THESIS TITLE CENTERED ON THE PAGE VERTICALLY AND HORIZONTALLY,

IN ALL UPPER CASE LETTERS AND IN AN INVERTED

PYRAMID SHAPE. MATH MODE: $\frac{2^{15}}{\pi}$

by

Student Name

A thesis submitted to the Faculty and the Board of Trustees of the Colorado School of Mines in partial fulfillment of the requirements for the degree of Doctor of Philosophy (Computer Science).

Golden, Colorado

Date _____

Signed: _____

Student Name

Signed: _____

Dr. Thesis Advisor
Thesis Advisor

Signed: _____

Dr. Co-Advisor
Thesis Advisor

Golden, Colorado

Date _____

Signed: _____

Dr. Department Head
Professor and Head
Department of XXX

ABSTRACT

The abstract is a concise, one to three sentence statement of the thesis problem, a brief description consisting of no more than a few sentences describing the research method or design, and a report of the major findings and conclusions.

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Dedication Page: A dedication page is optional and not frequently included in a thesis. However, occasionally the thesis writer wants to dedicate the document to a professional colleague, friend, or relative. A dedication typically expresses gratitude for someone's support. If a dedication page is included, it is placed at the end of the front matter section, following the acknowledgments. Typically, a dedication page has no title, it simply states, e.g., "For my father." Roman numeral page numbering continues on the dedication page.

CHAPTER 1

INTRODUCTION

This could be a subtitle

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.

1.1   First section

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

1.2   Sencond section

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Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

1.2.1   First SubSection

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

1.2.2   Second SubSection

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1.2.2.1   Sub SubSection

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molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

1.3 Last section Math mode: $\frac{2^{15}}{\pi}$

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

1.4 Last section to test Citation

First paper Goossens et al. (1994) did something. Note that here we use ˜ to make sure the citation not go to the other line.

Lamport et al. Lamport (1994) did something.

Many papers Makuuchi (2000); Yassin et al. (1994) did something.

All papers Makuuchi (2000); Yassin et al. (1994); Goossens et al. (1994); Lamport (1994) did something.

Online link LLC (1999) is about something.

More papers: Columbus (1492), Goossens et al. (1994), James et al. (1776), Columbus (1492); Phillips (1999); Green et al. (1900); Smith and Weston (1954)

CHAPTER 2

REPRODUCED CHAPTER: THIS CHAPTER REPRESENTS THAT STYLE USED WHEN A JOURNAL ARTICLE HAS ALREADY BEEN PUBLISHED OR HAS BEEN ACCEPTED FOR PUBLICATION

2012 Elsevier Ltd. Katherine Smith [*] [1], Eric Wright [†] [2]

Abstract

This is the original abstract of your paper.This is the original abstract of your paper.This is the original abstract of your paper.This is the original abstract of your paper.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

2.1   First section

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[†]Corresponding author. Direct correspondence to `example@mines.edu`.
[2]Southern Nevada, 550 City Parkway, Suite 810, Las Vegas, NV, 89106, USA.

CHAPTER 3

THIS IS A REALLY REALLY LONG TITLE THAT SOMEONE ELSE WROTE FOR
ALL THE PENGUINS IN THE WORLD MATH MODE: $\frac{2^{15}}{\pi}$

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem
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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.

3.1 First section

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at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend
consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna.
Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus.
Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum
pellentesque felis eu massa.

3.2 This is a really long title having more than three lines of text to appear on the toc.

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CHAPTER 4

EXAMPLE OF LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG LONG CHAPTER

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4.1   First section

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4.1.1   Subsection

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4.1.2 This is a really long title having more than three lines of text to appear on the toc.

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4.1.2.1 SubSubsection

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CHAPTER 5

FIGURE AND TABLE CHAPTER

Fusce mauris. Vestibulum luctus nibh at lectus. Sed bibendum, nulla a faucibus semper, leo velit ultricies tellus, ac venenatis arcu wisi vel nisl. Vestibulum diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue quam, in hendrerit risus eros eget felis. Maecenas eget erat in sapien mattis porttitor. Vestibulum porttitor. Nulla facilisi. Sed a turpis eu lacus commodo facilisis. Morbi fringilla, wisi in dignissim interdum, justo lectus sagittis dui, et vehicula libero dui cursus dui. Mauris tempor ligula sed lacus. Duis cursus enim ut augue. Cras ac magna. Cras nulla. Nulla egestas. Curabitur a leo. Quisque egestas wisi eget nunc. Nam feugiat lacus vel est. Curabitur consectetuer.

