**A**

**MINI PROJECT REPORT**

**ON**

**“SEISMIC ANALYSIS OF G+4 BUILDING USING ETABS”**

**Submitted in partial fulfilment of the requirements for the award of degree**

**BACHELOR OF TECHNOLOGY**

**IN**

**CIVIL ENGINEERING**

**BY**

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Under the guidance of

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**JNTUH UNIVERSITY COLLEGE OF ENGINEERING SULTANPUR**

Sultanpur (V), Pulkal (M), Sangareddy (D)-502273, Telangana

2020-2024

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**CERTIFICATE**

This is to certify that the project report entitled “**SEISMIC ANALYSIS OF G+4 building using ETABS**” Submitted by **KAMALLA PRASANNA TEJA (20SS1A0128)** in the partial fulfilment of the requirements for the award of degree of Bachelor of Technology in Civil Engineering for the year 2020-2024 is an authentic work carried out by her under my supervision and guidance.

**Mr. AVINASH JOSHI Dr. M. PADMAVATHI**

**Internal Guide Head of the department**

**EXTRNAL EXAMINER**

i

## DECLARATION

I hereby declare that project work entitled with

“**SEISMIC ANALYSIS OF G+4 BUILDING USING ETABS”** submitted by me in the department of Civil Engineering, JNTUH College of Engineering, Sultanpur in partial fulfilment of degree for the award of **Bachelor of Technology** in **Civil Engineering** is a bonafide work, carried out by me under the supervision of AVINASH JOSHI, Assistant Professor(C), Department of Civil Engineering, JNTUHCES.

Also, I declare that the matter embedded in this report has not been submitted by me in full or partial thereof for the award of any degree/diploma of any other university or institution previously.

**KAMALLA PRASANNA TEJA (20SS1A0128)**

ii

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iii

# ABSTRACT

ETABS stands for Extended Three-Dimensional Analysis of Building Systems. The

main purpose of this software is to design multistoried building in a systematic process. The effective design and construction of an earthquake resistant structures have great importance all over the world. This project presents multi-storey residential building analyzed and designed with lateral loading effect of earthquake using ETABS. This project is designed as per INDIAN CODES- IS 1893- part2:2002, IS 456:200 Every structural engineer should design a building with most efficient planning and also be economical. They should ensure that it is serviceable, habitable in healthy environment for its occupants and have longer design period. Structurally robust an aesthetically pleasing building are being constructed by combining the best properties of any construction material and at the same time meeting specific requirements like type of building and its loads, soil condition, time, flexibility and economy. In the view of above, the high-rise buildings are best suited solution. ETABS, a comprehensive structural analysis and design software, offers an efficient and precise approach for engineers architects. It allows 3D modeling, ensuring a thorough representation of the structure.it provides the capability to assess the buildings response to various loads.

This paper discusses the analysis of a residential building (G+4) located at Hyderabad under effect of Seismic forces. Maximum storey displacements, storey shears, and storey drifts was observed.

**Key words:**

Seismic Analysis, Lateral loading effect of earthquake, Maximum storey displacement

Storey shear, Storey drift.

iv

**INDEX**

|  |  |
| --- | --- |
| **CONTENTS** | PG.NO |
| **CHAPTER 1**  INTRODUCTION   * 1. General   2. History   3. Basic codes of design   4. objectives | 1  1  2  3 |
| **CHAPTER 2**  LITERATURE REVIEW | 4 |
| **CHAPTER 3**  METHODOLOGY  3.1 Basic data of multistorey  3.2 Foundation of structure  3.3 Equivalent static method | 6  9  10 |
| **CHAPTER 4**  PROCEDURE | 15 |
| **CHAPTER 5**  RESULTS AND ANALYSIS | 23 |
| **CHAPTER 6**  CONCLUSION | 29 |
| **CHAPTER 7**  REFERENCES | 30 |

v