SETHU INSTITUTE OF TECHNOLOGY

INVISIBLE EXOSKELETON FOR PERFECT PERCH

ABSTRACT

- When standing occurs continually over prolonged periods, it can result in inflammation of the veins. This inflammation may progress over time to chronic and painful varicose veins.
- So this device will be made in a way that it will be attached on the back of our bending posture of legs.
- It is attached in the way that the position is comfy while sitting without a chair. It just gives the balanced position for body to sit. To reduce the problems related to leg pain. The main objective of our idea it to sit whenever you feel tired.

INTRODUCTION

- Prolonged standing effectively reduces the blood supply to the muscles resulting in the acceleration of the onset of fatigue and causes pain in the muscles.
- Therefore, we designed the contraption that is secured with belts at the hips and another pair of straps binds it securely to the legs.
- Here, a general concept of the human- exoskeleton compatibility and interaction control is addressed.
- To overcome decline of their activity leads to strengthen the humans in the future.

PROBLEM IDENTIFICATION

- A person's body is affected by the arrangement of the work area and by the tasks that he or she does while standing.
- As a result, the worker has fewer body positions to choose from, and the positions themselves are more rigid.
- Lack of flexibility in choosing body positions contributes to health problems.
- The lack of mobility in elderly subjects may be responsible for the observed sub-optimal postural changes.

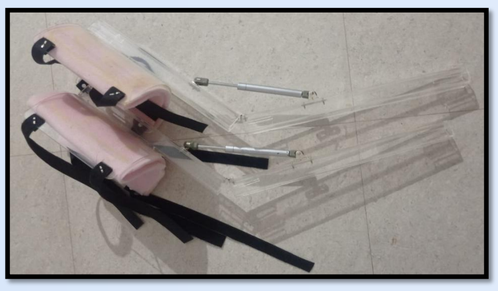
METHODOLOGY

- The methodology involves a combination of biomechanics and engineering principles.
- The device is designed to distribute the user's weight evenly across their body, using a combination of straps, supports, and hinges.
- Based on this analysis, we can then design the chair less chair to provide the necessary support and stability for the user.
- This may involve working with human subjects to assess the device's effectiveness and make any necessary adjustments.

MATERIALS REQUIRED

S.IN	MATERIALS	PRICE
1	Acrylic, fiberglass	6*4 feet at 600/-
2	Hydraulic gas strut	445/- (pair)
3	Hinges	50/-
4	Screws and nuts	55/- kg
5	Cuffs and foams	180/-
6	Straps and buckles	200/-
7	Foot bush	50/-

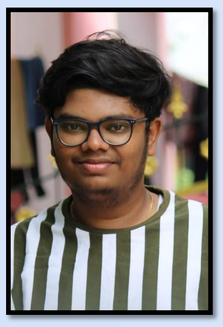
PRODUCT



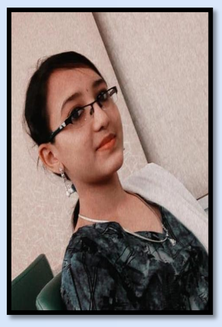
MENTOR

Dr. MAHESWARAN. E
Associate professor/ BME

TEAM MEMBERS:

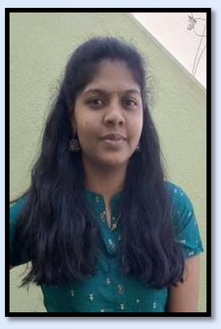


ALAN JUDAH ELROY. T
2020111007



HASMITHA.M . N
2020111023

MEERASRI. K. S
20202111032



NAGA SUVEATHA. N
2020111037