

# How to prepare a Technical report using L<sup>A</sup>T<sub>E</sub>X

*A Project Report*

*Submitted to the APJ Abdul Kalam Technological University  
in partial fulfillment of requirements for the award of degree*

***Bachelor of Technology***

*in*

***Electronics and Communication Engineering***

*by*

**batch member 1(batch member1 roll no)**

**batch member 2(batch member2 roll no)**

**batch member 3(batch member3 roll no)**

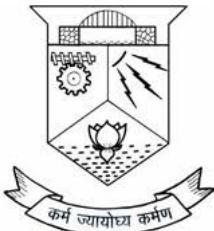
**batch member 4(batch member4 roll no)**



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
COLLEGE OF ENGINEERING TRIVANDRUM  
KERALA  
June 2021**

**DEPT. OF ELECTRONICS & COMMUNICATION ENGINEERING  
COLLEGE OF ENGINEERING TRIVANDRUM**

**2020 - 21**



**CERTIFICATE**

This is to certify that the report entitled **How to prepare a Technical report using L<sup>A</sup>T<sub>E</sub>X** submitted by **batch member 1** (batch member1 roll no), **batch member 2** (batch member2 roll no), **batch member 3** (batch member3 roll no) & **batch member 4** (batch member4 roll no) to the APJ Abdul Kalam Technological University in partial fulfillment of the B.Tech. degree in Electronics and Communication Engineering is a bonafide record of the project work carried out by him under our guidance and supervision. This report in any form has not been submitted to any other University or Institute for any purpose.

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## **DECLARATION**

We hereby declare that the project report **How to prepare a Technical report using L<sup>A</sup>T<sub>E</sub>X**, submitted for partial fulfillment of the requirements for the award of degree of Bachelor of Technology of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by us under supervision of Prof. Project guide

This submission represents our ideas in our own words and where ideas or words of others have been included, we have adequately and accurately cited and referenced the original sources.

We also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. We understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title of any other University.

Trivandrum

15-06-2021

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# Abstract

This document contains essential templates required to write technical reports using L<sup>A</sup>T<sub>E</sub>X. This template may be used for the preparation of B.Tech seminar reports of APJ Abdul Kalam Technological University, Kerala. Also minimum working examples to create equations, include figure, include table, table of contents symbols list and bibliographic citation in a L<sup>A</sup>T<sub>E</sub>X document are provided.

Please note that this template is provided without warranty on an AS IS basis.

*JIM*

# Acknowledgement

We take this opportunity to express my deepest sense of gratitude and sincere thanks to everyone who helped us to complete this work successfully. We express our sincere thanks to Dr. Head of Dept, Head of Department, Electronics and Communication Engineering, College of Engineering Trivandrum for providing us with all the necessary facilities and support.

We would like to express my sincere gratitude to the Prof. Project coordinator, department of Electronics and Communication Engineering, College of Engineering Trivandrum Trivandrum for the support and co-operation.

We would like to place on record my sincere gratitude to our project guide Prof. Project guide, Assistant Professor, Electronics and Communication Engineering, College of Engineering Trivandrum for the guidance and mentorship throughout this work.

Finally I thank my family, and friends who contributed to the successful fulfilment of this seminar work.

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# Contents

<b>Abstract</b>	<b>i</b>
<b>Acknowledgement</b>	<b>ii</b>
<b>List of Figures</b>	<b>iv</b>
<b>List of Tables</b>	<b>v</b>
<b>List of Symbols</b>	<b>vi</b>
<b>1 Introduction</b>	<b>1</b>
<b>2 Literature Review</b>	<b>2</b>
2.1 section1 . . . . .	3
2.1.1 title 2 . . . . .	3
<b>3 System Development</b>	<b>5</b>
3.1 section1 . . . . .	5
3.1.1 title 2 . . . . .	5
<b>4 Results and Discussion</b>	<b>7</b>
4.1 section1 . . . . .	7
4.1.1 title 2 . . . . .	7
<b>5 Conclusion</b>	<b>9</b>
<b>References</b>	<b>10</b>

# List of Figures

2.1	Autonomous System Hierarchy . . . . .	2
2.2	The Sine and Cosine waves . . . . .	4

# List of Tables

4.1 test table . . . . .	8
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# List of Symbols

$\Omega$  Unit of Resistance

$\epsilon'$  Real part of dielectric constant

c Speed of light

$\lambda$  Wavelength

$\delta$  Delta

# **Chapter 1**

## **Introduction**

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# Chapter 2

## Literature Review

Each chapter is to begin with a brief introduction (in 4 or 5 sentences) about its contents. The contents can then be presented below organised into sections and subsections.

