

# Project Title

*A Project Preliminary Report*

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

*Bachelor of Technology*

*in*

*Electrical and Electronics 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 ELECTRICAL AND ELECTRONICS ENGINEERING  
CHRIST COLLEGE OF ENGINEERING  
IRINJALAKUDA  
December 2023**

# **CHRIST COLLEGE OF ENGINEERING**

## **VISION**

To be a premier institution that nurtures professionally competent and socially responsible engineers through quality technical education, research and training.

## **MISSION**

- Implement the best teaching-learning practices with qualified faculty and supportive infrastructure to impart knowledge in modern technology.
- Create a quality education system that encourages faculty and students to involve in meaningful research for the benefit of society.
- Inculcate leadership qualities, ethical values and foster the notion of lifelong learning in students.

## **DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

### **VISION**

To excel in fostering competent Electrical and Electronics engineering professionals with sound knowledge and practical skills for the social upliftment.

### **MISSION**

- To impart the excitement of modern technology and problem-solving skill among students through the development of an inspiring teaching-learning environment.
- To mould the young minds to provide cost-effective, innovative and sustainable solutions, for the challenges faced by the society, through fundamental research and training.
- To develop ethical values, leadership skills and life-long learning practices that leads the students to become responsible citizens.

### **Program Educational Objectives (PEO)**

1. Transform students into skilled professionals in Electrical and Electronics Engineering with strong foundation in Mathematics, Basic Science and Management.
2. Mould the students to achieve and excel in their engineering profession or higher studies.
3. Promote the students to emerge as an expert in Electrical and Electronics Engineering with excellent oral and written communication skills, ethical and human values, life-long learning capabilities and professionalism for the benefit of industry and society.

### **Program Specific Outcomes (PSO)**

1. Apply the fundamental knowledge of Mathematics, Science, Electrical and Electronics Engineering to identify, analyse and solve the real-life problems in Electrical, Electronics and allied interdisciplinary areas.
2. Provide techno-economic solutions to implement systems such as smart electricity distribution, renewable energy, electric drive and transportation.
3. Attain competence in developing, testing and implementing electrical and/or electronic systems by the effective use of relevant scientific and technological solutions

**DEPT. OF ELECTRICAL & ELECTRONICS CHRIST COLLEGE OF  
ENGINEERING IRINJALAKUDA**

**2023 - 24**



**CERTIFICATE**

This is to certify that the report entitled **Project Title** 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 Electrical and Electronics Engineering is a bonafide record of the project preliminary 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 preliminary project report **Project Title** , 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 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.

Irinjalakuda

15-12-2023

**Batch member 1**

**batch member 2**

**batch member 3**

**batch member 4**

# Abstract

This document contains essential templates required to write technical reports using  $\text{\LaTeX}$ . 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  $\text{\LaTeX}$  document are provided.

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

# 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. Ravisankar A N, Head of Department, Electrical and Electronics Engineering , Christ College of Engineering for providing us with all the necessary facilities and support.

We would like to express my sincere gratitude to the Dr. M Nandakumar and Dr. Vishnu P Madhanmohan, Department of Electrical and Electronics Engineering , Christ College of Engineering Irinjalakuda for the support and co-operation.

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

Finally I thank my family, and friends who contributed to the succesful fulfilment of this project preliminary work.

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**batch member 3**

**batch member 4**



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# List of Symbols

$\Omega$  Unit of Resistance

$\varepsilon'$  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.

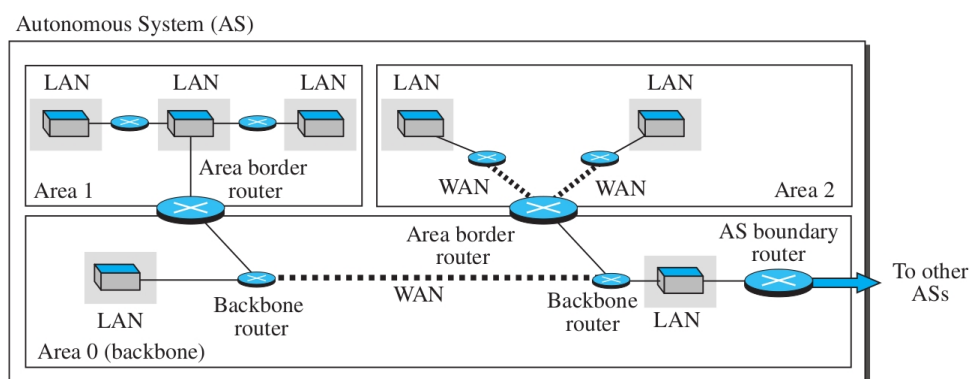


Figure 2.1: Autonomous System Hierarchy

### 2.1 section1

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### 2.1.1 title 2

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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.

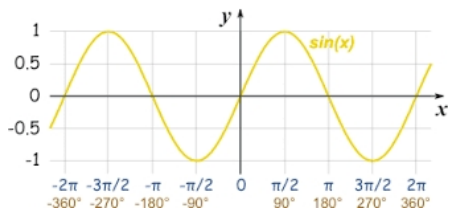
$$y = mx + c \tag{2.1}$$

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

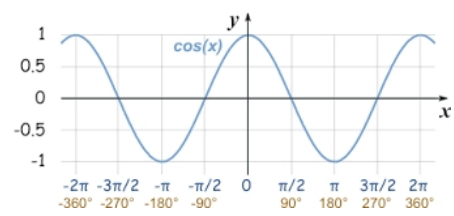
$$2x - 5y = 8$$

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

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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# References

- [1] HU, Yun Chao, et al., *Mobile edge computing?A key technology towards 5G*, ETSI white paper, 2015, vol. 11, no 11, p. 1-16.
- [2] @online Raspberry pi, <https://www.raspberrypi.org/> Online; accessed 10-June-2019
- [3] HU, Yun Chao, et al., *Mobile edge computing?A key technology towards 5G*, ETSI white paper, 2015, vol. 11, no 11, p. 1-16.