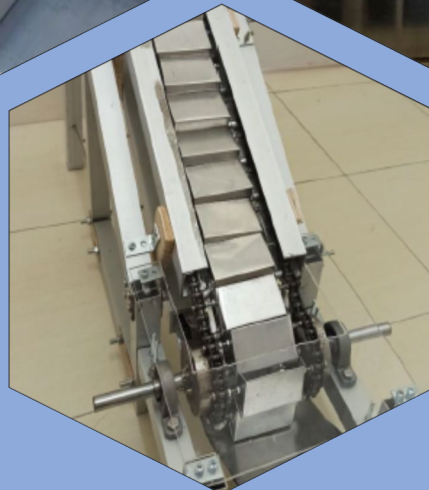
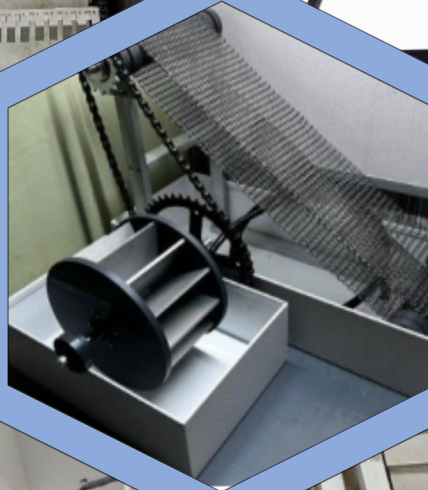


PROTOTYPE DESIGN COLLECTION

SERIES 1



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CHAPTER 44

Automatic Laptop Stand

Amirul Haziq Roselin and Noor Hafiz Noordin

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PROJECT DESCRIPTION

Working from home, office, or on the go necessitates the use of a laptop. However, while laptops provide flexibility in terms of working location, their design does not make them an ergonomic choice for lengthy periods of time. A laptop stand can assist in fixing laptop ergonomic issues. It is one of the most affordable and straightforward ways to safeguard your health and improve your quality of life. Based on the survey that has been conducted, a few problems of current laptop stands faced by consumers are risk of injuries, space-consuming, and lack of flexibility. The objectives of this project are to design and fabricate an automatic laptop stand with adjustable height and to design and fabricate an ergonomic laptop stand that is portable. The project method will cover basic electrical systems and strength of the material, designing, and analysis will be done using an application called Solidwork, and the fabrication process will involve welding, folding, cutting, and soldering. The significance of this product is the capability of setting the heights of the laptop based on consumer's preferences, powered by motor and alkaline batteries, and the design is minimalist yet able to provide comfort to users.

Keywords: *Laptop, Ergonomic, Stand, Automatic, Portable*

PROTOTYPE



DESIGN PARAMETER

NAME : AMIRUL HAZIQ BIN ROSELIN
STUDENT ID: 2019438248
GROUP: J4EM1104E
TITLE : ASSEMBLY DRAWING
SCALE: 1:5
SHEET 1 OF 1

ITEM NO.	PART NUMBER	QTY.
1	Stand Base	1
2	DC Motor	1
3	Metal Joint	1
4	M12 x 1.5 x 10 Bolt	1
5	Stand Cover 2	1
6	lifting part	1
7	Laptop Base	1
8	Mini Drawer Slides	1
9	AA-Batteries	3
10	DPDT Button	1
11	Battery Cover	1
12	B18.2.3.2M - Formed hex screw, M12 x 1.75 x 100 -- 100CS	1
13	DIY Nut	1

NAME : AMIRUL HAZIQ BIN ROSELIN
STUDENT ID: 2019438248
GROUP: J4EM1104E
TITLE : EXPLODED DRAWING
SCALE: 1:5
SHEET 1 OF 1