

%This LaTeX thesis template was developed by Abdinasir Hirsi, a recent PhD graduate in Electrical Engineering from the Faculty of Electrical and Electronic Engineering (FKEE), Universiti Tun Hussein Onn Malaysia (UTHM).

%The development of this template was carried out under the supervision and guidance of PROF. MADYA Dr. Lukman Hanif bin Muhammad Audah, Deputy Dean of FKEE, who also served as the PhD supervisor of Dr. Abdinasir. His academic leadership, technical insight, and continuous support were instrumental in shaping both the research journey and the development of this template.

%The author would also like to sincerely acknowledge the Dean of FKEE, Prof. Ts. Dr. Asmarashid bin Ponniran, for his leadership and support, as well as the entire FKEE faculty for fostering a strong academic and research environment.

%Special appreciation is extended to the Centre for Graduate Studies (CGS), UTHM, for their administrative support and guidance throughout the postgraduate journey.

%This template is shared with the intention of supporting UTHM postgraduate students by simplifying thesis preparation and ensuring compliance with institutional formatting requirements.

UTHM LATEX THESIS TEMPLATE

IF YOU ENCOUNTER ERRORS

Before making any changes to formatting:
1. Confirm that the compiler is set to XeLaTeX.
2. Recompile the project.
3. Avoid manual formatting adjustments.

Most issues are resolved by recompiling with the correct settings.
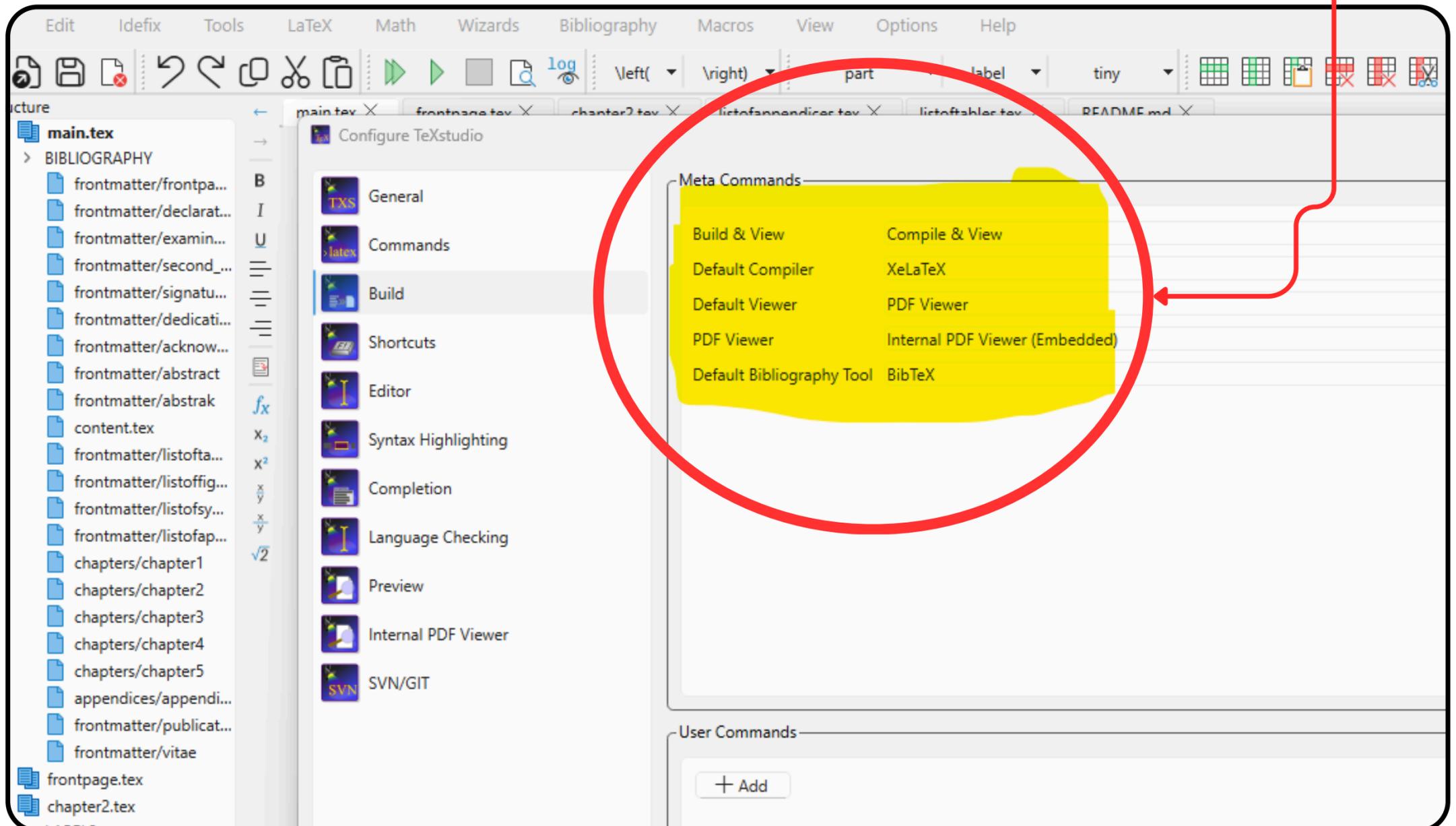
UTHM LATEX THESIS TEMPLATE

