# An hkputhesis sample 

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# Master of Science in Software Technology 

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## Statement of Authorship

Except where reference is made in the text of this dissertation, this dissertation contains no material published elsewhere or extracted in whole or in part from a dissertation presented by me for another degree or diploma.

No other person's work has been used without due acknowledgement in the main text of the dissertation.

This dissertation has not been submitted for the award of any other degree or diploma in any other tertiary institution.

Name: QING Pei

Dated: 31/07/2012

## Acknowledgements

This is the acknowledgments.


#### Abstract


This is the abstract.

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## Chapter 1 Introduction

This is the introduction. The first paragraph after a heading is not indented.

This is a sentence. This is a sentence. This is a sentence. This is a sentence. This is a sentence.

### 1.1 Section Heading

This is a sentence. This is a sentence. This is a sentence. This is a sentence. This is a sentence.

### 1.1.1 Subsection heading

This is a sentence. This is a sentence. This is a sentence. This is a sentence. This is a sentence.

## Subsubsection heading

This is a sentence. This is a sentence. This is a sentence. This is a sentence. This is a sentence.

## Chapter 2 Summary

This is the summary chapter.

## References

[1] Leslie Lamport. ${ }^{A T} T_{E} X$ : A Document Preparation System. Addison-Wesley, Reading Massachusetts, 1994.
[2] Michel Goossens, Frank Mittelbach, and Alexander Samarin. The ${ }^{A} T_{E} X$ Companion. Addison-Wesley, Reading Massachusetts, 1994.
[3] Helmut Kopka and Patrick W. Daly. A Guide to ${ }^{\Delta T} T_{E} X$, : Document Preparation for Beginners and Advanced Users. Addison-Wesley, Reading Massachusetts, third edition, 1999.
[4] Helmut Kopka and Patrick W. Daly. A Guide to ${ }{ }^{T} E_{E} X$ : Document Preparation for Beginners and Advanced Users. Addison-Wesley, Reading Massachusetts, second edition, 1995.

## Appendix A: Demonstrate Citations

I typed

```
For \LaTeX\ answers I refer to
% note to self: {\em \LaTeX: A Document Preparation System\/}
\cite{Lamport:1994}
and then to
% note to self: {\em The \LaTeX\ Companion\/}
\cite{Goossens:1994}
or
% note to self: {\em A Guide to LaTeX\/} (1999)
\cite{Kopka:1999}.
% note to self: {\em A Guide to LaTeX\/} (1999)
\cite{Kopka:1999}
is an updated edition of the 1995 edition
\cite{Kopka:1995}.
```

to get

For LATEX answers I refer to [1] and then to [2] or [3]. [3] is an updated edition of the 1995 edition [4].

## Appendix B: Demonstrate Figures

The $h$ specifier used in all the examples below tells $\mathrm{LT}_{\mathrm{E}} \mathrm{X}$ to put the figure "here" instead of trying to find a good spot at the top or bottom of a page. Specifiers can be combined, for example, " $\backslash$ begin\{figure\} [htbp!]".

The complete list of specifiers:

| Specifier | Description <br> b |
| :--- | :--- |
| bottom of page |  |
| $h$ | here on page |
| p | on separate page of figures |
| $t$ | top of page |
| $!$ | try hard to put figure as early as possible |

Label "fi:not-centered" is ' B .1 '. Label "sf:four-parts-c" is 'B.5(c)]'.

This is the first paragraph. This is the first paragraph. This is the first paragraph. This is the first paragraph. This is the first paragraph.


Figure B.1: By default figures are not centered. This is a long caption to demonstrate that captions are single spaced.

This is the second paragraph. This is the second paragraph. This is the second paragraph. This is the second paragraph. This is the second paragraph. This is the second paragraph. This is the second paragraph. This is the second paragraph. This is the second paragraph. This is the second paragraph.


Figure B.2: Use  to center figures.

This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph. This is the third paragraph.

This is the fourth paragraph. This is the fourth paragraph. This is the fourth paragraph. This is the fourth paragraph. This is the fourth paragraph. This is the fourth paragraph. This is the fourth paragraph. This is the fourth paragraph. This is the fourth paragraph. This is the fourth paragraph.

This is the fifth paragraph. This is the fifth paragraph. This is the fifth paragraph. This is the fifth paragraph. This is the fifth paragraph. This is the fifth paragraph.


Figure B.3: This is another figuure.


Figure B.4: This figure has two parts.

This is the fifth paragraph. This is the fifth paragraph. This is the fifth paragraph. This is the fifth paragraph.

This is the sixth paragraph. This is the sixth paragraph. This is the sixth paragraph. This is the sixth paragraph. This is the sixth paragraph. This is the sixth paragraph. This is the sixth paragraph. This is the sixth paragraph. This is the sixth paragraph. This is the sixth paragraph.


Figure B.5: This figure has four parts.

