

A PROJECT REPORT ON
DESIGN AND FABRICATION OF MULTI DIRECTIONAL
ELEVATOR

A project report Submitted in partial fulfilment of the requirement for the award of
the
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CERTIFICATE

This is to certify that the project work entitled "**DESIGN AND FABRICATION OF MULTI DIRECTIONAL ELEVATOR**" is a bonafied record of work carried out by K. MOHAN DURGA PRASAD (21815A0351), T. SAI MANIKANTA (21815A0344), MD. JAFAR SIDDIK (21815A0357), N. SANJAY (21815A0358), K. BHANU PRAKASH (20Q71A0381) in partial fulfilment of the requirement for the award of Bachelor of Technology in MECHANICAL ENGINEERING by Jawaharlal Nehru Technological University, Gurajada Vizianagaram. During the year 2023-2024.

The results embodied in this project work have not been submitted to any other university or institute for the award of any degree.

PROJECT GUIDE

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ABSTRACT

DESIGN AND FABRICATION OF MULTI DIRECTIONAL ELEVATOR

This multi directional elevator system is a conceptual working model. This elevator could move both in vertical and horizontal direction on exterior elevation of a multi stored building. This system is completely independent of main building and have an access to reach any location on front elevation of the building. Apart from public transportation it can be used in emergency situations for safe evacuation and quick rescue operations in case of fire or blocking of passageway by attackers.

This system works on H bot mechanism with linear guide rails and belt drive. Elevator is powered by two high torque stepper motors and source of power is 12V dc, independent from main power. Motor position is precisely controlled by mother board which consists of stepper driver module, ramps1.4 board and Arduino nano micro controller. The software code is written in embedded C and upload into microcontroller.

Elevator position is controlled by key pad in normal operation and also by joy stick in case of emergency or material lifting to a particular location.

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