INSTALLING TEXSTUDIO AND LATEX (STEP-BY-STEP)

UTHM LATEX THESIS TEMPLATE

INSTALLING TEXSTUDIO AND LATEX (STEP-BY-STEP)

To write your thesis using TeXstudio, you must install two components:

1. A LaTeX distribution (this installs all required packages)
2. The TeXstudio editor

Both are required for the template to compile correctly.

STEP 1 – INSTALL A LATEX DISTRIBUTION

Choose one of the following depending on your operating system.

- **Windows users**
  - Install MiKTeX or TeX Live.
  - During installation, allow automatic installation of missing packages when compiling.
- **macOS users**
  - Install MacTeX (recommended). This already includes a full LaTeX environment.
- **Linux users**
  - Install TeX Live using your system package manager.
  - After installation, restart your computer to ensure the system paths are updated.

UTHM **LATEX** THESIS TEMPLATE

STEP 2 – INSTALL TEXSTUDIO

Download and install TeXstudio from the official website (https://www.texstudio.org/). TeXstudio is only the editor. It uses the LaTeX distribution installed in Step 1 to compile the thesis.

STEP 3 – CONFIGURE THE COMPILER

- **Open TeXstudio.**
  - **Go to:**
    - **Options → Configure TeXstudio → Build**
- **Set the Default Compiler to:**
  - **XeLaTeX**
- **Apply the changes and close the settings.**

Compiler	XeLaTeX
TeX Live version	2021
Main document	main.tex
Spell check	English

STEP 4 – OPEN THE TEMPLATE

1. **Extract the template folder.**
2. **Open TeXstudio.**
3. **Open the file main.tex.**
4. **Press Compile.**

Do not compile chapter files individually.

IMPORTANT NOTES

- **The first compilation may take longer because LaTeX installs required packages automatically.**
- **If package installation prompts appear, allow them to install.**
- **Always compile using XeLaTeX.**

