



Proposal/thesis format for the Research Project Module (IT4010)

Faculty of Computing, Sri Lanka Institute of the Information Technology

Guidelines on Documentation and Submissions of Dissertations

1. Introduction for the common sections and the necessary guidelines

All undergraduate students at the SLIIT should follow the under mentioned instructions before preparation of their proposal or Final dissertation reports.

None of these reports will not be accepted if the students have not prepared the documents according to these guidelines. The sections that should be included only into the proposal document are highlighted in this color.

There is a sample Proposal template is given in the Appendix 1 and the Dissertation template and the guidelines are given in the Appendix 2.

1.1 Page Formatting

1.1.1 **General Instructions:** International A4 white paper of good quality (80 gsm) should be used. Other paper may be used if required (e.g.: for maps) on the instructions of the supervisor.

1.1.2 **Submission:** The document should be word processed and double sided. One and a half line spacing is required, except for the abstract, tables and indented quotations where single line spacing may be used.

1.1.3. **Fonts:** A conventional font type must be used and text should be in “**Times New Roman.**”

- Chapter heading : All Capital—14 Font size, Bold
- Section heading : Title case-12 Font size, Bold
- Sub-section heading :Sentence case-12 Font size, Bold
- Body text : Sentence case - 12 Font size
- Tables and Illustrations : Font size may be varied while maintaining legibility

1.1.4. **Margins** of 40 mm on left & bottom and 25 mm on top & right should be used

(Refer Appendix I).

2. Pagination

Each page should have page numbers except the “**Title**” page. Lower case **Roman numerals** should be assigned centered at the bottom of the page to all “**preliminary pages**” (Refer Appendix II; i - ix in content page). Pagination of the body text and appendices is to be in **Arabic numerals** centered at the right bottom of the page. The pagination begins with the first page of the first chapter and continues throughout the rest of the text.

3. Tables and Illustrations

Tables are grids consisting of columns and rows that present numerical or verbal facts by categories. Figures include charts, graphs, diagrams, photographs, maps, musical examples, drawings and other images. All these types of nontextural material are collectively referred to as illustrations. **All tables and figures must be referred to in the text by number (not by a phrase such as "the following table")**. Charts, graphs, maps, and tables that are larger than the standard page should be attached as Appendices. Furthermore, the tables figures should be center aligned and placed either at the top of the page or the bottom of the page. Figure cations should be in Times New Romen, 10 font size below the figure, as illustrated in Fig. 1. Where as the table captions should be placed top of the table, as shows in Table 1.

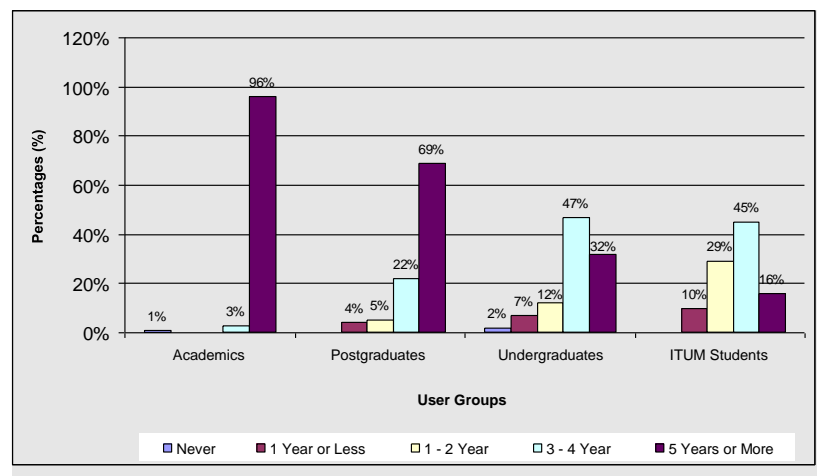


Figure 1: The Internet experience of the participants

Source: (if any)

Table 1: Kruskal-Wallis Test results for the Internet experience vs. user category

User Category	N	Median	Ave Rank	Z
Academics	73	5.000	233.5	6.90
Postgraduates	87	5.000	189.9	2.78
Undergraduates	139	4.000	130.1	-5.75
ITUM Students	31	4.000	95.5	-4.29
Overall	330		165.5	

4. Photographs

High-quality colored or black-and-white photographs or reprints with sufficient clarity may be incorporated. Photographs with glossy finish and dark backgrounds should be avoided where possible. State 'Original in Color' in the title where color is used.

5. Algorithms

Compact pseudocode is preferred to lengthy source code in verbose programming languages.

Long listings in verbatim mode (typewriter font) are hard to read. It is recommend to use the available stylistic features to structure program code, such as boldface font for key words, italics for variable and function names, slanted for comments, etc.

