

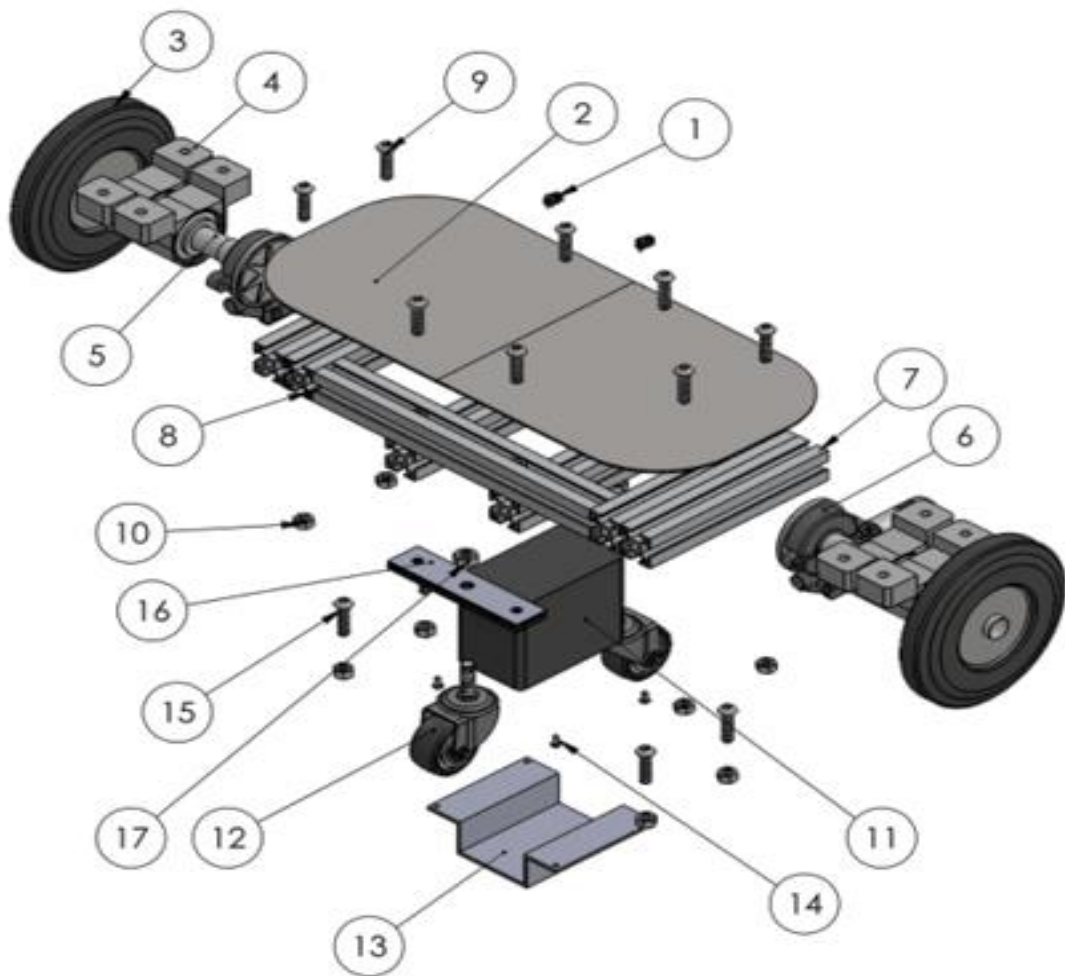
PROTOTYPE DESIGN COLLECTION

SERIES 2



Prototype Design Collection

Series 2



AHMAD NAJMIE RUSLI

UNIVERSITI TEKNOLOGI MARA CAWANGAN JOHOR
KAMPUS PASIR GUDANG

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FOREWORD

This digital book on Prototype Design Collection Series 2 (PDC Series 2) is published as a reference design for mechanical engineering students. The designs presented experience a few phases of analysis before fabrication of prototype. Each project summarises the project description, prototype, figures, and design parameter. The design products vary in tools or equipment for household, workshop, entrepreneur, etc. Suggested material and detail of prototype dimension are also mentioned in this book.

It is hoped that this book will assist the students to have more ideas on innovation design products in the future.