5.1 Figures

The "`figure`" environment should be used for figures. One or more images can be placed within a figure. If your figure contains third-party material, you must clearly identify it as such, as shown in the example below.

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Figure 5.1: The figure with long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long caption and links. (`https://goo.gl/VLCRBB`).

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.
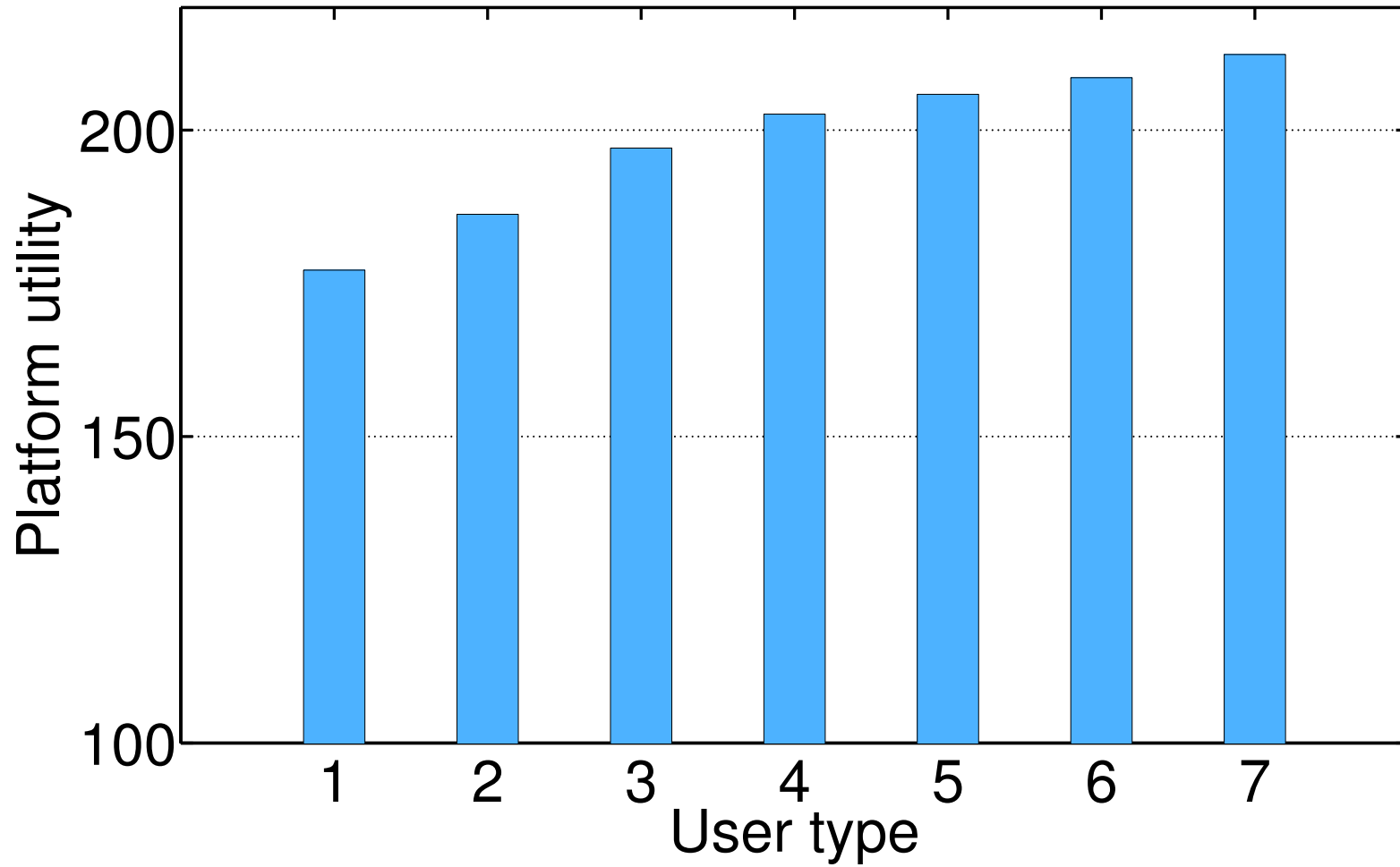
Figure 5.2: Continues figures in landscape mode. (first)
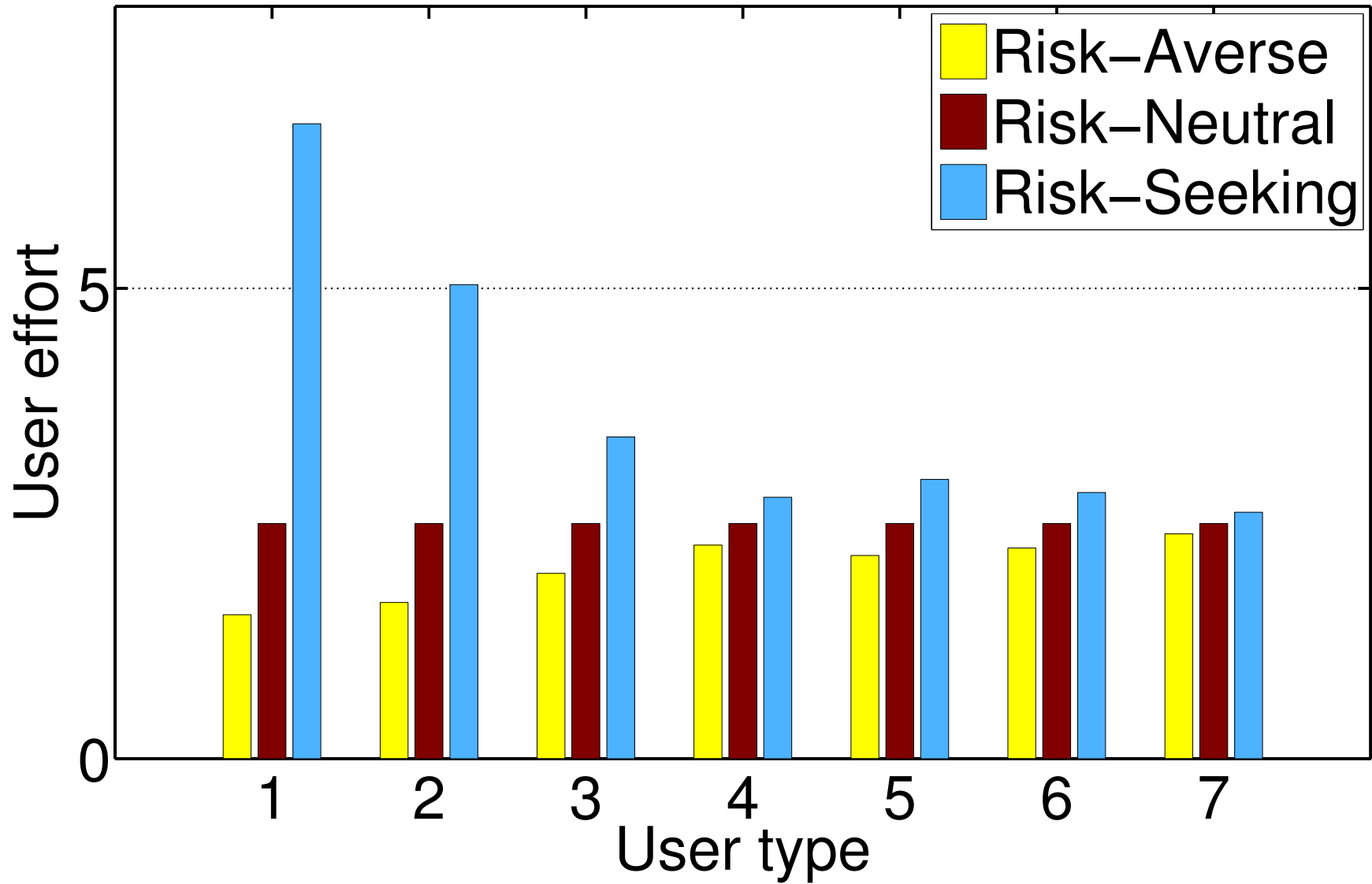
Figure 5.3: Continues figures in landscape mode. (second)

Your figures should contain a caption which describes the figure to the reader. Figure captions go below the figure. Your figures should **also** include a description suitable for screen readers, to assist the visually-challenged to better understand your work.