Avoid long names for variables and constants, especially if you need to reference them in mathematical formulas. Line numbers should only be used if the describing plain text explicitly references them.

Avoid page breaks in algorithms / listings. Treat them as floating objects, like tables and figures.

Avoid excessively long algorithms or program listings. Partition the algorithm into suitable parts and package the parts into separate appendixes

6. Equations

When you are adding equations, you have to add it as an equation given as displayed in Fig. 2. The equation must have a reference number and you have to refer the equation using “(<equation number>)” in the body of text. Moreover, you must explain all the necessary variables in the equation as explained below.

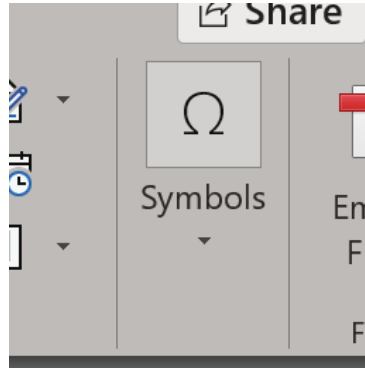


Figure 2 Insert->Symbol->equation

E.g.

Force can be explained using (1), where f is force, m is mass and a is the acceleration.

$$f = ma \quad (1)$$

7. Binding

Use normal stapler binding for the proposal documents, if the supervisor requested a hard copy. Otherwise you have to upload the document to the given cloud space.

Hard bound dissertation should follow the formatting and the binding guidelines given in the “thesis dissertation example.docx”.

8. Plagiarism.

The thesis must have maximum 20% of the plagiarism. Thesis must check for the plagiarism before you submit the draft for the supervisor because if you find exceeding 20% of plagiarism level, the thesis will be subjected to the rejections or mark deductions. The Turnitin tool has to be used to check the plagiarism.

Sections that Must be there in the Proposal/ Dissertation

NOTE: The sections that should be included only into the proposal document are highlighted in this color.

- i. Title page
- ii. Declaration
- iii. Abstract
- iv. Acknowledgement/Dedication
- v. Table of contents
- vi. List of Tables
- vii. List of Figures
- viii. List of Abbreviations
- ix. Introduction
 - a. Background Literature
 - b. Research Gap
- x. Research Problem
- xi. Research Objectives
- xii. Methodology
 - a. Methodology including the system diagram (You may use subsections as needed)
 - b. Commercialization of the Product
- xiii. Software Specifications, Research Review or Design Components
- xiv. Budget and Budget Justification (if any)
- xv. Testing & Implementation
- xvi. Results & Discussion (This section is not needed in the Proposal report)
 - a. Results
 - b. Research Findings
 - c. Discussion
 - d. Summary of Each Student's contribution
- xvii. Conclusions
- xviii. References
- xix. Glossary
- xx. Appendices (no limit)

1. Cover

A sample cover page is available in both Proposal and dissertation appendixes necessarily.

2. Title Page (See the appendixes given)

First page should be the title page It should contain.

- The Title
- Project ID
- ‘Project Proposal Report/ Final Project Thesis’
- Authors’ Full Names, Student IDs
- Names of the Supervisors
- Official Name of the Degree
- Official Name of the Department of the University
- The Month and Year of Submission

3. Declaration, copyright statement and the statement of the supervisor (This section is only needed for the Dissertation)

“I declare that this is our own work and this proposal does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other university or Institute of higher learning and to the best of our knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

Also, I hereby grant to Sri Lanka Institute of Information Technology, the nonexclusive right to reproduce and distribute my dissertation, in whole or in part in print, electronic or other medium. I retain the right to use this content in whole or part in future works (such as articles or books).”

Name	Student ID	Signature
The supervisor/s should certify the proposal report with the following declaration.		

The above candidates are carrying out research for the undergraduate Dissertation under my supervision.

Signature of the supervisor:

Date

4. In the acknowledgement section, the student is required to declare the extent of assistance which has been given by his/her faculty/department staff, fellow students & external bodies or others in the collection of materials and data, the design & construction of apparatus, the analysis of data and preparation of the dissertation. If the research was sponsored, it is necessary to mention the name of the funding organization and other details (if any). In addition, it is appropriate to highlight the supervision and advice given by the dissertation supervisor.
5. Abstract

Individual copies of all authors must have an abstract reflecting the research done. Abstracts must provide a brief introduction to the subject in addition to the concise summary of methodology, anticipate test results, conclusions and recommendations (300 words or less).

Abstract Title : Title case/Times New Roman 12 point Bold (If use other fonts,
Change the size appropriately)

Text : Times New Roman 11 point Light.