## Appendix C: Demonstrate Mathematics

\% From _More Math Into LaTeX_, 4th Edition, page 152:
$\% \quad$ TeX uses $\$ \$$ to open and close a displayed math environment.
\% In LaTeX, this may occassionally cause problems. Don't do it.

$$
\[
\mathrm{E}=\mathrm{mc} \wedge 2
$$

\]

$$
E=m c^{2}
$$

\begin\{equation\} }
$\mathrm{E}=\mathrm{mc}{ }^{\wedge} 2$
\end\{equation\} }

$$
\begin{equation*}
E=m c^{2} \tag{C.1}
\end{equation*}
$$

\% Mydefs.tex defines \be to be \begin\{equation\} and }
\% \ee to be \end\{equation\}. }
$\backslash$ be

$$
\mathrm{E}=\mathrm{mc} \mathrm{c}^{2}
$$

\ee

$$
\begin{equation*}
E=m c^{2} \tag{C.2}
\end{equation*}
$$

$\backslash$ be

$$
\begin{equation*}
x=-\frac{b}{2 a} \pm \frac{\sqrt{b^{2}-4 a c}}{2 a} \tag{C.3}
\end{equation*}
$$

\%requires\usepackage\{amsmath\};usealign*fornoequationnumber\begin\{align\}}undefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefinedundefined

$$
a=\{ \} \& b+c \backslash \backslash
$$

$$
x=\{ \} \& y+z
$$

\end\{align\} }

$$
\begin{align*}
& a=b+c  \tag{C.4}\\
& x=y+z \tag{C.5}
\end{align*}
$$

$$
\[
\begin{aligned}
& \mathrm{Z}= \\
& \text { \left } ( } \\
{\text { } \begin{array}{l}
\text { begin }\{\operatorname{array}\}\{c c\} \\
\text { c\& } \mathrm{d}
\end{array}} \\
{\text { \end\{array\} } } \\
{\text { \right } ) }
\end{array}
\end{aligned}
$$

\]

$$
Z=\left(\begin{array}{ll}
a & b \\
c & d
\end{array}\right)
$$

```
\begin\{equation\} }
    \begin\{split\} }
        \(a=\{ \} \& b+c \backslash \backslash\)
        \(\} \&+d+e\)
    \end\{split\} }
\end\{equation\} }
```

$$
\begin{align*}
a= & b+c  \tag{C.6}\\
& +d+e
\end{align*}
$$

$\backslash$ be

$$
(\backslash \cos x)^{\wedge} 2+(\backslash \sin x)^{\wedge} 2=1
$$

$\backslash$ ee

$$
\begin{equation*}
(\cos x)^{2}+(\sin x)^{2}=1 \tag{C.7}
\end{equation*}
$$

If $\$ \mathrm{X}=\backslash \cos \mathrm{x} \$$ and $\$ \mathrm{Y}=\backslash \sin \mathrm{x} \$$ then $\$ \mathrm{X}^{\wedge} 2+\mathrm{Y}^{\wedge} 2=1 \$$.

If $X=\cos x$ and $Y=\sin x$ then $X^{2}+Y^{2}=1$.

## Appendix D: Demonstrate Multicols

This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column. This is one column.

This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This
is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns. This is two columns.

This is three columns. $\quad$ This is three columns.
This is three columns. This is three columns. This is three columns. This is three columns. This is three columns. This is three columns.

This is three columns. This is three columns. This is three columns. This is three columns. This is three columns. This is three columns.

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This is three columns.
This is three columns.
This is three columns.
This is three columns.

| This is four columns. | columns. <br> This is four | This is four columns. | columns. <br> This is four |
| :---: | :---: | :---: | :---: |
| This is four | columns. | This is four | columns. |
| columns. | This is four | columns. | This is four |
| This is four | columns. | This is four | columns. |
| columns. | This is four | columns. | This is four |
| This is four | columns. | This is four | columns. |
| columns. | This is four | columns. | This is four |
| This is four | columns. | This is four | columns. |
| columns. | This is four | columns. | This is four |
| This is four | columns. | This is four | columns. |
| columns. | This is four | columns. |  |
| This is four | columns. | This is four |  |


| This is five | This is five | This is five | This is five | This is five |
| :--- | :--- | :--- | :--- | :--- |
| columns. | columns. | columns. | columns. | columns. |
| This is five | This is five | This is five | This is five | This is five |
| columns. | columns. | columns. | columns. | columns. |
| This is five | This is five | This is five | This is five | This is five |
| columns. | columns. | columns. | columns. | columns. |
| This is five | This is five | This is five | This is five | This is five |
| columns. | columns. | columns. | columns. | columns. |
| This is five | This is five | This is five | This is five | This is five |
| columns. | columns. | columns. | columns. | columns. 14 |

# Appendix E: Demonstrate Tables 

| Label | Number |
| :--- | :--- |
| ta:text-only | E.1 |
| ta:fruit | E.2 |
|  |  |

This table contains only text. Let's cite Lamport's book here: [1].
Table E.1. This is the caption. Let's cite Lamport's book again here: [1].

