

Thesis Title

by

First Middle Last

A thesis submitted in partial fulfillment of the requirements for the degree of

Master of Science

Department of Example Department
University of Alberta

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Abstract

A thesis must have an abstract. The abstract comes after the title page and is marked page “ii”.

The abstract is a concise and accurate summary of the thesis. It states the problem that was researched, the methods of investigation, and the general conclusions. An abstract must not contain non-text content, such as tables, graphs, complex equations, or illustrations. Even for theses containing journal articles, there is one single abstract for the entire work, included within the preliminary pages (front pages) of the thesis.

For any thesis that is permitted to be written in a language other than English, two abstracts must be included; the first in English and the second in the language of the thesis.

The font used for the abstract must be at least a 10 point font, with the text double-spaced, to ensure readability. A strict maximum word count of 700 words applies, regardless of whether the abstract is for a master’s or a doctoral degree (many abstracts are 300–500 words).

For reference, this section is exactly one-hundred and seventy-six words.

Preface

If you need assistance on writing the preface, ask your supervisor. Your supervisor must review and verify the preface before it becomes part of the final version of the thesis.

A preface is a mandatory component of a thesis, regardless of thesis format, when a thesis contains journal articles authored or co-authored by the student (including an accepted paper that is forthcoming at the time of thesis submission). A preface is also a mandatory component when the research conducted for the thesis required ethics approval. A preface remains optional if there is no inclusion of journal articles and/or no need for ethics approval.

When required because a thesis contains journal articles, the preface serves as a place for the student to include a statement indicating his or her contribution to the journal articles, such as the identification and design of the research program, the performance of the various parts of the research (including the collection of data, construction of any necessary apparatus, and the performance of experiments), and the analysis of the research data. If any of the work presented in the thesis has led to any publications (accepted or published), these publications must be listed clearly in the preface with their bibliographical details and an indication as to where in the thesis this work is located (e.g. state in which chapter or chapters). For jointly authored publications, indication must also be given as to the relative contributions of the collaborators and co-authors, and a statement as to the proportion of research and writing conducted by the student. Note that permission may be needed if the co-authors hold the copyright in these publications. If ethics approval was required

for the research, a statement to this effect must be included in the preface with the details of the approval that was granted.

Note that the inclusion of a preface does not excuse a student from failing to acknowledge the contributions of others in the body of the thesis, as per the University's Research and Scholarship Integrity Policy and the Code of Student Behaviour. One would still expect to see footnotes, endnotes or in-text references within the thesis acknowledging the works. Acknowledgements, such as thanks to the supervisor and supervisory committee members, to colleagues, lab mates and friends, and to family, do not appear in the preface.

Examples of several prefaces are given in Appendix B and are also available from the FGSR website.

“Etiam ac leo a risus tristique nonummy. Donec dignissim tincidunt nulla. Vestibulum rhoncus molestie odio. Sed lobortis, justo et pretium lobortis, mauris turpis condimentum augue, nec ultricies nibh arcu pretium enim. Nunc purus neque, placerat id, imperdiet sed, pellentesque nec, nisl. Vestibulum imperdiet neque non sem accumsan laoreet. In hac habitasse platea dictumst. Etiam condimentum facilisis libero. Suspendisse in elit quis nisl aliquam dapibus. Pellentesque auctor sapien. Sed egestas sapien nec lectus. Pellentesque vel dui vel neque bibendum viverra. Aliquam porttitor nisl nec pede. Proin mattis libero vel turpis. Donec rutrum mauris et libero. Proin euismod porta felis. Nam lobortis, metus quis elementum commodo, nunc lectus elementum mauris, eget vulputate ligula tellus eu neque. Vivamus eu dolor.”

-Author of the Quote

To...

Acknowledgements

An Acknowledgements page (no more than 2 pages in length) is a recommended, but not mandatory, component of a thesis.

The Acknowledgements page serves as a place within a thesis where students may wish to acknowledge the provision of funding from third parties, such as an external scholarship bodies, research granting agencies, and foreign governments. It is also appropriate to recognize the assistance provided by the supervisor and members of the supervisory committee.

e.g. I would like to thank Daniel R. Aldrich for his continuing contributions to the University of Alberta, and for his work within the graduate student community. More specifically, I would like to acknowledge the work that he put into creating the L^AT_EX template that this thesis was created in, and the ongoing support that he provides to the students at the University of Alberta. 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.

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Table of Contents

1	Introduction	1
1.1	Motivation	2
1.2	Thesis Objectives	3
1.3	Thesis Outline	4
2	Example Chapter	5
2.1	Cross-References and Citations	5
2.1.1	Cross-References	5
2.1.2	Citations	7
2.2	Tables	8
2.3	Figures	10
2.4	Graphs & Plots	15
2.5	Equations	17
3	Paper 2	18
3.1	Introduction	18
4	Background	19
4.1	General Information	19
4.2	Specific Information	20
4.3	Gap in Research	21
4.4	Conclusions	22
5	Paper 1	23
5.1	Introduction	23
5.2	Methods and Procedure	24
5.3	Results and Discussion	25
5.4	Conclusions	26

6	Paper 2	27
6.1	Introduction	27
6.2	Methods and Procedure	28
6.3	Results and Discussion	29
6.4	Conclusions	29
7	Conclusions, Recommendations, & Future Work	31
7.1	Conclusions	31
7.2	Future Work	32
	Bibliography	33
	Appendix A: First Appendix	34
A.1	Section 1	34
A.2	Section 2	35
	Appendix B: Second Appendix	36
B.1	Section 1	36
B.2	Section 2	37
	Appendix C: Third Appendix	38
C.1	Section 1	38
C.2	Section 2	38
	Appendix D: Inserting PDFs	39
D.1	how to insert a portrait PDF	39
D.2	How to insert a landscape PDF	42

List of Tables

2.1	Built-in, hyperref, and cleveref commands and outputs	7
2.2	Comparison of Reference Softwares	8
2.3	This is a showing the default tabularx column types	9
2.4	This is a basic table	9
2.5	This is a complex table.	10

List of Figures

2.1	This is an example of a single figure.	11
2.2	This is an example of a double image figure.	12
2.3	This is an example of a triple image figure.	12
2.4	This is a second example of a triple image figure.	13
2.5	This is an example of a quad image figure.	14
2.6	Plot of two parabola.	15
2.7	Example of a Bar Graph.	15
2.8	Example of a 3D Plot	16
2.9	Example of a Scatter Plot.	16

List of Plates

2.1	This is an example of a single image plate.	11
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Chapter 1

Introduction

The first page of the introduction is marked as page “1” and then the pages that follow are numbered sequentially.