Spacing : Single line

6. Table of contents

All the main sections and subsections of each chapter must be included in the table of contents with their page numbers. The page numbers of abstracts, and others which come first in the proposal report should also be included. Also, if there are any appendices, should be included in the table of contents.

7. List of figures

If the report contains any figures then separate list should be prepared including the name of the object and the page number. The chapter number should be included in defining the number of figures.

8. List of tables

If the report contains any tables then separate list should be prepared including the name of the object and the page number. The chapter number should be included in defining the number of tables.

9. List of abbreviations

Abbreviations must follow the International standards. When an abbreviation is used in first time, it must be explained in the text. A separate list should be prepared for all abbreviations used in dissertation with their full meaning. The abbreviations in the list should be arranged according to the alphabetical order.

10. Introduction

The report should with an introduction and the last part of the report should include the anticipated conclusions and recommendations. All the chapters of report should have a title and a chapter number. Any new chapter should be started in a new page.

11. Background & Literature survey

This section should elaborate the background information related to the research project.

12. Research Gap

This section must provide the evidences related to the existing solutions and should do a thorough comparison to highlight the novelty of the solution you are proposing.

13. Research Problem

This section should explain the research problem and the specific research questions you are trying to solve in detail. The necessary references should be given to improve the clarity of the problem definition.

14. Objectives

13.1 Main Objective

13.2 Specific Objectives

This section should be dedicated to state the main and the specific objectives of the proposal/ Report. The objectives should be clearly show that the research problem and the questions are addressed, and you have the motivation to solve them. The objectives you set here should be tested and discussed in the section 15.

Main objective of your research project states what you expect to achieve in general terms. Specific objectives break down the main objective into smaller, logically connected parts that systematically address the various aspects of the problem leading to the main objective. Your specific objectives should specify exactly what you will do in each component of your study, how, where, when and for what purpose.

15. Methodology

The methodologies to achieve the objectives stated in the section 13 should be explained in the methodology section. However, in the proposal document, **you might not be able to give an extensive explanation of the methodologies. Yet, a tentative methodology should be there to convince feasibility of the proposed solution.** Thus section should explain the equations, algorithms, and the scenarios. Moreover, the section should elaborate the methods used for the data collection.

16. Test Results and the Discussion **(This section is not needed to the Proposal report)**

This section should contain all the necessary details of the case studies, testing, environments, simulations, evaluations, and all the test results to prove you have achieved your objectives and the research problem is solved as you have explained. Moreover, this section should justify the results you have obtained through a comprehensive discussion.

17. Description of Personal and Facilities

This section should include the facilities and the personal support you require to achieve your objectives.

18. Software Specifications, Research Review or Design Components

Depending on the advice of the supervisor you should decide the type of the user requirements, design requirements, and the review. Based on that you have to select a template from SRS, DD, or RRD and have to add the necessary section as sub sections for this section.

Subsections must be included into is as following table (Select appropriately with the guidance of the supervisor

SRS (For Software oriented Projects)	DD (For Hardware oriented projects)	RRD
1 User interfaces	1 User interfaces	1. Sources for test data and analysis. 1.1 Data collection procedures to be used 1.2 Data analysis methods to be used
2 Hardware interfaces	2 Hardware interfaces	2. Anticipated benefits 2.1 Benefits to users 2.2 Contribution to the body of knowledge
3 Software interfaces	3 Software interfaces	3.Scope and specified deliverables / expected research outcome 3.1 Explain what the software product(s) will do, and, if necessary, will not do
4.Communication interfaces	4 Communication interfaces	4. Research constraints (if any) 4.1 All conditions that may limit developer's options.
5 Classes/Objects < For Software Dev. Oriented Projects>	5 Architectural Design <For Embedded System related Projects > 5.1 High level Architectural Design	5. Project plan or schedule The timeline that indicates the time frame within which various parts of the research will be completed. The value of including this is that it demonstrates the feasibility of the research.

	5.2 Hardware and software requirements with justification 5.3 Risk Mitigation Plan with alternative solution identification 5.4 Cost Benefit Analysis for the proposed solution	
6 Performance requirements	6 Performance requirements	
7 Design constraints	7 Design constraints	
8 Software system attributes 8.1 Reliability 8.2 Availability 8.3 Security 8.4 Maintainability		
9. Other requirements		

19. Budget and Budget Justification (if any)

20. Reference list

A reference list¹ is the list of all books, articles, and other source of materials, which were referred and should be listed according to the international referencing method adopted. APA Style and IEEE Style are recommended. You may refer the reference [1] for the IEEE style and you must follow the guidelines when referring the research works, webpages, etc. Each reference entry should be single-spaced with double spacing between entries.

NOTE: The ‘Reference list’ does not contain a chapter number.

