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# 中原大學 OOOO學系 O士OOOO

範例標題(TITLE)

**Sample Title** 

指導教授:OOO

研究生:OOO

中華民國 OOO 年 O 月

# 摘要

本文件修改自中原大學論文模板。

關鍵字:研究所、論文



# Abstract

This is a modified CYCU thesis template.

**Keywords:** postgraduate, thesis



# Acknowledgement

I want to extend my many thanks to the numerous individuals who provided online solutions for various syntax and compiling issues. These sources are documented as commented links in this LATEX source code template.



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### 1 Introduction

#### 1.1 Description of template

This template was modified from the original version provided by Chung Yuan Christian University (CYCU) [1], written by Chen [2], and hosted on CYCU-AIoT-System-Lab [3].

#### 1.2 Notes on usage

- 1. This template is **NOT** officially released or endorsed by CYCU. Please ensure that this template meets your requirements before use.
- 2. The creator of this template designed it to demonstrate LATEX usage, reduce time spent on error correction, and incorporate necessary elements. The creator is not responsible for any issues arising from its use.
- 3. This template is distributed under the **Apache License 2.0** [4]. If you believe there are any license violations, please contact the creator at dachuan516@gmail.com.
- 4. Contributions are welcome and encouraged! If you have improvements or suggestions, please submit a pull request or reach out to the creator at dachuan516@gmail.com.



### 2 Syntax

#### **2.1** Text

Display text in **bold**, *italic*, typewriter [5].

Embed website links with displaying text, https://www.overleaf.com/learn/latex/H yperlinks [6].

Use different formats of list to display [7]:

- item 1
  - 1. item 1

**Bold title** item 1

Use special characters like  $\checkmark$ , x [8].

Embed code from file as figure, as shown in Fig. 2.1 and 2.2.

```
#!/bin/bash

cho "helloworld"
ping 8.8.8.8
```

Figure 2.1 Embed entire script file.

```
echo "hello⊔world"
ping 8.8.8.8
```

Figure 2.2 Embed selected lines script file.

### 2.2 Figure

Various tools can be use to create figures and are roughly classified as 1 (best) to 3 (worst) in Table 2.1.

TC 1 1 0 1		11.00	to create figures.
Table / L	Accessment of	different tools	to create figures
1 a b 1 c 2 . 1	Assessment of	different tools	to cicate figures.

Tool	Time required	Ease of use	Adjustability	Image quality	Scripting
Mermaid (PDF) [9]	1	1	3	1	1
draw.io (PDF) [10]	2	1	2	1	3
GNU Plot (PDF) [11]	3	3	1	1	1
MS PowerPoint	2	1	2	3	3
ĿT <sub>E</sub> X TikZ [12]	3	3	1	1	1

To embed a downloaded figure or figure created with external tools mentioned in Table 2.1, the following format can be used for PNG, JPG and PDF (best quality) format [13].

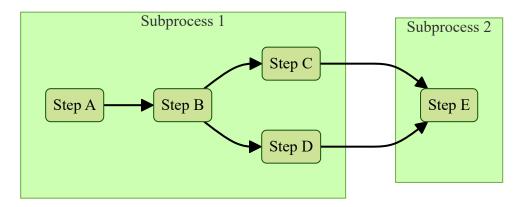


Figure 2.3 A example of embedding a PDF image.

To use TikZ in LaTeX, visit the Minimal Working Example (MWE) example page [14]. Additional packages will be needed and should be added in the main.tex file.

#### 2.3 Table

A basic version of LaTeX two by two table with custom border is shown in Table 2.2; another table with specific column and row name is shown in Table 2.3; an additional table with merged rows and columns is shown in Table 2.4.

Table 2.2 Basic table.

Table 2.3 Table with column and row names.

	Column A	Column B
Row 1	cell	cell
Row 2	cell	cell

Table 2.4 Table with merged rows and columns.

	Column A	Column B
Row 1-2	cell	cell
	merged cell	
Row 3	cell	cell

If it is too confusing to edit the entire table manually, visit Table Generator for web-based Graphical User Interface (GUI) editor and copy the generated code into the document [15].