This LaTeX template was **developed** by **Abdinasir Hirsi** under the supervision of **Assoc Prof. Dr. Lukman Audah,** with support from FKEE and CGS.
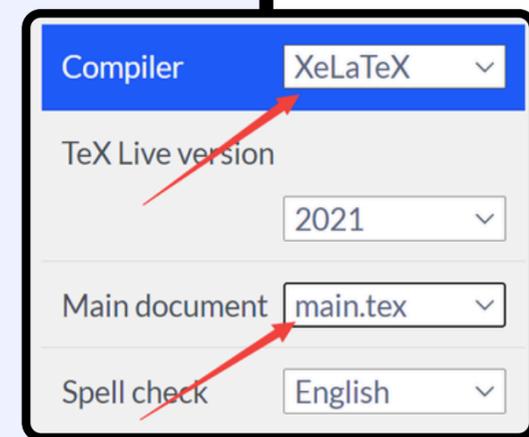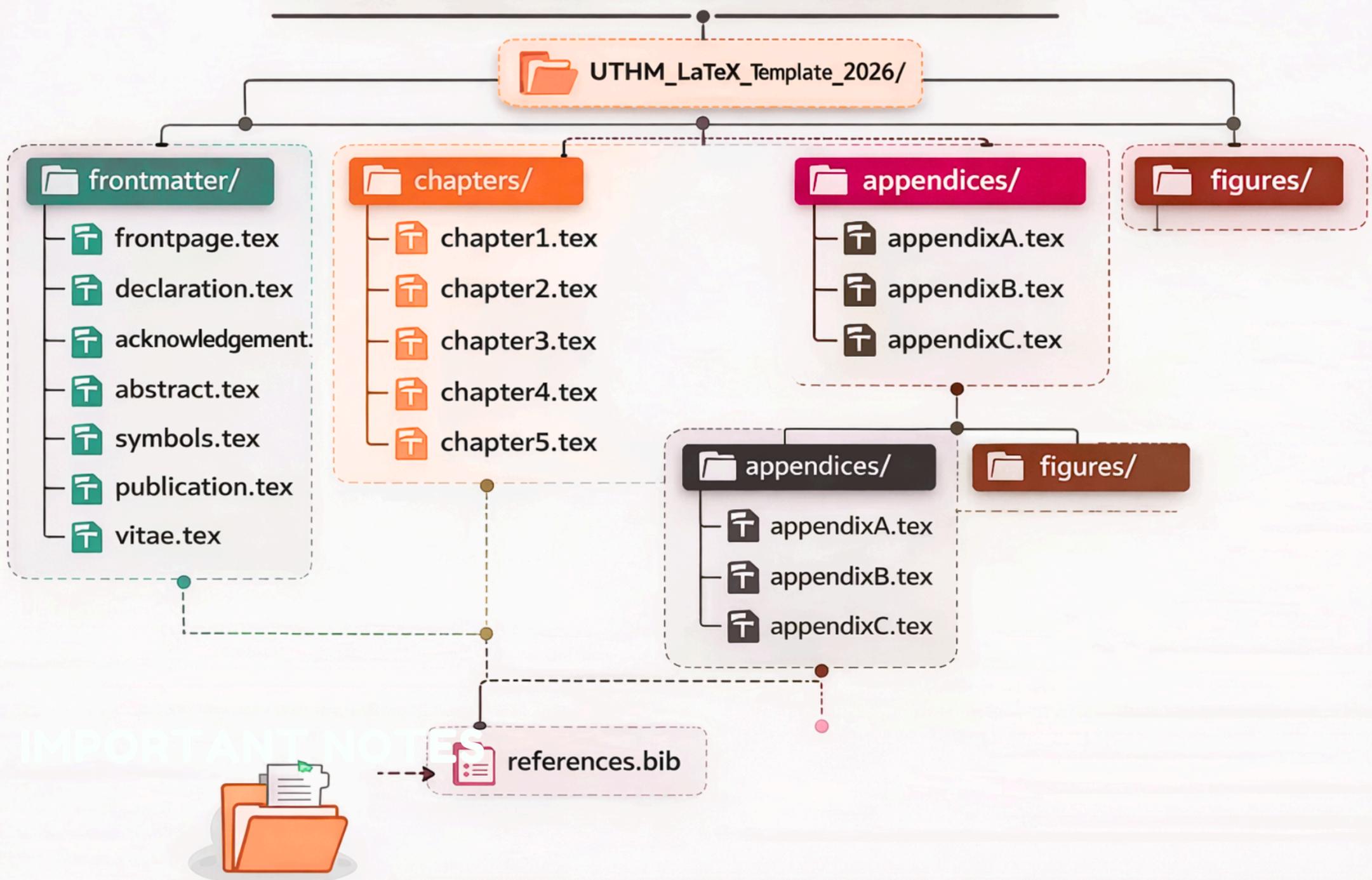
UTHM **LATEX** THESIS TEMPLATE

TEMPLATE FOLDER STRUCTURE

UTHM LATEX THESIS TEMPLATE

TEMPLATE FOLDER STRUCTURE

The template is organised into several folders. Each folder has a specific purpose. Students should only edit the files intended for writing their thesis content. Do not rename folders or move files, as this may break the compilation.

