

RESEARCH TITLE IN ENGLISH

LIM LIAN TZE

**FACULTY OF SCIENCE
UNIVERSITY OF MALAYA
KUALA LUMPUR**

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RESEARCH TITLE IN ENGLISH

LIM LIAN TZE

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REQUIREMENTS FOR THE DEGREE OF MASTER OF
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**INSTITUTE OF MATHEMATICAL SCIENCES
FACULTY OF SCIENCE
UNIVERSITY OF MALAYA
KUALA LUMPUR**

2017

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RESEARCH TITLE IN ENGLISH

ABSTRACT

An abstract must not exceed 500 words, typed in a single paragraph with double-spacing, and written in Bahasa Malaysia and English language. A maximum of five (5) keywords should also be listed below the abstract.

Keywords: Keyword, keyword, keyword, keyword.

RESEARCH TITLE IN MALAY

ABSTRAK

Ini merupakan abstrak dalam Bahasa Melayu (satu perenggan).

ACKNOWLEDGEMENTS

Thanks guys. I owe you many.

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LIST OF SYMBOLS AND ABBREVIATIONS

θ	:	temperature degree.
IR	:	Information Retrieval.
LI	:	lexical item.
NLP	:	Natural Language Processing.
POS	:	part of speech.
WWW	:	World Wide Web.

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CHAPTER 1: INTRODUCTION

1.1 First Level Heading

You can use the usual \LaTeX commands and environments: footnotes¹ too², certainly with figures and tables as well.



Figure 1.1: First figure. OK?

Table 1.1: This is a table.

Hey	How's it	Going?
Fine!	Just great.	See ya!
Fine!	Just great.	See ya!

This is a quotation:

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla.

You can create subfigures (and similarly subtables.)

¹ See here, how weird, how to fill out an entire line. See here, how weird, how to fill out an entire line. See here, how weird, how to fill out an entire line. See here, how weird, how to fill out an entire line. See here, how weird, how to fill out an entire line.

² don't you agree?



(a) This is a subfigure



(b) This is another subfigure

Figure 1.2: Second figure. If you have a citation in the caption, you might want to provide an optional caption that doesn't contain the citation so that it won't appear in the List of Tables or Captions. (Audibert, 2004)

Table 1.2: A trivial subtable example

(a) One Subtable

One	Two
Three	Four
Five	Six

(b) Two Subtables

α	β
γ	δ
ϵ	ζ

1.1.1 Suggestions about Tables

\LaTeX tables can be notoriously. . . *interesting* to do. But whatever you do, **please don't nest tabulars** i.e. put tabulars within tabulars. They are hard to read and debug, and prone to errors.

<http://www.tablesgenerator.com> is a handy tool, where you can design your tables and then export the \LaTeX code. You can even paste in some data you copied from Excel via the 'File > Paste table data' function.

For tables/columns that are too wide to fit nicely on the page, see this blog post for some suggestions: <http://tex.my/how-to-deal-with-wide-tables/>

For tables that are too long and must be broken up into multiple pages, use the `longtable` or `supertabular` packages: these have mechanisms for automatically breaking the tables, and repeating the table header/footer rows on each page. Click here for a `longtable` example, which is reproduced in Table 1.3. Table 1.4 shows a `supertabular` example.

1.1.2 Suggestion about Itemize and Enumerate Lists

umalayathesis v1.3 loads the `enumitem` package, which provides some mechanisms for customising lists.

If the space above the `itemize` and `enumerate` lists are too big for your liking:

- This is the first point and
- This is the second point

You can use the `nosep` option:

- This is the first point and
- This is the second point

To use a different bullet:

- ★ This is the first point and
- ★ This is the second point

And even different numbering scheme:

- (i) This is the first point and
- (ii) This is the second point

Other possible commands for changing the counter format are:

- `\arabic:` 1, 2, 3, ...
- `\roman:` i, ii, iii, ...
- `\Roman:` I, II, III, ...
- `\alph:` a, b, c, ...
- `\Alph:` A, B, C, ...

1.2 Citations

umalayathesis uses the apacite package and bibliography style. Use `\cite` for parenthetical citations, such as this one (Audibert, 2004). (Budanitsky & Hirst, 2006). To get text citations, use the `\citeA` command and you'll get (Audibert, 2004).

1.2.1 ★★ A Note about the APA Citation Format ★★

umalayathesis uses the apacite package and bibliography style, which fully implements the APA6 guidelines. The APA6 guidelines can be rather complex with lots of subtleties, so some questions about this style comes up every once in a while. Therefore this is important: **Please read this blog post first. Now.**

<http://tex.my/why-is-latex-doing-all-the-apa-citations-wrong/>

Back? Have you really read it? Not really? Please go read it first. :-)

Now this is the first citation of a source with $3 \leq \text{authors} \leq 5$; per APA6 requirements, all authors will be listed. (Azarova et al., 2002). Great! Let's cite it again, and this time per APA6 requirements, only the first author followed by et al. will be displayed: (Azarova et al., 2002)

So now – bearing in mind the actual APA guidelines – if you're absolutely still being forced by your supervisor or Graduate Office staff to *always* abbreviate citations with $3 \leq \text{authors} \leq 5$, always use the `\shortcite` command for such citations while using umalayathesis.