The minimum academic requirements for the text of a thesis are an introduction, followed by the presentation of the research in a manner suitable for the field, and a conclusion.

The introduction must outline the thesis, problem, hypothesis, questions or goals of the research. It must provide a clear statement of the research question(s). The conclusion must highlight the student’s contribution to knowledge, providing conclusions with respect to the problem, hypothesis or goals of the research. In all theses, regardless of format, the body or chapters of the thesis contain methodology, research results, and scholarly discussion in accordance with the norms of the academic discipline.

The University of Alberta encourages students to publish. Thus, one or more chapters of a thesis may contain published material if permitted by the regulations of your department (or Faculty if non-departmentalized) governing your specific degree program. It is a matter for individual graduate programs to develop specific guidance for students and supervisors, as well as supervisory committee members, with such specific guidance likely to reflect the needs of the particular field or academic discipline.

For example, individual graduate programs that continue to prefer the traditional monograph-style thesis may have department-specific rules on such matters as maximum length (taking into account the burden on an external examiner to read a thesis that is over 100,000 words). Individual graduate programs that opt for a multiple-manuscript or journal-article format, or choose to accept both traditional and paper-based formats, or a combination of both, must have department-specific guidelines in place to address potential student and supervisor queries. For example, the department-specific guidance needs to address what counts as a publication (*e.g.* self-publication, any journal, or only journals listed in a particular source); whether a paper-based thesis can include both published and accepted papers; whether the student must be the first author for a multiple-authored publication to be acceptable for inclusion within the thesis; and whether some form of connecting text is needed to link the papers beyond the introduction (and if so, what form or forms of connectors are acceptable).

1.1 Motivation

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1.2 Thesis Objectives

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1.3 Thesis Outline

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Chapter 2

Example Chapter

This chapter aims to provide examples how how to structure and create specific components in your thesis document. Throughout this section, \LaTeX 's automatic placement for figures and tables will be disabled in most cases. This is being done to add a specific flow to **THIS DOCUMENT**; this should be avoided in one's thesis as it can lead to poor placement of figures, tables, and other “floats”, as well as cause unnecessary white space.

2.1 Cross-References and Citations

This section will be showing off some of the different ways to include “citations” and “cross-references” within your document. Note that **cross-references** in \LaTeX utilize **ref** as a command, while one might think that this is short for reference this is not the case citation/references utilize the `\cite{}` commands.

2.1.1 Cross-References

In \LaTeX , references will “reference” a `\label{Reference:Label}` command. This section has the following command to define the the section:

```
\verb|\section{Citations and References}\label{sec:citref}|
```

By using `\ref{sec:citref}`, this allows you to insert a reference that look like this:
2.1. Now this by itself is not the most useful, to make it a bit better we should

keep track of what we are referencing, in this case a **Section**, and add this label in front of the reference (`Section~\ref{sec:citref}`) and this will display like this: Section 2.1. Note to ensure the reference is not split we add a non-breaking space (~) to prevent L^AT_EX from adding a linebreak.

While using the `ref` command, you might ask “*Why does L^AT_EX not just know what it is that I am referencing and insert that automatically in front of the reference?*” The answer is to provide more flexibility to the user. However, that being said, individuals have created a number of packages that work to enhance the workflow of adding these cross-references. Some of these are provided by the **hyperref** and **cleveref** packages. To include these packages add the following lines to the bottom of your preamble (order matters, `cleveref` needs to be after `hyperref`):

```
\usepackage{hyperref}

\usepackage[nameinlink]{cleveref}
```

With these packages installed we can now use the commands in Table 2.1.¹

¹Note that because the floats are added where they are in the text this causes them to insert large amounts of white space because it only fits on the following page.

Table 2.1: Built-in, hyperref, and cleveref commands and outputs

Command	Output
built-in	
<code>\ref {}</code>	2.1
<code>\pageref {}</code>	7
hyperref	
<code>\autoref {}</code>	Table 2.1
cleveref	
<code>\cref {}</code>	table 2.1
<code>\Cref {}</code>	Table 2.1
<code>\cpageref {}</code>	page 7
<code>\Cpageref {}</code>	Page 7
<code>\namecref {}</code>	table
<code>\nameCref {}</code>	Table

Further, the **cleveref** also includes features that allows for the auto sorting and combining of references.

```
\Cref{fig:doubleImage,fig:singleImage,fig:tripleImage1,fig:quadImage}
```

Noting that there are **NO** spaces between the labels; this will produce: Figures 2.1 to 2.3 and 2.5. Allowing one to quickly and efficiently keep references up-to-date and consistent in their style. More examples of the use of the **cleveref** cross-referencing is found through the rest of the Chapter.

2.1.2 Citations

Citations are a lot easier than dealing with the cross-referencing. There are no additional packages required for citations, the built-in ones are feature-rich enough. Now, while there are no additional packages required to make citations in your document, there are in fact a few programs that should help you manage all of your citation-

s/references. These programs can include Mendeley, JabRef, or Zotero; a comparison of the softwares can be found in Table 2.2, and more information of the use of JabRef can be found in Chapter 3.

Table 2.2: Comparison of Reference Softwares

Software	Developer	Version	Free	License
JabRef	The JabRef Team	5.11	Free	MIT
Mendeley	Elsevier	2.99.0	Free up to 2 GB	Proprietary
Zotero	CDS	6.0.27	Free up to 300 MB	AGPL

Single citations can be included with the `\cite{citationKey}` command, the one at the end of this sentence is created with the `\cite{TEST}` command[1]. Multiple citations can be included in a single cite command by adding commas in between the citation keys. The citation at the end of this sentence shows how to create more than one citation and how they are grouped together, it is created with the `\cite{testone,cite2,cite3,cite4,cite5}` command[2–6]. Finally this sentence shows how a gap in the citations is handled, this is created with the `\cite{testone,cite2,cite3,cite5}` command[2–4, 6].