LaTeX TEMPLATE FOLDER STRUCTURE

UTHM_LaTeX_Template_2026/

frontmatter/
- frontpage.tex
- declaration.tex
- acknowledgement.
- abstract.tex
- symbols.tex
- publication.tex
- vitae.tex

chapters/
- chapter1.tex
- chapter2.tex
- chapter3.tex
- chapter4.tex
- chapter5.tex

appendices/
- appendixA.tex
- appendixB.tex
- appendixC.tex

figures/

appendices/
- appendixA.tex
- appendixB.tex
- appendixC.tex

figures/

IMPORTANT NOTES

references.bib

UTHM LATEX THESIS TEMPLATE

TEMPLATE FOLDER STRUCTURE

The template is organised into several folders. Each folder has a specific purpose. Students should only edit the files intended for writing their thesis content. Do not rename folders or move files, as this may break the compilation.

MAIN.TEX

- This is the main file of the thesis.
- Always compile this file.
- Do not compile individual chapter files.
- All chapters, front pages, appendices, and references are automatically connected through this file.

FRONTMATTER/

- This folder contains the pages that appear before Chapter 1.
- Examples include:
  - title page
  - student declaration
  - acknowledgement
  - abstract
  - list of symbols
  - publication page
  - vitae page
- Students should edit only the text inside these files when necessary.

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CHAPTERS/

- This folder contains the thesis chapters.
- Each chapter is stored in a separate file:
  - chapter1.tex
  - chapter2.tex
  - chapter3.tex
  - chapter4.tex
  - chapter5.tex
- Students should write their thesis content inside these files only.

APPENDICES/

- This folder contains appendix files such as:
  - appendixA.tex
  - appendixB.tex
  - appendixC.tex
- Add appendix content inside these files when needed.
- The template automatically formats appendices correctly.

FIGURES/

- Store all images, diagrams, and figures inside this folder.
- Keeping figures in one folder helps maintain a clean project.

REFERENCES.BIB

- This file stores all bibliography entries.
- Students should add their references here and use the \cite{} command inside chapters to cite them.

The template automatically formats references in IEEE style.

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WRITING YOUR FIRST CHAPTER

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WRITING YOUR FIRST CHAPTER

- To begin writing your thesis, open the chapters/ folder and select the chapter file you want to edit, for example:
    - chapter1.tex
  - Each chapter is stored in its own file. Write your thesis content directly inside these chapter files.
  - Do not create new chapter files unless necessary, and do not move files outside the chapters folder.
- **Where to Start Writing**
  - Inside the chapter file, you will see an existing chapter title already defined.
  - Start writing your text below the chapter heading. The template automatically handles chapter numbering, spacing, and formatting.
  - Students should only write their content and should not manually adjust formatting.
- **Writing Sections and Subsections**
  - To create sections within a chapter, use:
    - \section{Section Title}
    - \subsection{Subsection Title}
    - \subsubsection{Subsection Title}
  - The template automatically formats headings according to UTHM requirements.
- **Writing Paragraphs**
  - Simply write your text normally. The template automatically applies:
    - correct font
    - correct spacing
    - correct indentation
- Students should not attempt to manually adjust spacing or alignment.

UTHM LATEX THESIS TEMPLATE

WRITING YOUR FIRST CHAPTER

- **Adding Lists**
  - For bullet lists, use the standard LaTeX itemize environment.
  - For numbered lists, use the enumerate environment.
  - The template automatically formats lists consistently.
- **Saving Your Work**
  - Save your file and compile the thesis by compiling main.tex.
  - Do not compile individual chapter files.
- **Important Reminder**
  - Write only the content of your thesis.
  - The template automatically manages formatting, numbering, and layout.
  - Avoid inserting manual spacing, manual page numbers, or custom formatting commands.

UTHM **LATEX** THESIS TEMPLATE

INSERTING FIGURES

UTHM **LATEX** THESIS TEMPLATE

INSERTING FIGURES

- Figures such as diagrams, charts, and screenshots should be inserted using the standard LaTeX figure environment. The template automatically formats figure numbering and captions according to UTHM requirements.

- **Step 1 — Place Your Image in the Figures Folder**
  - Before inserting a figure, copy your image file into the figures/ folder inside the template.
  - Keeping all images in this folder prevents missing file errors during compilation.