1.2.2 Alternative APA Bibliography Style File

Note: Not recommended; only use this if you absolutely have no other choice e.g. mandatory requirement by your faculty.

The apacite package and bibliography style fully implements the APA6 citation and referencing style, including the author expansion of first citations. If you have been forced

to disable these arrangements, you can either always remember to use `\shortcite`, or you may want to use an alternative bibliography style, `newapa`. It's *not* new at all – it's quite old (only new when it was first created!), doesn't fully implement APA's guidelines (e.g. it doesn't expand authors in citations at all). But it might make things a bit more convenient for you. You can activate this by using the `newapa` document class option:

```
\documentclass[newapa]{umalayathesis}
```

This will also load the `natbib` package, so you should use `\citep{...}` for parenthetical citations (Smith, 1990); and `\citet{...}` for text citations i.e. Smith (1990).

1.2.3 Using Another Bibliography Style

If your faculty allows/requires you to use an entirely different bibliography style, use the `custombib` document class option. You are then responsible for loading any packages (e.g. `natbib`) and setting up the necessary `\bibliographystyle`, etc.

For example, if your faculty requires you to use the `IEEEtran` bibliography style, you can write

```
\documentclass[custombib]{umalayathesis}
\bibliographystyle{IEEEtran}
\bibliographystyleown{IEEEtran} %% Style for List of Publications
```

1.2.3.1 Symbols and Abbreviations

If you're just starting to write your thesis, you may want to maintain a list of symbols and acronyms, and process it using the `makeglossaries` command, so that acronyms are automatically expanded/abbreviated, and listed in the List of Symbols and Abbreviations. See the `umalayathesis-manual.pdf` for further information. Great. Let's talk about lexical items (LIs) and parts of speech (POS) in Natural Language Processing (NLP). I

mention again LIs. Oh I have a symbol too, it's temperature degree (θ). And I talk a lot about lexicons.

Or if you've actually already nearly finished writing your thesis, it's probably much easier to forget about glossaries and the `myacronyms.tex` file, and just create a List of Symbols and Abbreviations manually yourself with a `tabular`:

```
\chapter{List of Symbols and Abbreviations}
\begin{tabular}{l @{ : } l}
UM & University Malaya\\
KL & Kuala Lumpur\\
\end{tabular}
```

(a) *A Fifth Level Heading*

This will not be included in the Table of Contents.

Here's an example `longtable`. Beware: very large long tables can take a loooooong time to compile!

Table 1.3: A sample `longtable`.

First column	Second column	Third column
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778

Continued on next page

Table 1.3, continued

[illegible]

Continued on next page

Table 1.3, continued

[illegible]

Continued on next page

Table 1.3, continued

[illegible]

Continued on next page

Table 1.3, continued

First column	Second column	Third column
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778

Here's a supertabular example too.

Table 1.4: A sample supertabular.

First column	Second column	Third column
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
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One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778

Continued on next page

Table 1.4, continued

[illegible]

Continued on next page

Table 1.4, continued

[illegible]

Continued on next page

Table 1.4, continued

First column	Second column	Third column
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778
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One	abcdef ghijklmn	123.456778
One	abcdef ghijklmn	123.456778

CHAPTER 2: DUMMY CHAPTER

2.1 Section 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

. Refer to Figure 2.1. Refer to Table 2.1.



Figure 2.1: Short caption

Figure 2.2: Long caption. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et



(a) Subfigure 1

(b) Subfigure 2

Figure 2.3: Multiple figure

Table 2.1: Short caption.

Header 1	Header 2	Header 3
Row 1	Row 2	Row 3
Row 1	Row 2	Row 3
Row 1	Row 2	Row 3

Table 2.2: Long caption. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et

Header 1	Header 2	Header 3
Row 1	Row 2	Row 3
Row 1	Row 2	Row 3
Row 1	Row 2	Row 3

2.2 Section 2

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean

faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

. Refer to Section 2.1. Always use shortcite (Audibert, 2004)

REFERENCES

- Audibert, L. (2004). Word sense disambiguation criteria: a systematic study. In *20th International Conference on Computational Linguistics (COLING 2004)* (pp. 910–916). Geneva, Switzerland: COLING.
- Azarova, I., Mitrofanova, O., Sinopalnikova, A., Yavorskaya, M., & Oparin, I. (2002). RussNet: Building a lexical database for the Russian language. In *Proceedings of workshop on wordnet structures and standardisation and how this affect wordnet applications and evaluation* (p. 60-64). Las Palmas.
- Budanitsky, A., & Hirst, G. (2006). Evaluating WordNet-based measures of lexical semantic relatedness. *Computational Linguistics*, 32(1), 13–47.

LIST OF PUBLICATIONS AND PAPERS PRESENTED

- Lim, L. T. (2009). Multilingual lexicons for machine translation. In *Proceedings of the 11th International Conference on Information Integration and Web-based Applications & Services (iiWAS2009) Master and Doctoral Colloquium (MDC)* (pp. 732–736). Kuala Lumpur, Malaysia.

SAMPLE PDF FILE

**FOR TESTING
ONLY**

APPENDIX A: MANUALS, TECHNICAL SPECIFICATIONS, DOCUMENTATIONS, EXAMPLE SCENARIOS

APPENDIX B: TRY

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.