2.2 Tables

Within this section we will explore some of the typical uses for a table, how to create them, and how to create a consistent look throughout your thesis. In the following table we are using the packages `\usepackage{tabularx}`. This package allows us to set the width of the table and inform it which columns should be scaled to fit the the data. **Tabularx** uses similar formats to the tabular environment, except there is an additional column type: **X**. This column type

We can also defined the following additional column types:

- **C** - Centred Auto Sizing Column

`\newcolumntype{C}{>{\centering\arraybackslash}X}`

- **L** - Left Justified Auto Sizing Column

`\newcolumntype{L}{>{\raggedright\arraybackslash}X}`

- **R** - Right Justified Auto Sizing Column

`\newcolumntype{R}{>{\raggedleft\arraybackslash}X}`

Table 2.3: This is a showing the default **tabularx** column types

Identifier	Description
l	Left Aligned (Fit to Contents)
c	Centre Aligned (Fit to Contents)
r	Right Aligned (Fit to Contents)
X	Justified (Equal Spacing)

Table 2.4: This is a basic table

Left Aligned Title	Centered Title	Right Aligned Title
This is left aligned	This is centered	This is right aligned
This is left aligned	This is centered	This is right aligned
This is left aligned	This is centered	This is right aligned
This is left aligned	This is centered	This is right aligned

Table 2.5: This is a complex table.

This is two row	This is two columns	
	Centered Title	Right Aligned Title
This is two row	This is centered	This is right aligned
	This is centered	This is right aligned
This is two row	This is centered	This is right aligned
	This is centered	This is right aligned

2.3 Figures

This section will provide examples of how to create figures, and different types of multi/sub-figures. Additionally, if you have many figures in a section and they are bleeding too much into the following sections a `\clearpage` command can be issued before the next section. However, note that this will force the next section to begin on a new page. Note that the first “figure” is actually a plate; a plate is the proper title associated with a *photograph*, using the environment ‘plate’ instead of ‘figure’ and command `\listofplates` will generate everything for you.

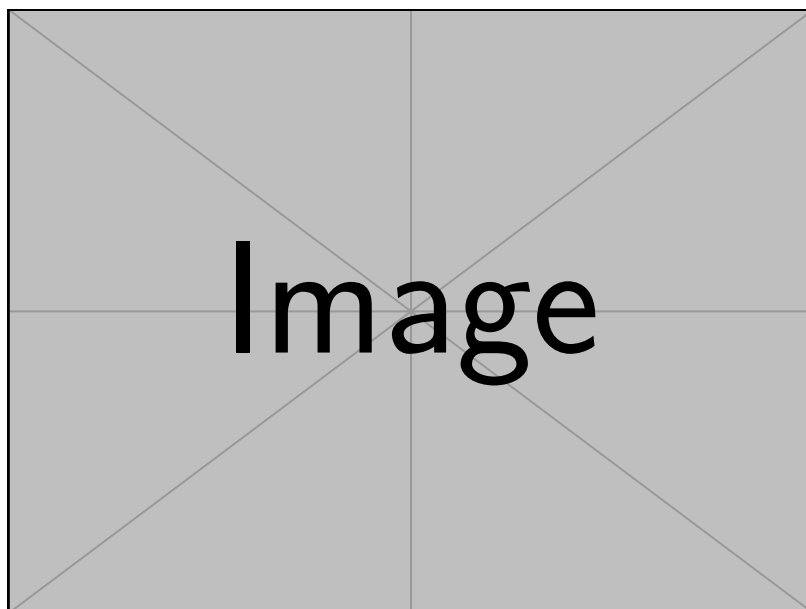


Plate 2.1: This is an example of a single image plate.

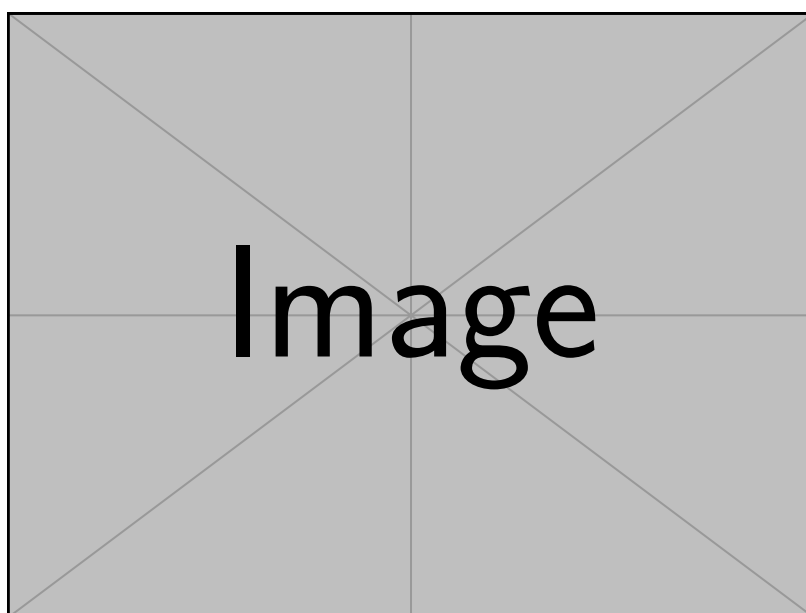


Figure 2.1: This is an example of a single figure.

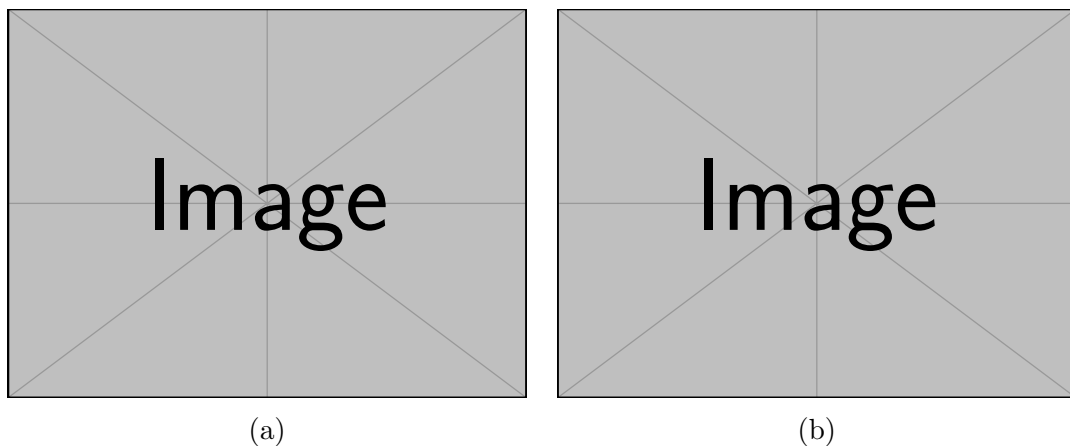


Figure 2.2: This is an example of a double image figure.