| apple | banana | cherry[1] |
| :--- | :---: | ---: |
| aardvark | boa constrictor | coyote |

Table E.2. This is a really long and boring caption. It goes on and on as if it thinks what it says is important. Here is some more of it. The citation for "Lamport::1994" is "[1]".
Table E.3. 2.3 sidewaystable mode $\backslash$ begin\{table\}... $\backslash e n d\{t a b l e\}$ table
$\begin{array}{lcc}\text { apple } & \text { banana } & \text { cherry } \\ \text { aardvark } & \text { boa constrictor } & \text { coyote }\end{array}$
Table E.4. 2.4 sidewaystable mode \halign\{ . . . \} table
cherry
coyote $\begin{array}{lc}\text { apple } & \text { banana } \\ \text { aardvark } & \text { boa constrictor }\end{array}$

| apple | banana | cherry |
| :--- | :---: | :---: |
| aardvark | boa constrictor | coyote |
| apple | banana | cherry |
| aardvark | boa constrictor | coyote |
| apple | banana | cherry |
| aardvark | boa constrictor | coyote |
| apple | banana | cherry |
| aardvark | boa constrictor | coyote |
| apple | banana | cherry |
| aardvark | boa constrictor | coyote |
| apple | banana | cherry |
| aardvark | boa constrictor | coyote |
| apple | banana | cherry |
| aardvark | boa constrictor | coyote |
| apple | banana | cherry |
| aardvark | boa constrictor | coyote |

Table E.5. 2.5 left hand table

| apple | banana | cherry |
| :--- | :---: | :---: |
| aardvark | boa constrictor | coyote |

Table E.6. 2.6 left hand table
Table E.7. 2.7 sidewaystable mode $\backslash$ begin\{table\}... $\backslash$ end\{table\} table
$\begin{array}{lcc}\text { apple } & \text { banana } & \text { cherry } \\ \text { aardvark } & \text { boa constrictor } & \text { coyote }\end{array}$

# Table E.8. Presidents 

\# Name<br>1 George Washington<br>2 John Adams<br>3 Thomas Jefferson

Table E.9. Presidents with horizontal and vertical lines

| $\#$ | Name |
| :---: | :--- |
| 1 | George Washington |
| 2 | John Adams |
| 3 | Thomas Jefferson |

## Appendix F: Demonstrate Text

```
This is a sentence.
This is a sentence.
This is a sentence.
This is a sentence.
This is a sentence.
This is a sentence.
This is a sentence.
This is a sentence.
This is a sentence.
This is a sentence.
```

This is a sentence. This is a sentence. This is a sentence. This is a sentence. This is a sentence.

This is a sentence. This is a sentence. This is a sentence. This is a sentence. This is a sentence.

```
From \verb+http://www.biblegateway.com/passage/?book_id=1&chapter=1&version=50
```

```
\begin{quote}
    1 In the beginning God created the heavens and the earth.
    2 The earth was without form,
    and void;
    and darkness was on the face of the deep.
    And the Spirit of God was hovering over the face of the waters.
```

    3 Then God said,'(Let there be light'';
    and there was light.
    4 And God saw the light,
    that it was good;
    and God divided the light from the darkness.
    5 God called the light Day,
    and the darkness He called Night.
    So the evening and the morning were the first day.
    \end\{quote\} }

From http://www.biblegateway.com/passage/?book_id=1\&chapter=1\&version=50:

1 In the beginning God created the heavens and the earth. 2 The earth was without form, and void; and darkness was on the face of the deep. And the Spirit of God was hovering over the face of the waters.

3 Then God said,"Let there be light"; and there was light. 4 And God saw the light, that it was good; and God divided the light from the darkness.

5 God called the light Day, and the darkness He called Night. So the evening and the morning were the first day.

```
\begin{description}
    \item[apple]
        A red fruit.
    \item[banana]
            A yellow fruit.
            This sentence is to make the entry longer so you can see what happens.
            This sentence is to make the entry longer so you can see what happens.
    \item[cherry]
            A red friut.
\end{description}
```

apple A red fruit.
banana A yellow fruit. This sentence is to make the entry longer so you can see what happens. This sentence is to make the entry longer so you can see what happens.
cherry A red friut.

```
\begin{enumerate}
    \item apple
    \item banana
            This sentence is to make the entry longer so you can see what happens.
            This sentence is to make the entry longer so you can see what happens.
    \item cherry
\end{enumerate}
```

1. apple
2. banana This sentence is to make the entry longer so you can see what happens.

This sentence is to make the entry longer so you can see what happens.
3. cherry

```
\begin{itemize}
    \item apple
    \item banana
            This sentence is to make the entry longer so you can see what happens.
            This sentence is to make the entry longer so you can see what happens.
    \item cherry
\end{itemize}
```

- apple
- banana This sentence is to make the entry longer so you can see what happens.

This sentence is to make the entry longer so you can see what happens.

- cherry