References

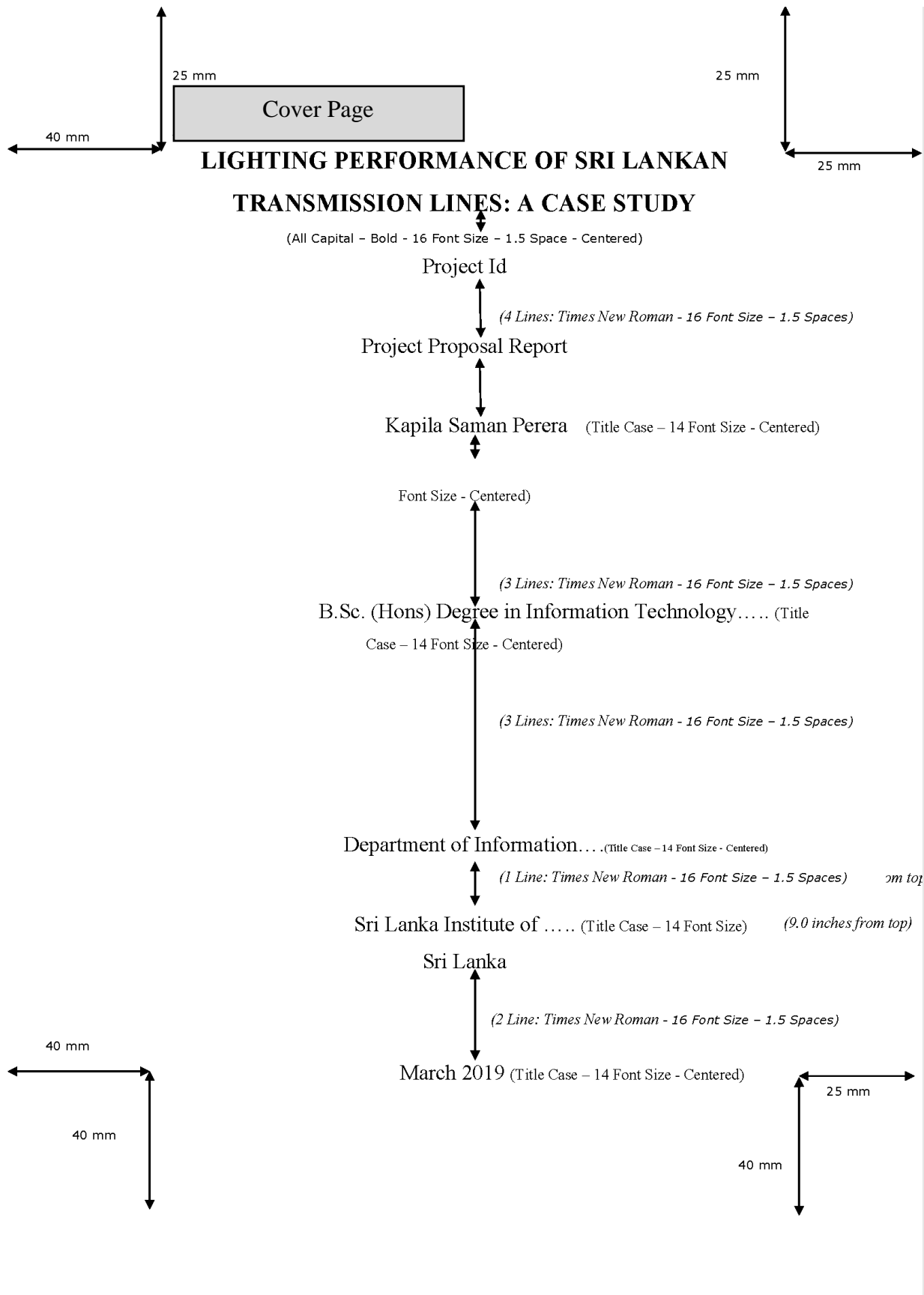
[1] IEEE Data Port, "How to Cite References: IEEE Documentation Style", <https://iee-dataport.org>, [Online]. Available: <https://bit.ly/2BTSKg2>.