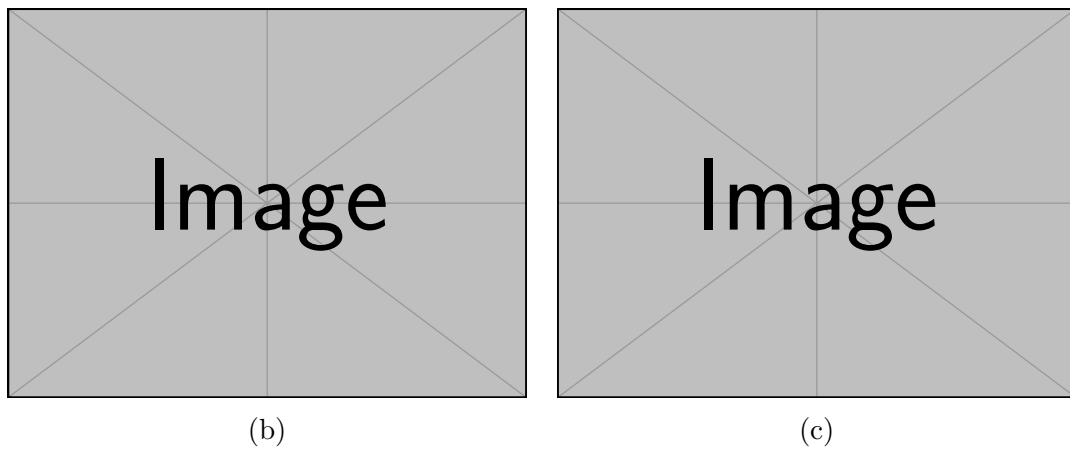
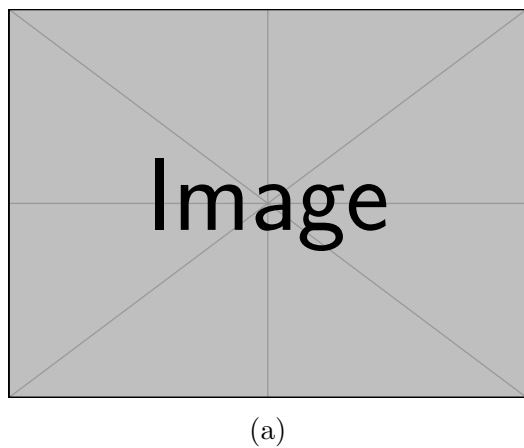
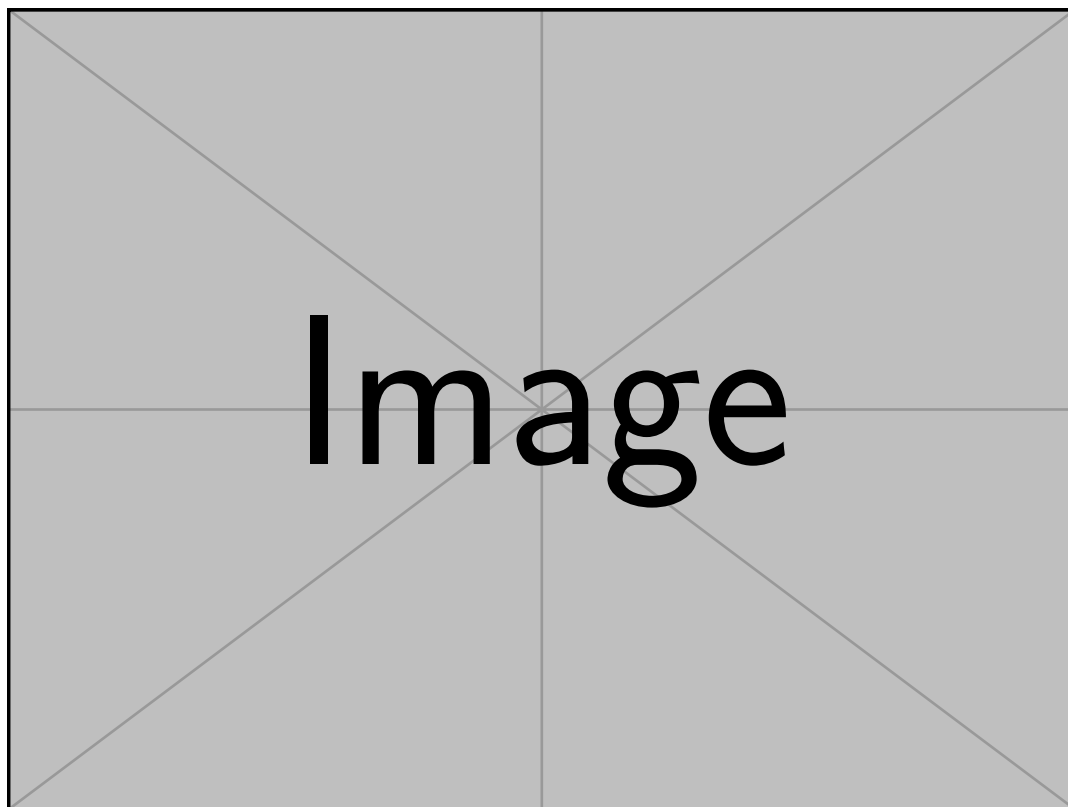
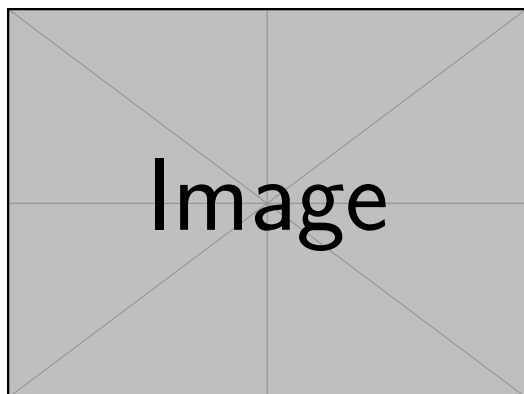