Technical writing is writing or drafting technical communication used in technical and occupational fields [1], such as computer hardware and software [2], engineering, chemistry, aeronautics, robotics, finance [3], medical, consumer electronics, biotechnology, and forestry. Technical writing encompasses the largest sub-field in technical communication. See figure 2.1 that shows the autonomous systems in Internet.

The SAM V71 datasheet [4]

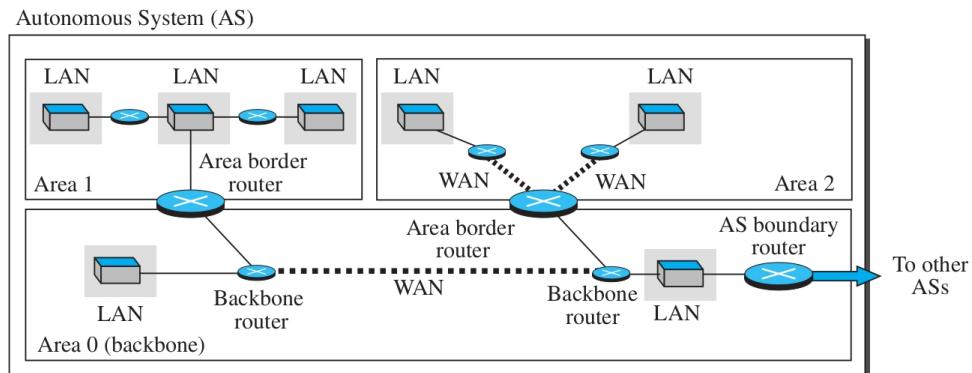


Figure 2.1: Autonomous System Hierarchy

## 2.1 section1

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### 2.1.1 title 2

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.

The system is described by the equation 2.1 below. Here y is the ordinate and x is the abscissa , m is the slope and c a constant.

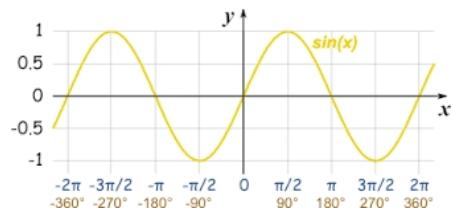
$$y = mx + c \quad (2.1)$$

Page centered and unnumbered multiple equations. The \* symbol supresses equation numbering.

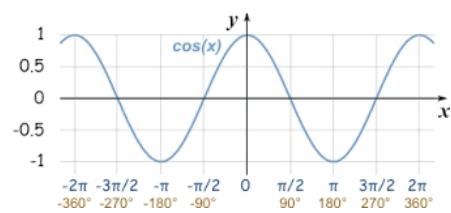
$$2x - 5y = 8$$

$$3x + 9y = -12$$

Side by side figures can be created using this environment. See fig 2.2 below.



(a) Sine Wave



(b) Cosine Wave

Figure 2.2: The Sine and Cosine waves

# **Chapter 3**

## **System Development**

Each chapter is to begin with a brief introduction (in 4 or 5 sentences) about its contents. The contents can then be presented below organised into sections and subsections.

### **3.1 section1**

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#### **3.1.1 title 2**

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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.

# **Chapter 4**

## **Results and Discussion**

Each chapter is to begin with a brief introduction (in 4 or 5 sentences) about its contents. The contents can then be presented below organised into sections and subsections.

### **4.1 section1**

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#### **4.1.1 title 2**

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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.

Table 4.1: test table

Sl. No	Item 1	Itm 2
1	37	45
2	42	23
3	47	1
4	52	-21
5	57	-43
6	62	-65
7	67	-87
8	72	-109
9	77	-131
10	82	-153

# **Chapter 5**

## **Conclusion**

Each chapter is to begin with a brief introduction (in 4 or 5 sentences) about its contents. The contents can then be presented below organised into sections and subsections.

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- [1] S. Ahmed, Z. Subah, and M. Z. Ali, “Cryptographic data security for iot healthcare in 5g and beyond networks,” in *2022 IEEE Sensors*. IEEE, 2022, pp. 1–4.
- [2] “Bsnl,” <https://portal.bsnl.in/myportal/>, accessed on 2021-01-21.
- [3] Y. C. Hu, M. Patel, D. Sabella, N. Sprecher, and V. Young, “Mobile edge computing—a key technology towards 5g,” *ETSI white paper*, vol. 11, no. 11, pp. 1–16, 2015.
- [4] “Sam v71,” <https://ww1.microchip.com/downloads/en/DeviceDoc/Atmel-44003-32-bit-Cortex-M7-Microcontroller-SAM-V71Q-SAM-V71N-SAM-V71J-Datasheet.pdf>, accessed on 2023-12-05.