A MAJOR PROJECT
Stage - II Report
on

Your Document Title - Title of the project

Submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD (JNTUH)

by

(BATCH: XX)

Student 1 Name	217Y1A05XX
Student 2 Name	217Y1A05YY

in partial fulfilment of the requirements for the Award of the Degree
of

BACHELOR OF TECHNOLOGY
in

[BRANCH NAME]

Under the Guidance of
[Guide Name]
[Position]

DEPARTMENT OF [BRANCH NAME]

MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY & MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
NAAC Accredited Institution with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

April, 2025

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Date: 04-04-2024

CERTIFICATE

This is to certify that the major project work entitled ***Your Document Title - Title of the project*** was carried out by Student 1 Name (217Y1A05XX) and Student 2 Name (217Y1A05YY), bona fide students of **Marri Laxman Reddy Institute of Technology and Management, Hyderabad**. This work was carried out in partial fulfillment of the requirements for the degree of **Bachelor of Technology** in **[Branch Name]** awarded by **Jawaharlal Nehru Technological University, Hyderabad (JNTUH)** during the year 2024–2025 under the guidance of **[Guide Name]**, *[Position]*.The major project report has been approved as it meets the academic requirements in respect of major project work prescribed by the institution for the said degree.

The results presented in this project report have not been submitted by us to any other university for the award of a degree.

1. Student 1 Name 2. Student 2 Name

This is to certify that the above statement made by the candidate(s) is correct to the best of my knowledge.

Supervisor: Date: _____

Guide	*Head of Department*	*Principal*
[Guide Name]	**[HOD Name]**	**[Principal Name]**

External Viva

Name of Examiners Signature with Date

Acknowledgment

I/we would like to express my/our sincere gratitude to my/our guide **[Guide Name], [Position], [Department Name]**, for his/her excellent guidance and invaluable support, which helped me/us accomplish the B.Tech degree and prepared me/us to achieve more life goals in the future. His/her total support of my/our dissertation and countless contributions to my/our technical and professional development made for a truly enjoyable and fruitful experience. Special thanks are dedicated for the discussions we had during my/our project period and for reviewing my/our dissertation.

I/we am/are very much grateful to my/our Project Coordinator, **[Supervisor/Coordinator Name], [Supervisor Designation], [Department Name]**, MLRITM, Dundigal, Hyderabad, who has not only shown utmost patience, but was fertile in suggestions, vigilant in directions of error and has been infinitely helpful.

I/we am/are extremely grateful to **[HOD Name], Head of Department, [Department Name]**, MLRITM, Dundigal, Hyderabad, for the moral support and encouragement given in completing my/our project work.

I/we wish to express deepest gratitude and thanks to **[Principal Name], Principal, and [Director Name], Director** for their constant support and encouragement in providing all the facilities in the college to complete the project work.

I/we would also like to thank all our faculties, administrative staff and management of MLRITM, who helped me/us to complete the project.

On a more personal note, I/we thank my/our **beloved parents and friends** for their moral support during the course of our project.

This acknowledgement is for your reference. You can write your own acknowledgement.

(Sentences/words may change depending on individual copy and department copy)

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DECLARATION

I hereby declare that the major project report entitled ***Your Document Title - Title of the project*** is bona fide work duly completed by me. It does not contain any part of the report or thesis submitted by any other candidate to this or any other institute of the university.

All such materials that have been obtained from other sources have been duly acknowledged.

Student 1 Name
(Regd. No. **217Y1A05XX**)

Student 2 Name
(Regd. No. **217Y1A05YY**)

Abstract

This section should provide a concise summary of your entire document. The abstract should clearly state the purpose, methodology, key findings, and conclusions of your research. It should be approximately 150-250 words and stand alone as a complete description of your work. The abstract is typically the last section written but appears at the beginning of the document.

Contents

List of Figures

List of Tables

List of Algorithms

List of Code

Chapter 1

Introduction

The introduction should provide background information on your topic, explain the significance of your research, and clearly state your research question or objective. This chapter should also outline the structure of the document and briefly summarize each subsequent chapter.