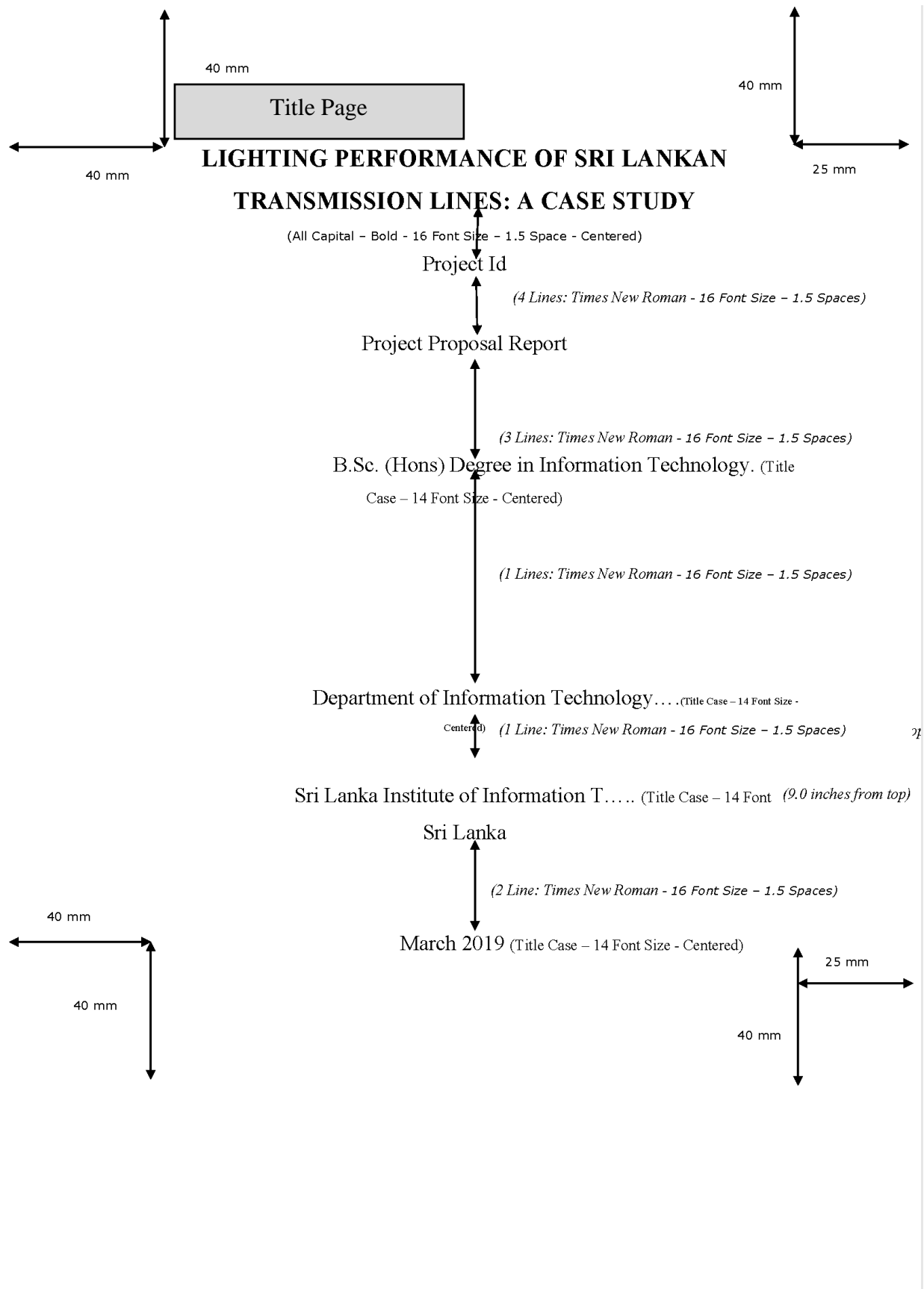
21. Appendices

Supplementary material could be included as Appendices rather than in the main text. For example, Appendices may contain questionnaires, detailed descriptions on apparatus, extensive tables of raw data, source code etc. All appendices must have page numbers written in the same type face and size used for pagination throughout.

If appendices contain photocopied material, the photocopies should be of letter quality.

APPENDIX 1
Proposal Template





Content Page

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Table 2.1 Use of IT strategy plans	10
Table 2.3 Kruskal-Wallis results for the Internet experience vs. user category	20

[List of Abbreviations]

LIST OF ABBREVIATIONS

Abbreviation	Description
ACM	Association for Computing Machinery
IEEE	Institute of Electrical and Electronic Engineers
OPAC	Online Public Access Catalogue

[List of Appendices]

LIST OF APPENDICES

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APPENDIX 2

Final Dissertation template and necessary guidelines

Sri Lanka Institute of Information Technology
Guidelines on Documentation and Submission of Dissertations

INTRODUCTION

A dissertation is an essay advancing a new point of view resulting from research as a requirement for a Bachelor degree

All Undergraduate students at the SLIIT should follow the under mentioned instructions before preparation of their dissertations.

The final copies of the dissertations will not be accepted if the students have not prepared the dissertation according to these guidelines.

Common Instructions

01. Number of Copies and the methods of submissions

Student must submit printed copies as follows;

Draft: One set of copies (1 group report and 4 individual summary reports). The Draft copy should be shared with your supervisor either using the assigned cloud space or as a “stapled” hard copy. The RP team will share the soft copy with the blind reviewer.