- **Step 2 — Insert the Figure Code in Your Chapter**
- Use the following structure to insert a figure:
  ```
  \begin{figure}[h]
  \centering
  \includegraphics[width=0.55\textwidth]{figures/your_image_name}
  \caption{Your figure caption.}
  \label{fig:your_label}
  \end{figure}
  ```
- Replace your_image_name with the actual file name of your image.

- **Step 3 — Referencing a Figure in the Text**
- To reference the figure inside your writing, use:
  ```
  Figure~\ref{fig:image_name}
  ```
- LaTeX will automatically insert the correct figure number.
- **Important Notes**
    - Do not type figure numbers manually.
    - Always use the label and reference system.
    - Supported formats include PNG, JPG, and PDF.

UTHM LATEX THESIS TEMPLATE

INSERTING TABLES

UTHM LATEX THESIS TEMPLATE

INSERTING TABLES

- Tables should be inserted using the standard LaTeX table environment. The template automatically formats table numbering, caption style, and spacing according to UTHM requirements.
- Students only need to write the table content and caption.

- **Step 1 — Insert the Table Code in Your Chapter**
- Use the following structure when inserting a table:
  ```
  \begin{table}[h]
  \centering
  \caption{Your table caption}
  \label{tab:your_label}
  \begin{tabular}{columns}
  ... table content ...
  \end{tabular}
  \end{table}
  ```
- Replace the caption and label with your own information.

- **Step 2 — Referencing a Table in Your Text**
- To refer to a table inside your writing, use:
  Table~\ref{tab:your_label}
- LaTeX automatically inserts the correct table number.
- **Important Notes**
  - Do not type table numbers manually.
  - Always use \label{} and \ref{} for referencing.
  - The template automatically controls caption.
- **If Your Table Is Too Wide**
  - If a table does not fit on the page, use the landscape table example provided in Chapter 2 of the template.
  - This allows large tables to be displayed without formatting issues.

UTHM LATEX THESIS TEMPLATE

INSERTING EQUATIONS

UTHM LATEX THESIS TEMPLATE

INSERTING EQUATIONS

- Mathematical equations should be inserted using LaTeX math mode. The template supports both standard equations and UTHM-style right-aligned numbering.
- Students should never type equation numbers manually unless instructed by their supervisor.
- Basic Equation Format
- UTHM-Style Right-Aligned Equation Number
- If a custom layout with the equation centered and the number aligned at the right is required, use the following structure:

```
\begin{table}[ht]
\centering
\setlength{\tabcolsep}{0pt}
\renewcommand{\arraystretch}{1.2}
\begin{tabular}{p{0.85\textwidth} p{0.15\textwidth}}

$\displaystyle
f(x) = a_0 + \sum_{n=1}^{\infty}
\left( a_n \cos \frac{n \pi x}{L}
+ b_n \sin \frac{n \pi x}{L} \right)
$

&
\raggedleft
(2.1)
```

This is equation number

```
\end{tabular}
\end{table}
```

- The template automatically ensures consistent formatting of mathematical expressions throughout the thesis.

UTHM LATEX THESIS TEMPLATE

CONCLUSION AND SUPPORT

UTHM LATEX THESIS TEMPLATE

CONCLUSION AND SUPPORT

- This guide has been prepared to help UTHM postgraduate students use the LaTeX thesis template correctly and avoid common formatting issues during thesis preparation.
- The template is designed to automatically handle layout, numbering, spacing, captions, references, and appendix formatting. Students are encouraged to focus on writing their research content while allowing the template to manage the technical formatting requirements.
- If you encounter difficulties while using the template, first review the instructions provided in this guide and ensure that the correct compiler settings and folder structure are being used.

NEED ASSISTANCE?

- For official postgraduate academic procedures or submission-related questions, students should contact the Centre for Graduate Studies (CGS), UTHM.

- For technical questions related to the LaTeX template, students may contact:
- Dr. Abdinasir Hirsi
- Email: sendtoabdinasir@gmail.com
- Website: https://www.abdinasirhirsi.com/
- LinkedIn: https://www.linkedin.com/in/engrabdinasir/