Times New Roman font is used for the text in this document, and the font size is set to 12pt. The line spacing is set to 1.5 for better readability.

1.1 Background

This section should provide context for your research, explaining fundamental concepts necessary for understanding your work.

1.2 Motivation

Explain why your research topic is important and what gap in knowledge it addresses.

1.3 Problem Statement

Clearly articulate the specific problem or question your research aims to address.

1.4 Outline of the Report

Provide a brief overview of the structure of your document, summarizing the content of each chapter.

Chapter 2

Literature Review

This chapter should synthesize existing research relevant to your topic. Analyze the current state of knowledge, identify gaps, and position your research within the existing literature.

2.1 Overview of Existing Work

Summarize key research papers, books, and other sources related to your topic.

2.2 Current Trends

Discuss recent developments and emerging trends in your research area.

2.3 Research Gaps

Identify limitations or gaps in existing research that your work aims to address.

Chapter 3

Theoretical Framework

Present the theoretical foundation of your research, including relevant models, equations, algorithms, or principles.

3.1 Key Concepts

Define and explain the fundamental concepts central to your research.

3.2 Mathematical Formulation

Present any relevant mathematical formulations, theorems, or proofs.

3.3 Algorithms

This section presents the algorithms used in this research.

Algorithm 1 demonstrates a basic search algorithm. This example shows how to properly format and include algorithms in your document.

3.3.1 Algorithm Complexity Analysis

When analyzing the time complexity of Algorithm 1, we find that binary search operates in $O(\log n)$ time, where n is the number of elements in the sorted array. This is because each comparison eliminates approximately half of the remaining elements.

Algorithm 1 Binary Search Algorithm

```
1: procedure BINARYSEARCH(A, n, x)
2:     low ← 1
3:     high ← n
4:     while low ≤ high do
5:         mid ← low + ⌊(high − low)/2⌋          ▷ Avoid integer overflow
6:         if A[mid] < x then
7:             low ← mid + 1
8:         else if A[mid] > x then
9:             high ← mid − 1
10:        else
11:            return mid
12:        end if
13:    end while
14:    return −1
15: end procedure
```

3.3.2 Pseudocode Formatting Tips

When writing algorithms:

- Use consistent indentation
- Number each line for easy reference with `algorithmic[1]`
- Include proper comments for complex steps
- Clearly define inputs and outputs of procedures

Figure 3.1 illustrates a key concept of this research. As shown in the figure, important relationships between variables can be visualized. As shown in Figure 3.2, the following diagram illustrates the relationship between key variables.

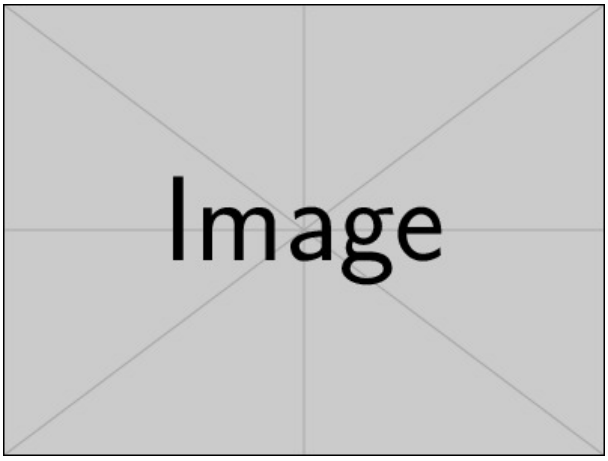

Figure 3.1: Detailed caption explaining the sample figure. The short caption appears in the list of figures.

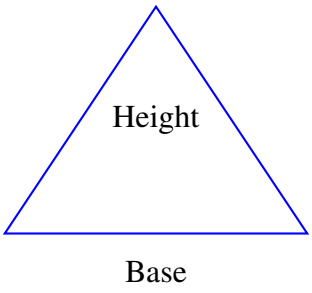

Figure 3.2: Detailed caption explaining the TikZ-drawn figure. The short caption appears in the list of figures.