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CHAPTER 102

Automatic Spinning Underclothing Hanger

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PROJECT DESCRIPTION

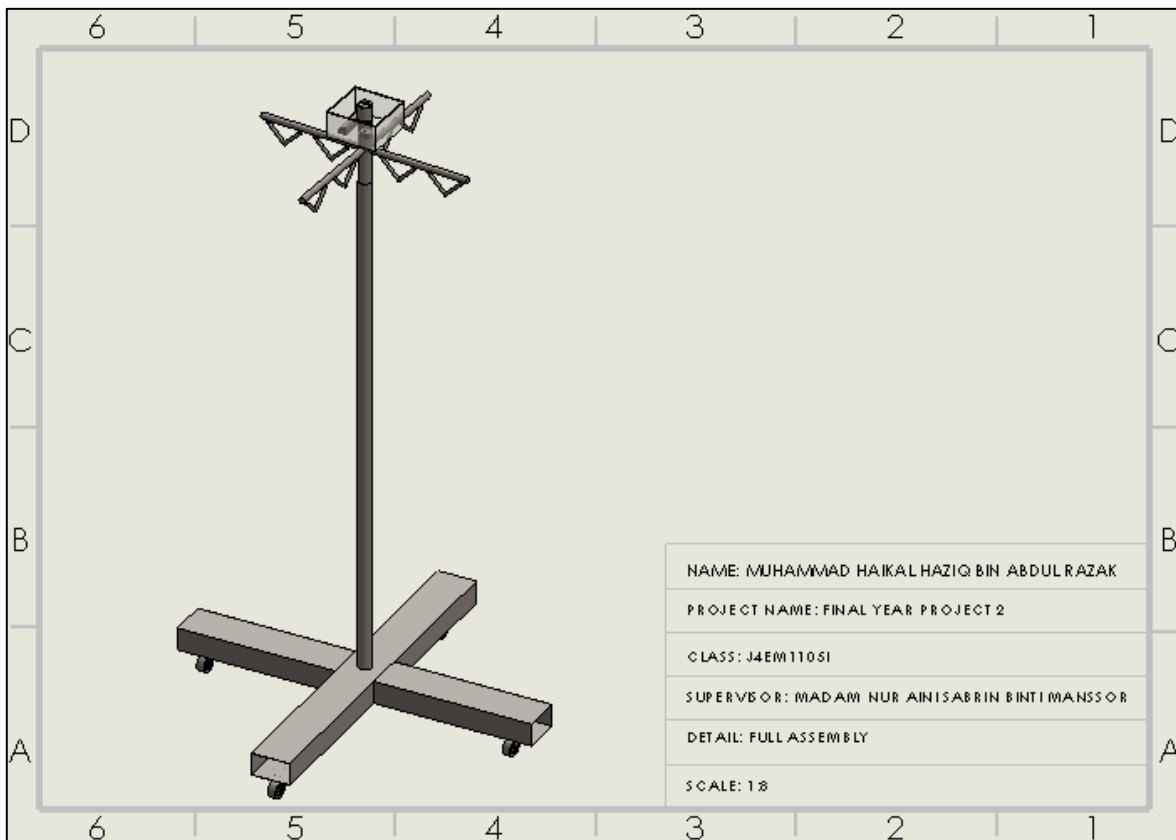
Indoor drying of underclothes is a common practice among individuals, often hindered by the absence of sunlight. Relying solely on natural wind currents inside the house proves unreliable. To address this issue, the project aims to develop a motorized spinning hanger that improves the functionality of existing underclothing hangers. The project focuses on designing and fabricating a solution specifically tailored to meet the needs of individuals in Malaysia. Considerations include factors such as the average height of people in Malaysia, ensuring user-friendly usability. The fabrication process involves various machining techniques, including welding, turning, boring, and others. The implemented design significantly reduces underclothes drying time indoors, offering a faster and more efficient solution to users.