Final (soft bound): One set of copies (1 group report and 4 individual summary reports) have to be submitted through the assigned cloud space.

Final (Hard bound): One group report and four individual reports have to prepare using the following instructions and submit it to the RP team..

02. Page Format

2.1. **General Instructions:** International A4 white paper of good quality (80 gsm) should be used. Other paper may be used if required (e.g.: for maps) on the instructions of the supervisor.

2.2 **Draft:** The draft to be submitted to the supervisor should be word processed and double sided. One and a half line spacing is required, except for the abstract, tables and indented quotations where single line spacing may be used.

2.3 **Final Submission:** Final submission should be word processed and single sided. One and a half line spacing is required, except for the abstract, tables and indented quotations where single line spacing may be used.

2.4. **Fonts:** A conventional font type must be used, and text should be in **Times New Roman**.

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- Body text :Sentence case - 12 Font size
- Tables and Illustrations : Font size may be varied while maintaining legibility

2.5. Margins of 40 mm on left & bottom and 25 mm on top & right should be used (Refer Appendix I).

03. Pagination

Each page should have page numbers except the “Title” page. Lower case **Roman numerals** should be assigned centered at the bottom of the page to all “preliminary

pages” (Refer Appendix II; i - ix in content page). Pagination of the body text and appendices is to be in **Arabic numerals** centered at the right bottom of the page. The pagination begins with the first page of the first chapter and continues throughout the rest of the text.

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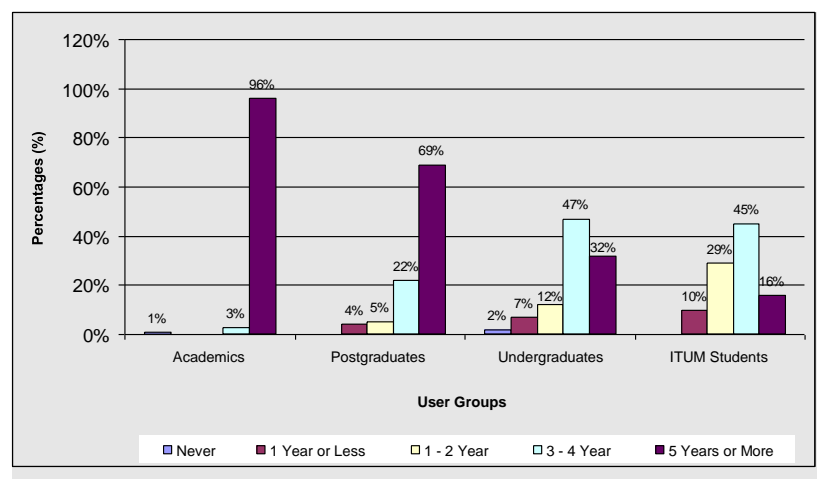


Figure 1: The Internet experience of the participants

Source: (if any)

Table 1: Kruskal-Wallis Test results for the Internet experience vs. user category

User Category	N	Median	Ave Rank	Z
Academics	73	5.000	233.5	6.90
Postgraduates	87	5.000	189.9	2.78
Undergraduates	139	4.000	130.1	-5.75
ITUM Students	31	4.000	95.5	-4.29
Overall	330		165.5	

05. Photographs

High-quality colored or black-and-white photographs or reprints with sufficient clarity may be incorporated. Photographs with glossy finish and dark backgrounds should be avoided where possible. State 'Original in Color' in the title where color is used.

06. Additional Materials

Additional materials if any (Eg: software, audio, video etc.), could be enclosed in a CD/DVD as an Appendix. These CDs/DVDs must be submitted in a pocket pasted inside back cover. Both CD label and the pocket should carry the following information: Name, Title of submission with project number, Date of submission (example: September 2017), Degree and Department (example: B.Sc. Special Honors degree in information Technology, specialization on Software Engineering, Department of Information Technology).

07. Binding

7.1. Cover Page (*Hard Bound*)

See the Sample coverage given Lettering on Cover should be in **GOLD printing on a black hard bound.**

7.2. *Draft (Soft Bound)*

The draft to be submitted to the supervisor should be soft bound

7.3. *Final Submission*

The final corrected copy of the dissertation must be free from typographical, grammatical and other errors when submitted. After making the alterations mentioned by the supervisor, final dissertation should be hardbound with the Black color.

Short name of the degree and the year submitted should be indicated at 80mm and 40 mm from the bottom of the spine respectively. The name of the candidate with initials should be mentioned at 20mm from the top of the spine as depicted in Fig. 2. Lettering on cover should be in **GOLD**.