#### 2.4 Equation

When displaying math symbols, they can be used inline like a+b=c. As shwon in Equation 2.1, it can be used to create complicated equations. It can use additional "aligned" environment to align multiple equations against certain location within equation with symbol &, as shown in Equation 2.2.

$$a^2 + b_1 = \frac{\sum_{n=1}^{m} c_n}{d} \tag{2.1}$$

$$a_1 + b = c$$

$$\sqrt{d} = c$$

$$d = \int_f^e x^5 dx + \alpha^{2^2}$$
(2.2)

### 2.5 Algorithm

Algorithms can be expressed with basic usage of the "algorithm" environment, as shown in Algorithm 1. If it requires math expressions, inline expression can be mixed within, as shown in Algorithm 2.

#### Algorithm 1 Basic example of algorithm.

if condition A then state 1 else state 2 end if

#### Algorithm 2 Advance example of algorithm.

```
\begin{array}{c} \textbf{if} \ a+b+c > \textbf{threshold then} \\ a+b+c \ \textbf{is too large} \\ \textbf{else} \\ \textbf{Normal state} \\ \textbf{end if} \end{array}
```

#### 2.6 Citation

### 2.7 Hyperlink

### 2.8 Custom commands and additional packages

# **Appendices**

## A Links

Table A.1 List of question links used in this template.

No. Parameter  1 https://tex.stackexchange.com/questions/286094/insert-code-keywords-inline 2 https://tex.stackexchange.com/questions/197507/listings-escapeinside-option s-not-working-for-me 3 https://tex.stackexchange.com/questions/313507/autoref-for-algorithms 4 https://tex.stackexchange.com/questions/142687/customize-of-autoref 5 https://tex.stackexchange.com/questions/20698/reference-multiple-subfloated igures-using-refx-y-z-to-give-fig-1a-1b-1c-in	d-f tpu
<pre>https://tex.stackexchange.com/questions/197507/listings-escapeinside-option s-not-working-for-me https://tex.stackexchange.com/questions/313507/autoref-for-algorithms https://tex.stackexchange.com/questions/142687/customize-of-autoref https://tex.stackexchange.com/questions/20698/reference-multiple-subfloated</pre>	d-f tpu
s-not-working-for-me  https://tex.stackexchange.com/questions/313507/autoref-for-algorithms  https://tex.stackexchange.com/questions/142687/customize-of-autoref  https://tex.stackexchange.com/questions/20698/reference-multiple-subfloated	d-f tpu
https://tex.stackexchange.com/questions/313507/autoref-for-algorithms https://tex.stackexchange.com/questions/142687/customize-of-autoref https://tex.stackexchange.com/questions/20698/reference-multiple-subfloated	tpu
4 https://tex.stackexchange.com/questions/142687/customize-of-autoref 5 https://tex.stackexchange.com/questions/20698/reference-multiple-subfloated	tpu
5 https://tex.stackexchange.com/questions/20698/reference-multiple-subfloated	tpu
	tpu
igures-using-refx-y-z-to-give-fig-1a-1b-1c-in	_
	_
6 https://tex.stackexchange.com/questions/144759/how-to-modify-the-label-ou	cle
t-in-cleveref-and-varioref	cle
7 https://ctan.mirror.twds.com.tw/tex-archive/macros/latex/contrib/cleveref/	
veref.pdf	
8 https://tex.stackexchange.com/questions/381119/how-to-make-a-range-reference	nce
-use-an-en-dash	
9 https://tex.stackexchange.com/questions/508107/lines-abstract-keyword	
10 https://tex.stackexchange.com/questions/69379/how-do-i-cite-author-in-latex	ζ
11 https://www.overleaf.com/learn/latex/Bibliography_management_with_natbib	
12 https://tex.stackexchange.com/questions/61877/natbib-sorting-and-citation-	ord
er-by-appearance	
13 https://en.wikibooks.org/wiki/LaTeX/Special_Characters	
14 https://tex.stackexchange.com/questions/72945/how-to-merge-cells-vertically	r
15 https://tex.stackexchange.com/questions/4118/whats-the-quickest-way-to-wr	ite
-2nd-3rd-etc-in-latex	
16 https://tex.stackexchange.com/questions/3033/forcing-linebreaks-in-url	
17 https://tex.stackexchange.com/questions/2099/how-to-include-svg-diagrams-include-svg-diagram-	n-1
atex	
18 https://graphicdesign.stackexchange.com/questions/5880/how-to-export-an-in-	ksc
$\verb"ape-svg-file-to-a-pdf-and-maintain-the-integrity-of-the-im"$	
19 https://tw.mirrors.cicku.me/ctan/macros/xetex/latex/xecjk/xeCJK.pdf	
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