Keywords: *Motorized spinning hanger, Indoor underclothes drying, Design and fabrication*

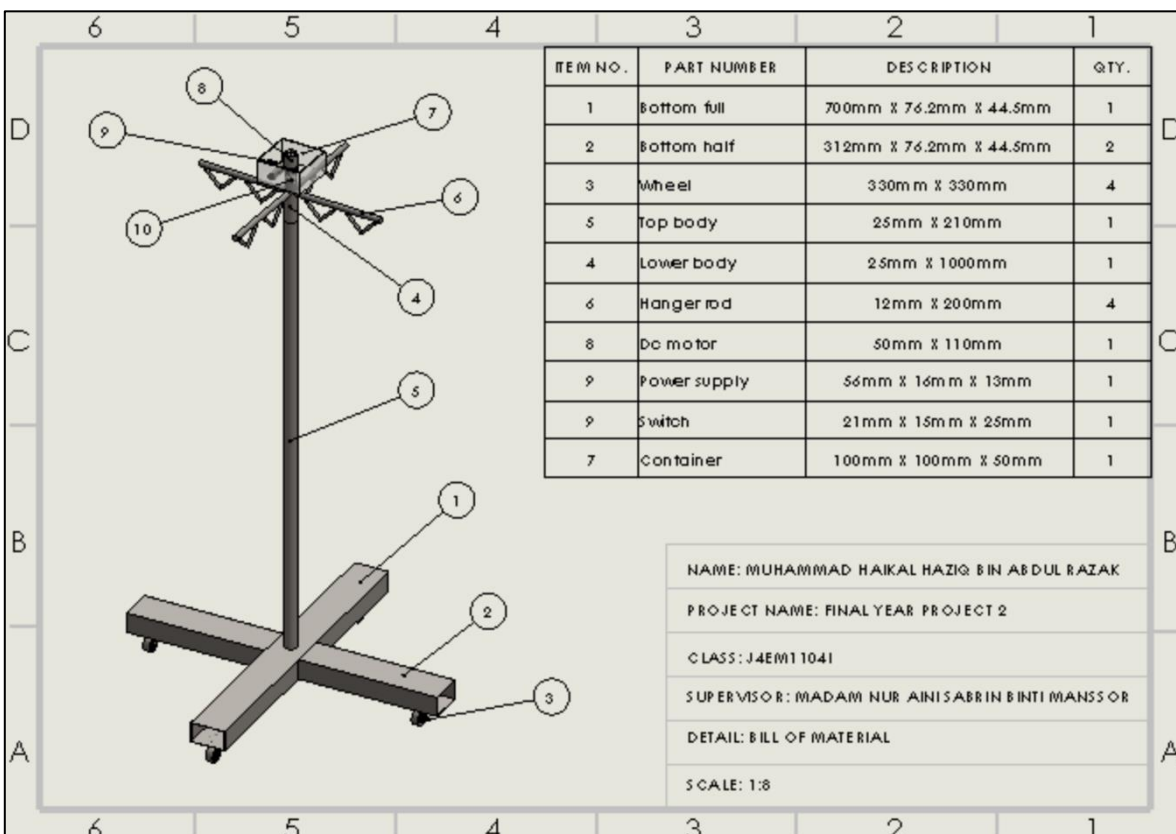
PROTOTYPE



DESIGN PARAMETER



NAME: MUHAMMAD HAIKAL HAZIQ BIN ABDULRAZAK
PROJECT NAME: FINAL YEAR PROJECT 2
CLASS: J4EM11051
SUPERVISOR: MADAM NUR ANISABRIN BINTI MANSOR
DETAIL: FULL ASSEMBLY
SCALE: 1:8



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Bottom full	700mm X 76.2mm X 44.5mm	1
2	Bottom half	312mm X 76.2mm X 44.5mm	2
3	Wheel	330mm X 330mm	4
5	Top body	25mm X 210mm	1
4	Lower body	25mm X 1000mm	1
6	Hanger rod	12mm X 200mm	4
8	Dc motor	50mm X 110mm	1
9	Power supply	56mm X 16mm X 13mm	1
9	Switch	21mm X 15mm X 25mm	1
7	Container	100mm X 100mm X 50mm	1

NAME: MUHAMMAD HAIKAL HAZIQ BIN ABDULRAZAK
PROJECT NAME: FINAL YEAR PROJECT 2
CLASS: J4EM11041
SUPERVISOR: MADAM NUR ANISABRIN BINTI MANSOR
DETAIL: BILL OF MATERIAL
SCALE: 1:8