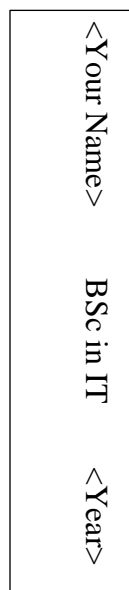
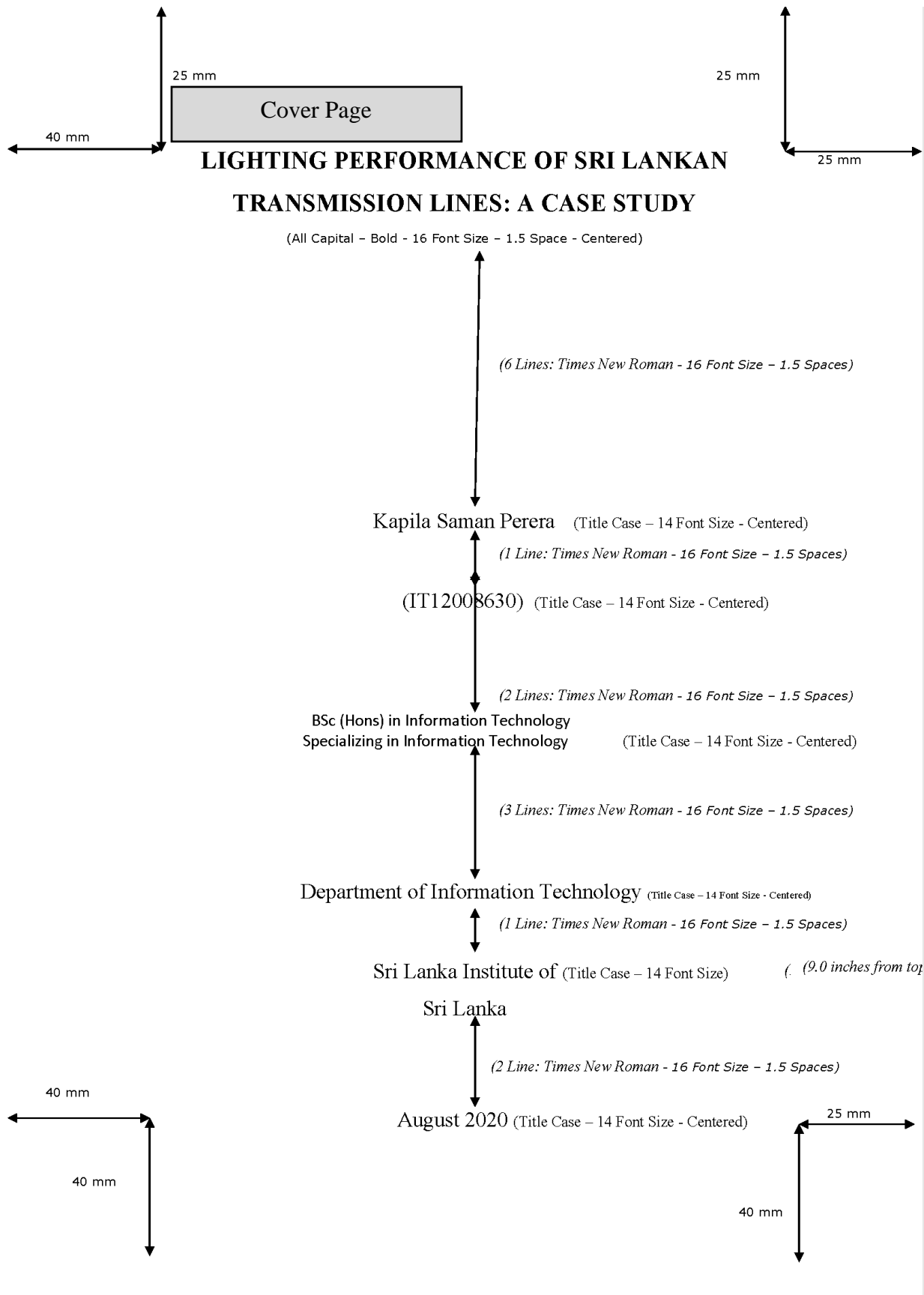