3.4 Example Implementation

Listing 3.1 demonstrates a Python function implementation that doubles its input parameter. This code sample illustrates how to include formatted code in your document with syntax highlighting.

```python
def example_function(parameter):
    """
    This is a sample function to demonstrate code inclusion.
   It takes a parameter and returns its double.
    :param parameter: The input value to be doubled.
    """
    result = parameter * 2
    return result

# Example usage
value = 42
print(f"The result is: {example_function(value)}")
```

Listing 3.1: Example Python Code

The following code example demonstrates how to include code in your document using the `minted` package. This package provides syntax highlighting for various programming languages. Refer to Listing 3.2 for an example of Python code included using the `minted` package.

```python
def example_function(parameter):
    """
    This is a sample function to demonstrate code inclusion.
    ↪ It takes a parameter and returns its double.
    :param parameter: The input value to be doubled.
    """
    result = parameter * 2
    return result
```

Listing 3.2: **Sample Python Code**

You can just write the code in the text without listing in document, this do not use listing, just write the code in the text. This is useful for small code snippets or examples that do not require a full listing format. For example, you can write a simple function in JavaScript like this:

```javascript
function calculateFactorial(n) {
    // Base case: factorial of 0 or 1 is 1
    if (n === 0 || n === 1) {
        return 1;
    }

    // Recursive case: n * factorial of (n - 1)
    return n * calculateFactorial(n - 1);
}

// Example usage of the calculateFactorial function
const number = 5; // Number to calculate the factorial of
const factorial = calculateFactorial(number); // Perform the
↪ calculation

// Output the result
console.log(`The factorial of ${number} is ${factorial}`);
```

3.4.1 Example Equations

Below are sample equations formatted in LaTeX:

The quadratic formula $ax^2 + bx + c = 0$ has the solution $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$.

$$E = mc^2 \tag{3.1}$$

$$(a+b)^2 = a^2 + 2ab + b^2 \tag{3.2}$$

$$(a-b)^2 = a^2 - 2ab + b^2 \tag{3.3}$$

Chapter 4

Methodology

Describe your research approach, methods, experimental setup, and data collection procedures.

4.1 Research Approach

Explain the overall approach or strategy you used in your research.

4.2 Experimental Setup

Describe the equipment, materials, or software used in your research.

4.3 Data Collection

Explain how you collected data, including any sampling strategies or selection criteria.

4.4 Analysis Methods

Describe the statistical techniques or analytical methods you used to process and interpret your data.

Chapter 5

Results and Discussion

Present your findings and interpret them in the context of your research question and existing literature.

5.1 Key Findings

Describe the main results of your research, supported by data, figures, or tables.

Table 5.1 presents the sample data collected during the experiment.

Table 5.1: Sample Table Format

Column 1	Column 2	Column 3
Row 1, Cell 1	Row 1, Cell 2	Row 1, Cell 3
Row 2, Cell 1	Row 2, Cell 2	Row 2, Cell 3
Row 3, Cell 1	Row 3, Cell 2	Row 3, Cell 3

5.2 Discussion

Interpret your findings, explain their significance, and discuss how they relate to existing research.

5.3 Limitations

Acknowledge any limitations or constraints in your research methodology or findings.

Chapter 6

Conclusion and Future Work

Summarize the key findings, contributions, and implications of your research, and suggest directions for future investigation.

6.1 Summary of Contributions

Highlight the main contributions or advancements your research has made to the field.

6.2 Future Research Directions

Propose potential areas for future research that build upon your findings or address limitations.

6.3 Final Remarks

Offer final insights or reflections on the significance of your research. As discussed in [1], the topic is highly relevant. Refer to [2] for more details.

References

[1] Author, A., & Co-Author, B. (2023). *Title of the article or paper*. Journal Name, Volume(Issue), Page range. https://doi.org/10.1000/sample

[2] Author, C. (2022). *Title of the Book*. Publisher Name.

[3] Organization Name. (2023). *Title of the webpage*. Retrieved Month Day, Year, from `https://www.example.com/page`

Appendix A

Appendix Title

This section contains supplementary material that would disrupt the flow of the main text but is still relevant to the research.