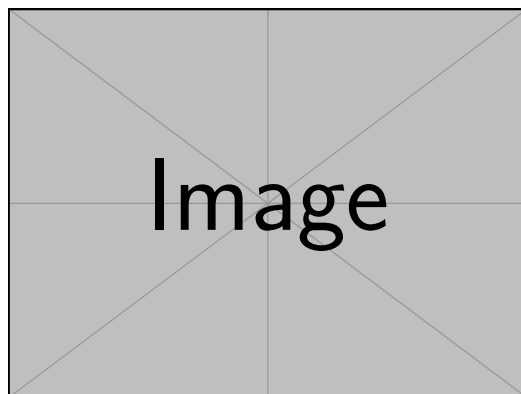
Figure 2.3: This is an example of a triple image figure.



(a)

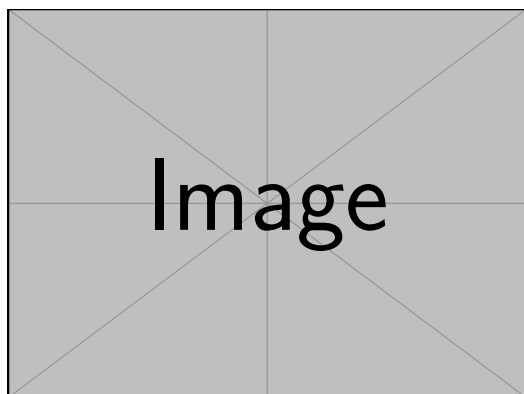


(b)

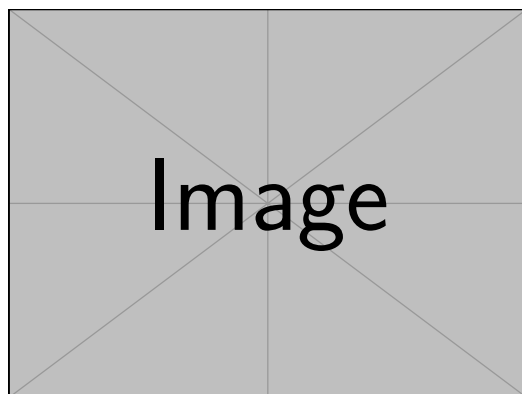


(c)

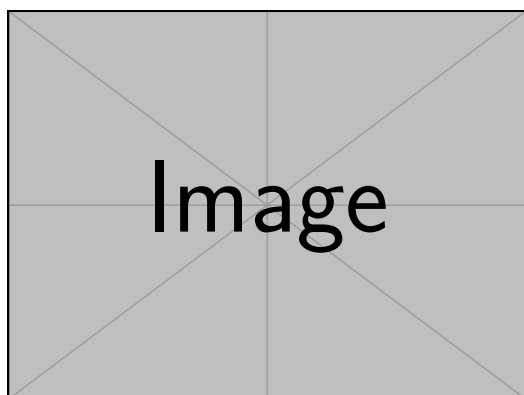
Figure 2.4: This is a second example of a triple image figure.



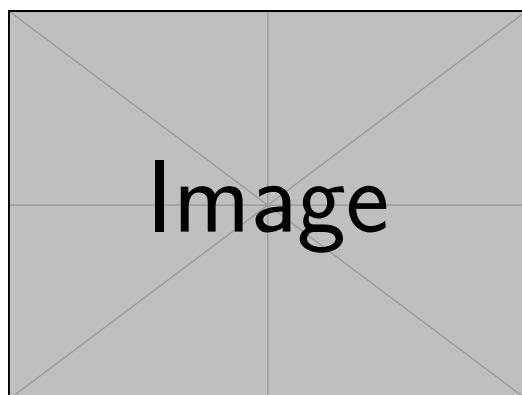
(a)



(b)



(c)



(d)

Figure 2.5: This is an example of a quad image figure.

2.4 Graphs & Plots

In the following section there will be a few examples of how to generate plots. For more information on how to create plots, [here](#) is the manual for pgfplots.

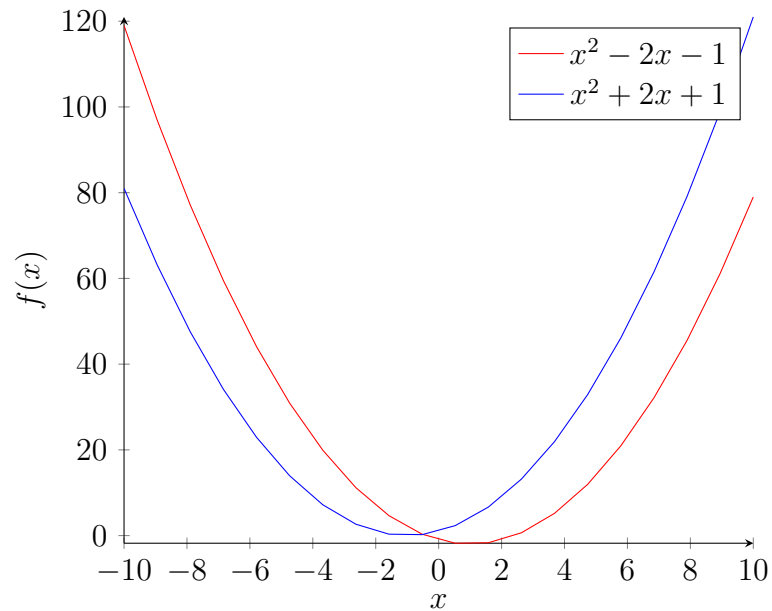


Figure 2.6: Plot of two parabola.