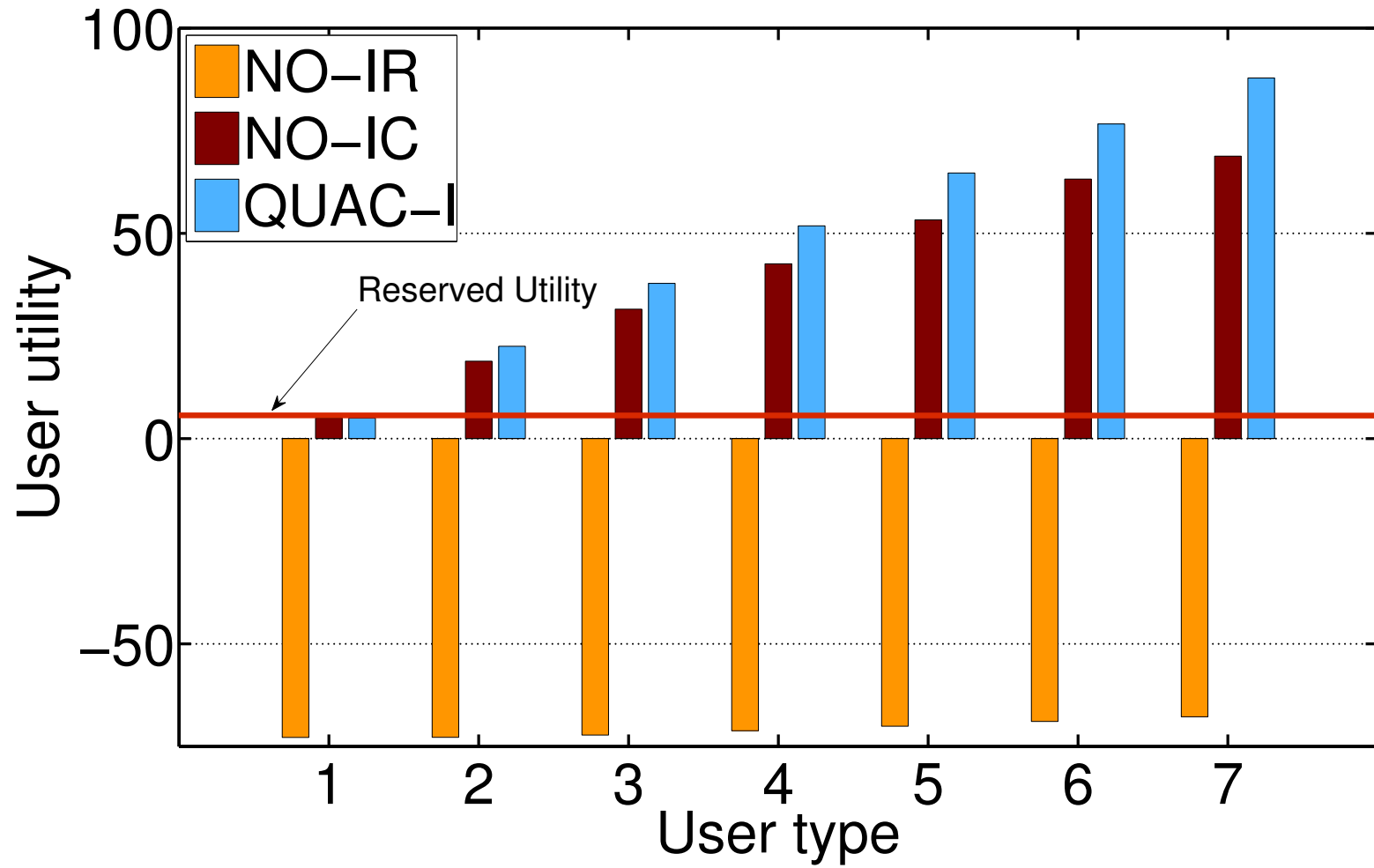Figure captions are placed *below* the figure.

Figure 5.4: Example of a figure in landscape mode. Use \centering to center the image

Figure 5.5: The original realy long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long figure caption.

