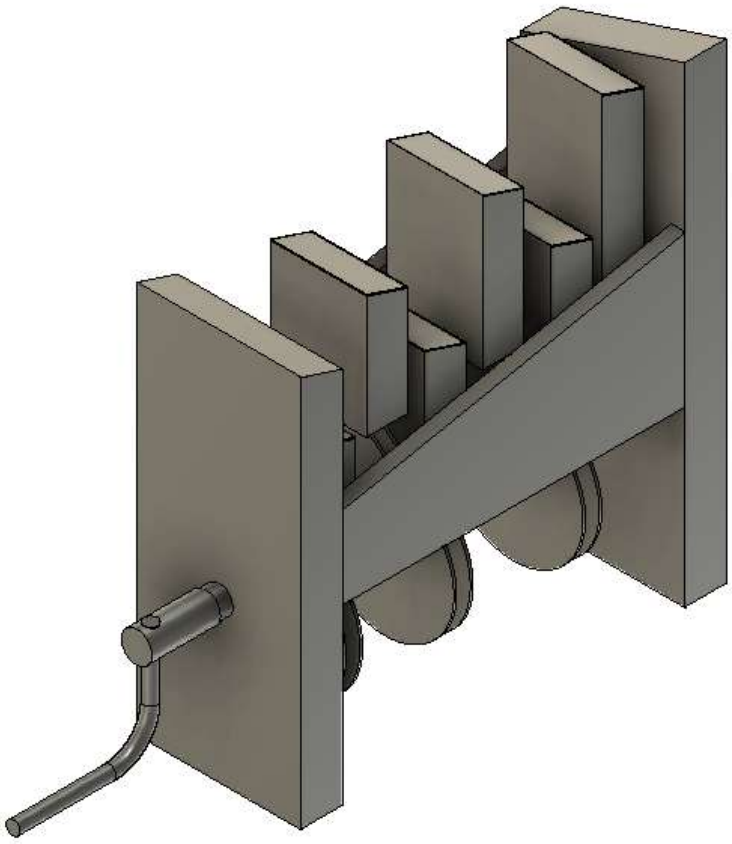
TA201A PROJECT REPORT

OBJECT LIFTING MECHANISM



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ACKNOWLEDGMENT

We desire to convey our sincere gratitude towards our tutor in charge, Mr. Ashish, along with the TAs, Ms. Swastika, and Mr. Praveen, for their virtuous support and guidance, which was highly instrumental to our success in completing the project.

We also deeply acknowledge the contributions of the esteemed laboratory team members, but for them, flaws in our project could not have been rectified timely.

We sincerely extend our vote of thanks to our tutor Dr. Rajdip Mukherjee, for his valuable suggestions, motivation, and indebted support, which was critical for the smooth conduction of our project sessions. Finally, we thank our course instructor Dr. Nilesh for introducing us to the Manufacturing world and
providing us with a chance to hone our practical and hands-on activity skills. The teaching has helped us in developing strong fundamentals of manufacturing processes.

MOTIVATION AND INTRODUCTION

Man's physical power has a threshold limit but not his mind. The wheel was originally invented just to transport heavy objects from one place to other. Gradually the need to lift the heavy objects gave rise to pulley systems. Over the period many such mechanisms were developed to lift the heavy objects easily and efficiently. One of the efficient mechanisms is demonstrated by our project: OBJECT LIFTING MECHANISM.

Boxes of different heights rests on the discs attached to the shaft. The Discs are so attached when the handle is rotated, alternative boxes show opposite vertical motion. While one box rises the next one descends and when the inclined surfaces of these adjacent boxes come to the same the height the object is transferred to the adjacent box of higher height by the virtue of the gravity. This motion continues until the object is reached to the box with maximum height.

Our project's mechanism sees multiple applications in the heavy industries to lift up heavy products where human labour is inefficient and costly.

Part List

S.no	Part Name	Qty.	Material/Description	Process
1	Handle	1	3 Metal Sheet Round Rod (dia*10mm, length=63mm) 1 Metal sheet Round Rod (dia=22 length=70mm)	Welding, Object Fabrication
2	Plate 1	1	Metal Steel Sheet (area = 895.76 cm^2)	Brazing, Sheet metal
3	Plate 2	1	Metal Steel Sheet (area = 1044.75cm^2)	Brazing, Sheet metal
4	Cylindrical Rod	1	Metal Sheet Round Rod (dia*20 mm, length=125mm)	Object Fabrication
5	Disc(with cavity)	12	Mild Steel Disc (dia*100mm)	Sheet metal, welding
6	Box	6	Mild Steel Sheet (Area=200cm^2)	Sheet Metal, welding
7	Sideplate	2	Mild Steel Sheet(Area = 212cm^2)	Sheet Metal,brazing

Work Distribution

Member	Week1	Week2	Week3
Mihir			
Milan			
Hamza			
Mohit			
Mrigank			
Mudit			
Mukul			
Naman			

Member	Week4	Week5	Week6
Mihir			
Milan			
Hamza			
Mohit			
Mrigank			
Mudit			
Mukul			
Naman