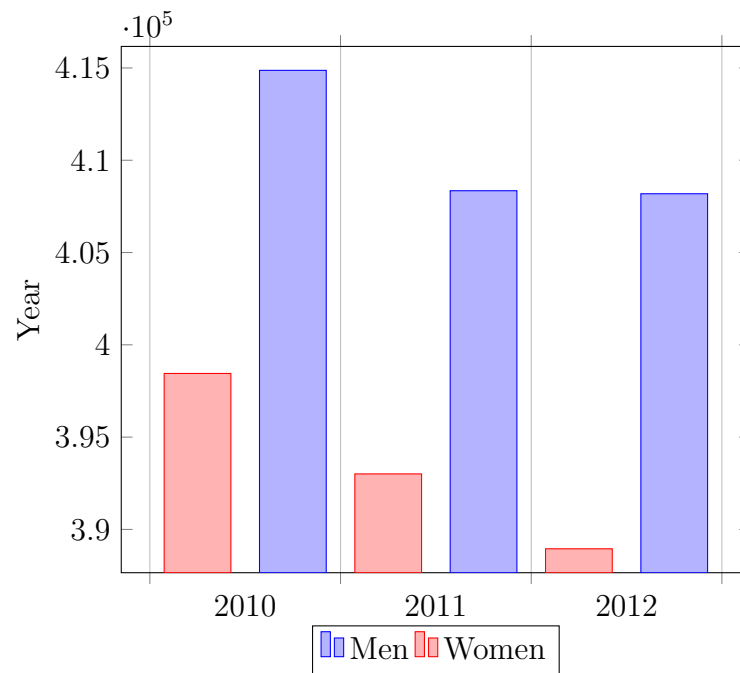


Figure 2.7: Example of a Bar Graph.

Example using the mesh parameter

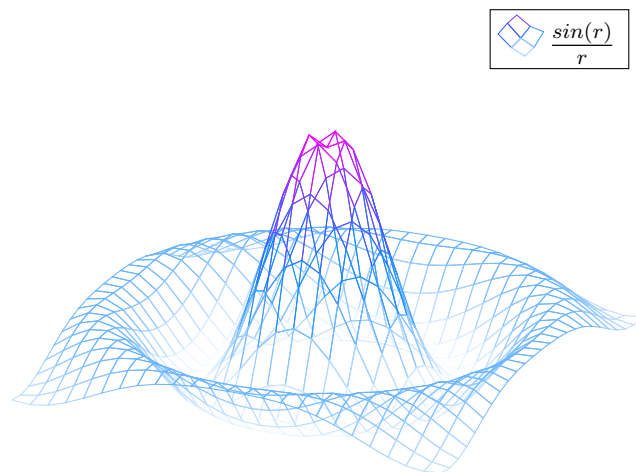


Figure 2.8: Example of a 3D Plot

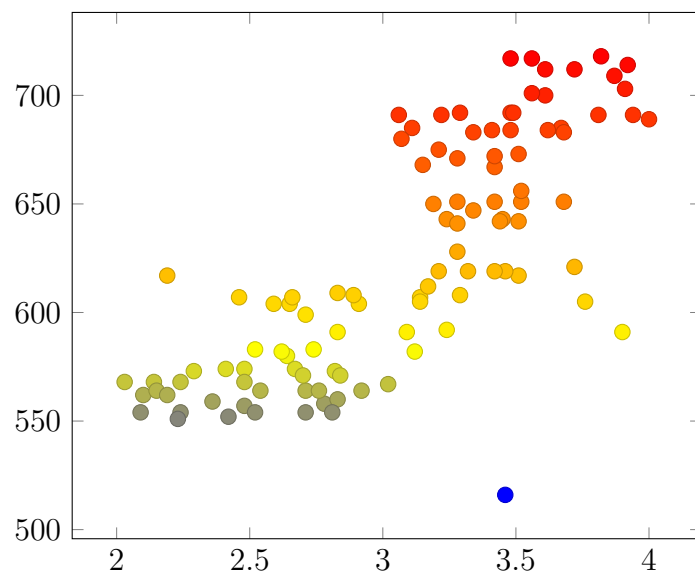


Figure 2.9: Example of a Scatter Plot.

2.5 Equations

There are many ways to include formulas in your thesis. This section will provide some different ways of adding them (inline and standalone), as well as provide some ways of referencing the equations.

To start the simplest way to add an equation is using the built-in `LATEX` math mode. To enter and exit math mode one just needs to use the `$<EquationGoesHere>` symbols around an equation. An example of using math mode to get an inline equation is: $\vec{F}_d = \frac{1}{2} A C_d \vec{V}^2$. The following equation has no referencing number:

$$E = m c^2$$

Equation (2.1) has a reference to it though. Or for more control the source for Equation (2.1) can be written out fully as it was for Equation (2.2).

$$\pi = 3.1415... \tag{2.1}$$

$$\pi = 3.1415... \tag{2.2}$$

If you have multiple equations that you want arranged very neatly, use the `align` environment and you can assign individual equations numbers as shown in Equations (2.3) to (2.5).

$$Equation1 = 1 \tag{2.3}$$

$$Equation2 = 2 + 2 \tag{2.4}$$

$$Equation3 = 3 + 3 + 3 \tag{2.5}$$

Chapter 3

Paper 2

3.1 Introduction

Chapter 4

Background

4.1 General Information

Donec et nisl id sapien blandit mattis. Aenean dictum odio sit amet risus. Morbi purus. Nulla a est sit amet purus venenatis iaculis. Vivamus viverra purus vel magna. Donec in justo sed odio malesuada dapibus. Nunc ultrices aliquam nunc. Vivamus facilisis pellentesque velit. Nulla nunc velit, vulputate dapibus, vulputate id, mattis ac, justo. Nam mattis elit dapibus purus. Quisque enim risus, congue non, elementum ut, mattis quis, sem. Quisque elit.

Maecenas non massa. Vestibulum pharetra nulla at lorem. Duis quis quam id lacus dapibus interdum. Nulla lorem. Donec ut ante quis dolor bibendum condimentum. Etiam egestas tortor vitae lacus. Praesent cursus. Mauris bibendum pede at elit. Morbi et felis a lectus interdum facilisis. Sed suscipit gravida turpis. Nulla at lectus. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Praesent nonummy luctus nibh. Proin turpis nunc, congue eu, egestas ut, fringilla at, tellus. In hac habitasse platea dictumst.