Figure 2. Spinal code of the hard bind copy

Components

1. A dissertation should contain the following parts in the given order.
 - i. Hard Cover (Background – Black, Text – Gold) [only Final report Hard copy]
 - ii. Title page (1 A4 page)
 - iii. Declaration (1 A4 page)
 - iv. Abstract (1 A4 page)
 - v. Acknowledgement (1 A4 page)
 - vi. Table of contents (1-2 A4 pages)
 - vii. List of Tables (if any)
 - viii. List of Figures (if any)
 - ix. List of abbreviations (if any)
 - x. Introduction (10-15 A4 pages)
 - a. background literature
 - b. research gap
 - xi. research Problem (2-5 A4 Pages)
 - xii. Research Objectives (1-2 A4 Pages)
 - xiii. Methodology (15-25 A4 pages)
 - a. Methodology including the system diagram and you may use subsections as many as you need
 - b. Commercialization aspects of the product
 - xiv. Testing & Implementation Results & Discussion (10-15 A4 pages)
 - a. Results
 - b. Research Findings
 - c. Discussion
 - d. Summary of Each Student's contribution
 - xv. Conclusion (2-4 A4 pages)
 - xvi. References (2 onwards)
 - xvii. Glossary (if any-1-2 pages)
 - xviii. Appendices (no limit)

Document Size: Min 50 A4 Pages



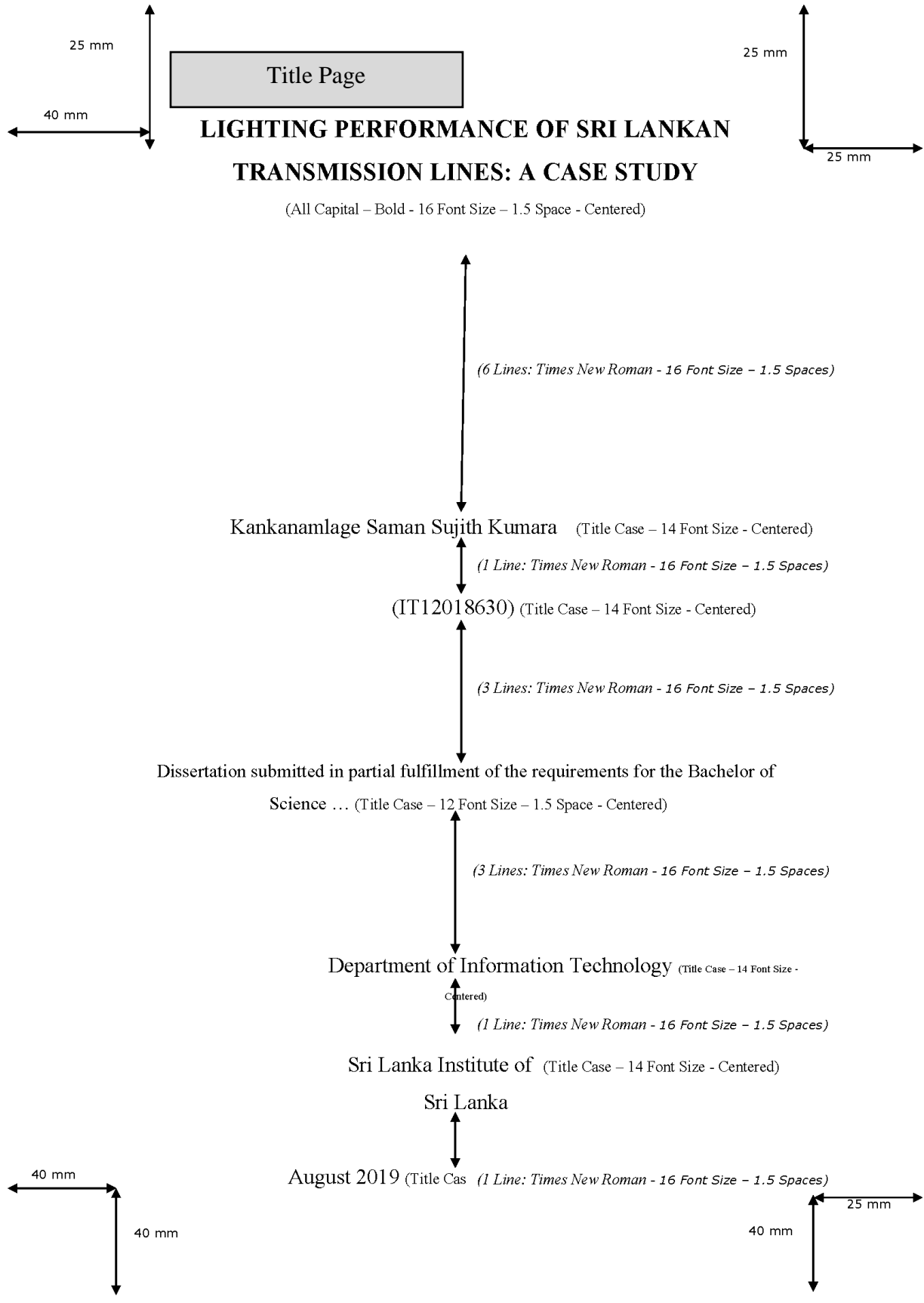


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