5.2 Tables

The "`minesthesis`" document class includes the "`booktabs`" package —

`https://ctan.org/pkg/booktabs` — for preparing high-quality tables.

Table captions are placed *above* the table.

Because tables cannot be split across pages, the best placement for them is typically the top of the page nearest their initial cite. To ensure this proper "floating" placement of tables, use the environment **table** to enclose the table's contents and the table caption. The contents of the table itself must go in the **tabular** environment, to be aligned properly in rows and columns, with the desired horizontal and vertical rules. Again, detailed instructions on **tabular** material are found in the *LATEX User's Guide*.

Immediately following this sentence is the point at which Table 5.1 is included in the input file; compare the placement of the table here with the table in the printed output of

this document.

Table 5.1: Frequency of Special Characters

Non-English or Math	Frequency	Comments
$\emptyset$	1 in 1,000	For Swedish names
π	1 in 5	Common in math
$\$$	4 in 5	Used in business
Ψ_1^2	1 in 40,000	Unexplained usage

Table 5.2: Some Typical Commands

Command	A Number	Comments	Command	A Number	Comments
\author	100	Author	\author	100	Author
\table	300	For tables	\table	300	For tables
\table*	400	For wider tables	\table*	400	For wider tables

Table 5.3: Some Typical Commands with borders

Command	A Number	Comments	Command	A Number	Comments
\author	100	Author	\author	100	Author
\table	300	For tables	\table	300	For tables
\table*	400	For wider tables	\table*	400	For wider tables

Table 5.4: Some Typical Commands with borders

Command	A Number	Comments
\author	100	Author
\table	300	For tables
\table*	400	For wider tables
\author	100	Author
\table	300	For tables
\table*	400	For wider tables

To set a wider table, which takes up the whole width of the page's live area, use the environment **table*** to enclose the table's contents and the table caption. As with a single-column table, this wide table will "float" to a location deemed more desirable. Immediately following this sentence is the point at which Table 5.2 is included in the input file; again, it is instructive to compare the placement of the table here with the table in the printed output of this document.

Table 5.5: Some table with really long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long long caption

Command	A Number	Comments	Command	A Number	Comments
\author	100	Author	\author	100	Author
\table	300	For tables	\table	300	For tables
\table*	400	For wider tables	\table*	400	For wider tables

Table 5.6: A table in landscape mode

Command	A Number	Comments	Command	A Number	Comments	Command	A Number	Comments
\author	100	Author	\author	100	Author	\author	100	Author
\table	300	For tables	\table	300	For tables	\table	300	For tables
\table*	400	For wider tables	\table*	400	For wider tables	\table*	400	For wider tables
\author	100	Author	\author	100	Author	\author	100	Author
\table	300	For tables	\table	300	For tables	\table	300	For tables
\table*	400	For wider tables	\table*	400	For wider tables	\table*	400	For wider tables
\author	100	Author	\author	100	Author	\author	100	Author
\table	300	For tables	\table	300	For tables	\table	300	For tables
\table*	400	For wider tables	\table*	400	For wider tables	\table*	400	For wider tables
\author	100	Author	\author	100	Author	\author	100	Author
\table	300	For tables	\table	300	For tables	\table	300	For tables
\table*	400	For wider tables	\table*	400	For wider tables	\table*	400	For wider tables

5.3 Section of Long Tables

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Table 5.7: Example of long table cross multiple pages

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\author	100	Author
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\author	100	Author
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Table 5.7 Continued

Command	A Number	Comments
\table*	400	For wider tables
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Table 5.7 Continued

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Table 5.8: A long long table in landscape mode

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\table	300	For tables	\table	300	For tables	\table	300	For tables
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Table 5.8 Continued

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Table 5.8 Continued

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CHAPTER 6

LAST CHAPTER

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6.3 Last section to test Citation

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Lamport et al. Lamport (1994) did something.

Many papers Makuuchi (2000); Yassin et al. (1994) did something.

All papers Makuuchi (2000); Yassin et al. (1994); Goossens et al. (1994); Lamport (1994) did something.

Online link LLC (1999) is about something.

CHAPTER 7

LAST LAST CHAPTER

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7.1.1   SubSection

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REFERENCES

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APPENDIX A

SUPPLEMENT DATA

Appendix material is information that is not essential to the text but that contributes to it.