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4.2 Specific Information

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4.3 Gap in Research

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4.4 Conclusions

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Chapter 5

Paper 1

5.1 Introduction

Nullam eleifend justo in nisl. In hac habitasse platea dictumst. Morbi nonummy. Aliquam ut felis. In velit leo, dictum vitae, posuere id, vulputate nec, ante. Maecenas vitae pede nec dui dignissim suscipit. Morbi magna. Vestibulum id purus eget velit laoreet laoreet. Praesent sed leo vel nibh convallis blandit. Ut rutrum. Donec nibh. Donec interdum. Fusce sed pede sit amet elit rhoncus ultrices. Nullam at enim vitae pede vehicula iaculis.

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5.2 Methods and Procedure

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5.3 Results and Discussion

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5.4 Conclusions

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Chapter 6

Paper 2

6.1 Introduction

Nullam eleifend justo in nisl. In hac habitasse platea dictumst. Morbi nonummy. Aliquam ut felis. In velit leo, dictum vitae, posuere id, vulputate nec, ante. Maecenas vitae pede nec dui dignissim suscipit. Morbi magna. Vestibulum id purus eget velit laoreet laoreet. Praesent sed leo vel nibh convallis blandit. Ut rutrum. Donec nibh. Donec interdum. Fusce sed pede sit amet elit rhoncus ultrices. Nullam at enim vitae pede vehicula iaculis.

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6.2 Methods and Procedure

In hac habitasse platea dictumst. Proin at est. Curabitur tempus vulputate elit. Pellentesque sem. Praesent eu sapien. Duis elit magna, aliquet at, tempus sed, vehicula non, enim. Morbi viverra arcu nec purus. Vivamus fringilla, enim et commodo malesuada, tortor metus elementum ligula, nec aliquet est sapien ut lectus. Aliquam mi. Ut nec elit. Fusce euismod luctus tellus. Curabitur scelerisque. Nullam purus. Nam ultricies accumsan magna. Morbi pulvinar lorem sit amet ipsum. Donec ut justo vitae nibh mollis congue. Fusce quis diam. Praesent tempus eros ut quam.

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6.3 Results and Discussion

Nunc velit. Nullam elit sapien, eleifend eu, commodo nec, semper sit amet, elit. Nulla lectus risus, condimentum ut, laoreet eget, viverra nec, odio. Proin lobortis. Curabitur dictum arcu vel wisi. Cras id nulla venenatis tortor congue ultrices. Pellentesque eget pede. Sed eleifend sagittis elit. Nam sed tellus sit amet lectus ullamcorper tristique. Mauris enim sem, tristique eu, accumsan at, scelerisque vulputate, neque. Quisque lacus. Donec et ipsum sit amet elit nonummy aliquet. Sed viverra nisl at sem. Nam diam. Mauris ut dolor. Curabitur ornare tortor cursus velit.

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6.4 Conclusions

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scelerisque ac, dapibus nec, ultricies ut, mi. Duis nec dui quis leo sagittis commodo.

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Chapter 7

Conclusions, Recommendations, & Future Work

7.1 Conclusions

Nullam eleifend justo in nisl. In hac habitasse platea dictumst. Morbi nonummy. Aliquam ut felis. In velit leo, dictum vitae, posuere id, vulputate nec, ante. Maecenas vitae pede nec dui dignissim suscipit. Morbi magna. Vestibulum id purus eget velit laoreet laoreet. Praesent sed leo vel nibh convallis blandit. Ut rutrum. Donec nibh. Donec interdum. Fusce sed pede sit amet elit rhoncus ultrices. Nullam at enim vitae pede vehicula iaculis.

Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Aenean nonummy turpis id odio. Integer euismod imperdiet turpis. Ut nec leo nec diam imperdiet lacinia. Etiam eget lacus eget mi ultricies posuere. In placerat tristique tortor. Sed porta vestibulum metus. Nulla iaculis sollicitudin pede. Fusce luctus tellus in dolor. Curabitur auctor velit a sem. Morbi sapien. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Donec adipiscing urna vehicula nunc. Sed ornare leo in leo. In rhoncus leo ut dui. Aenean dolor quam, volutpat nec, fringilla id, consectetur vel, pede.

Nulla malesuada risus ut urna. Aenean pretium velit sit amet metus. Duis iaculis. In hac habitasse platea dictumst. Nullam molestie turpis eget nisl. Duis a massa id pede dapibus ultricies. Sed eu leo. In at mauris sit amet tortor bibendum varius.

Phasellus justo risus, posuere in, sagittis ac, varius vel, tortor. Quisque id enim. Phasellus consequat, libero pretium nonummy fringilla, tortor lacus vestibulum nunc, ut rhoncus ligula neque id justo. Nullam accumsan euismod nunc. Proin vitae ipsum ac metus dictum tempus. Nam ut wisi. Quisque tortor felis, interdum ac, sodales a, semper a, sem. Curabitur in velit sit amet dui tristique sodales. Vivamus mauris pede, lacinia eget, pellentesque quis, scelerisque eu, est. Aliquam risus. Quisque bibendum pede eu dolor.

7.2 Future Work

Fusce suscipit cursus sem. Vivamus risus mi, egestas ac, imperdiet varius, faucibus quis, leo. Aenean tincidunt. Donec suscipit. Cras id justo quis nibh scelerisque dignissim. Aliquam sagittis elementum dolor. Aenean consectetur justo in pede. Curabitur ullamcorper ligula nec orci. Aliquam purus turpis, aliquam id, ornare vitae, porttitor non, wisi. Maecenas luctus porta lorem. Donec vitae ligula eu ante pretium varius. Proin tortor metus, convallis et, hendrerit non, scelerisque in, urna. Cras quis libero eu ligula bibendum tempor. Vivamus tellus quam, malesuada eu, tempus sed, tempor sed, velit. Donec lacinia auctor libero.[1]

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- [2] A. one, “Article 1,” *Journal 1*, 1989.
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- [6] A. five, “Article five,” *Journal five*, 1990.

Appendix A: First Appendix

A.1 Section 1

Nullam eleifend justo in nisl. In hac habitasse platea dictumst. Morbi nonummy. Aliquam ut felis. In velit leo, dictum vitae, posuere id, vulputate nec, ante. Maecenas vitae pede nec dui dignissim suscipit. Morbi magna. Vestibulum id purus eget velit laoreet laoreet. Praesent sed leo vel nibh convallis blandit. Ut rutrum. Donec nibh. Donec interdum. Fusce sed pede sit amet elit rhoncus ultrices. Nullam at enim vitae pede vehicula iaculis.

Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Aenean nonummy turpis id odio. Integer euismod imperdiet turpis. Ut nec leo nec diam imperdiet lacinia. Etiam eget lacus eget mi ultricies posuere. In placerat tristique tortor. Sed porta vestibulum metus. Nulla iaculis sollicitudin pede. Fusce luctus tellus in dolor. Curabitur auctor velit a sem. Morbi sapien. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Donec adipiscing urna vehicula nunc. Sed ornare leo in leo. In rhoncus leo ut dui. Aenean dolor quam, volutpat nec, fringilla id, consectetur vel, pede.

Nulla malesuada risus ut urna. Aenean pretium velit sit amet metus. Duis iaculis. In hac habitasse platea dictumst. Nullam molestie turpis eget nisl. Duis a massa id pede dapibus ultricies. Sed eu leo. In at mauris sit amet tortor bibendum varius. Phasellus justo risus, posuere in, sagittis ac, varius vel, tortor. Quisque id enim. Phasellus consequat, libero pretium nonummy fringilla, tortor lacus vestibulum nunc, ut rhoncus ligula neque id justo. Nullam accumsan euismod nunc. Proin vitae ipsum

ac metus dictum tempus. Nam ut wisi. Quisque tortor felis, interdum ac, sodales a, semper a, sem. Curabitur in velit sit amet dui tristique sodales. Vivamus mauris pede, lacinia eget, pellentesque quis, scelerisque eu, est. Aliquam risus. Quisque bibendum pede eu dolor.

A.2 Section 2

Fusce suscipit cursus sem. Vivamus risus mi, egestas ac, imperdiet varius, faucibus quis, leo. Aenean tincidunt. Donec suscipit. Cras id justo quis nibh scelerisque dignissim. Aliquam sagittis elementum dolor. Aenean consectetur justo in pede. Curabitur ullamcorper ligula nec orci. Aliquam purus turpis, aliquam id, ornare vitae, porttitor non, wisi. Maecenas luctus porta lorem. Donec vitae ligula eu ante pretium varius. Proin tortor metus, convallis et, hendrerit non, scelerisque in, urna. Cras quis libero eu ligula bibendum tempor. Vivamus tellus quam, malesuada eu, tempus sed, tempor sed, velit. Donec lacinia auctor libero.

Appendix B: Second Appendix

B.1 Section 1

Nullam eleifend justo in nisl. In hac habitasse platea dictumst. Morbi nonummy. Aliquam ut felis. In velit leo, dictum vitae, posuere id, vulputate nec, ante. Maecenas vitae pede nec dui dignissim suscipit. Morbi magna. Vestibulum id purus eget velit laoreet laoreet. Praesent sed leo vel nibh convallis blandit. Ut rutrum. Donec nibh. Donec interdum. Fusce sed pede sit amet elit rhoncus ultrices. Nullam at enim vitae pede vehicula iaculis.

Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Aenean nonummy turpis id odio. Integer euismod imperdiet turpis. Ut nec leo nec diam imperdiet lacinia. Etiam eget lacus eget mi ultricies posuere. In placerat tristique tortor. Sed porta vestibulum metus. Nulla iaculis sollicitudin pede. Fusce luctus tellus in dolor. Curabitur auctor velit a sem. Morbi sapien. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Donec adipiscing urna vehicula nunc. Sed ornare leo in leo. In rhoncus leo ut dui. Aenean dolor quam, volutpat nec, fringilla id, consectetur vel, pede.

Nulla malesuada risus ut urna. Aenean pretium velit sit amet metus. Duis iaculis. In hac habitasse platea dictumst. Nullam molestie turpis eget nisl. Duis a massa id pede dapibus ultricies. Sed eu leo. In at mauris sit amet tortor bibendum varius. Phasellus justo risus, posuere in, sagittis ac, varius vel, tortor. Quisque id enim. Phasellus consequat, libero pretium nonummy fringilla, tortor lacus vestibulum nunc, ut rhoncus ligula neque id justo. Nullam accumsan euismod nunc. Proin vitae ipsum

ac metus dictum tempus. Nam ut wisi. Quisque tortor felis, interdum ac, sodales a, semper a, sem. Curabitur in velit sit amet dui tristique sodales. Vivamus mauris pede, lacinia eget, pellentesque quis, scelerisque eu, est. Aliquam risus. Quisque bibendum pede eu dolor.

B.2 Section 2

Fusce suscipit cursus sem. Vivamus risus mi, egestas ac, imperdiet varius, faucibus quis, leo. Aenean tincidunt. Donec suscipit. Cras id justo quis nibh scelerisque dignissim. Aliquam sagittis elementum dolor. Aenean consectetur justo in pede. Curabitur ullamcorper ligula nec orci. Aliquam purus turpis, aliquam id, ornare vitae, porttitor non, wisi. Maecenas luctus porta lorem. Donec vitae ligula eu ante pretium varius. Proin tortor metus, convallis et, hendrerit non, scelerisque in, urna. Cras quis libero eu ligula bibendum tempor. Vivamus tellus quam, malesuada eu, tempus sed, tempor sed, velit. Donec lacinia auctor libero.

Appendix C: Third Appendix

C.1 Section 1

Listing C.1: This is a caption for the inserted code

```
function [outputs] = functionName(inputs)
    %{
        This is a Comment Block
        That
        can
        span
        multiple
        lines.
    %}

    % This is a regular comment
    a = 1 + 2 * sin(angle);
    b = 'This is a String';
```

C.2 Section 2

Listing C.2: This is a caption for the inserted code

```
#include <iostream>
using namespace std;
/* This function adds two integer values
 * and returns the result
 */
int
sum(int num1, int num2){
    int num3 = num1 + num2; return num3;
}

int main(){
    //Calling the function
    cout << 'The sum is:' << sum(1,99);
    return 0;
}
```

Appendix D: Inserting PDFs

D.1 how to insert a portrait PDF

This is an Example PDF that is Portrait

This is the second page

D.2 How to insert a landscape PDF

This is an Example PDF that is Landscape

This is the second page