Appendices are used to include information such as the following:

- Original data
- Long quotations
- Supporting legal decisions or laws
- Computer codes and programs
- Lithologic and petrographic descriptions
- Questionnaires
- Forms and documents
- Permissions to use copyrighted material
- Long tables

All Figuires and Tables in an Appendix need to be labeled with a number & a caption and need to be listed in either the List of Figures or List of Tables.

You may include long appendices as electronic attachments to your thesis. In either instance, appendices are listed in the table of contents.
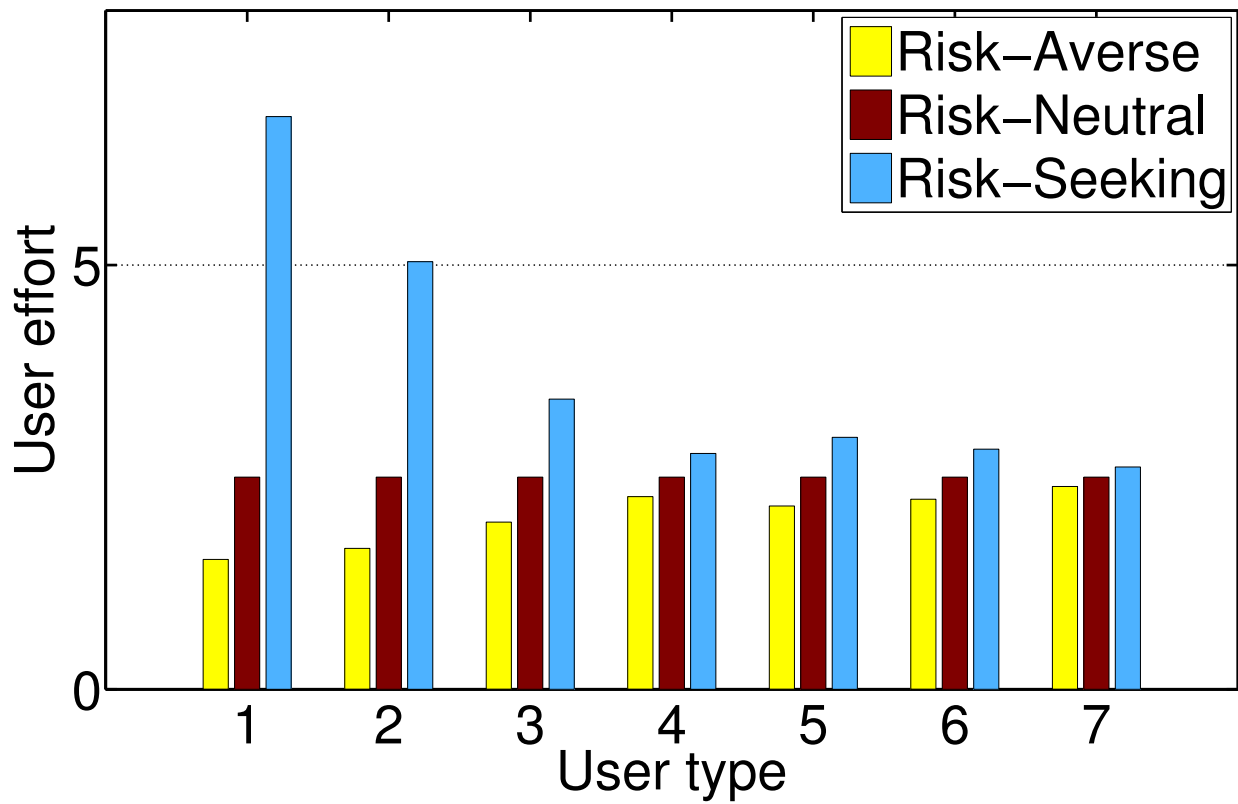
Figure A.1: Example Figure in Appendix A

APPENDIX B

SUPPLEMENTAL ELECTRONIC FILES

The Appendix for the Supplemental Electronic Files should look like the example below. Be sure to include the Appendix in the Table of Contents.

Table B.1: Example Table in Appendix B

Non-English or Math	Frequency	Comments
Ø	1 in 1,000	For Swedish names
π	1 in 5	Common in math
$\$$	4 in 5	Used in business
Ψ_1^2	1 in 40,000	Unexplained usage