

PROTOTYPE DESIGN COLLECTION

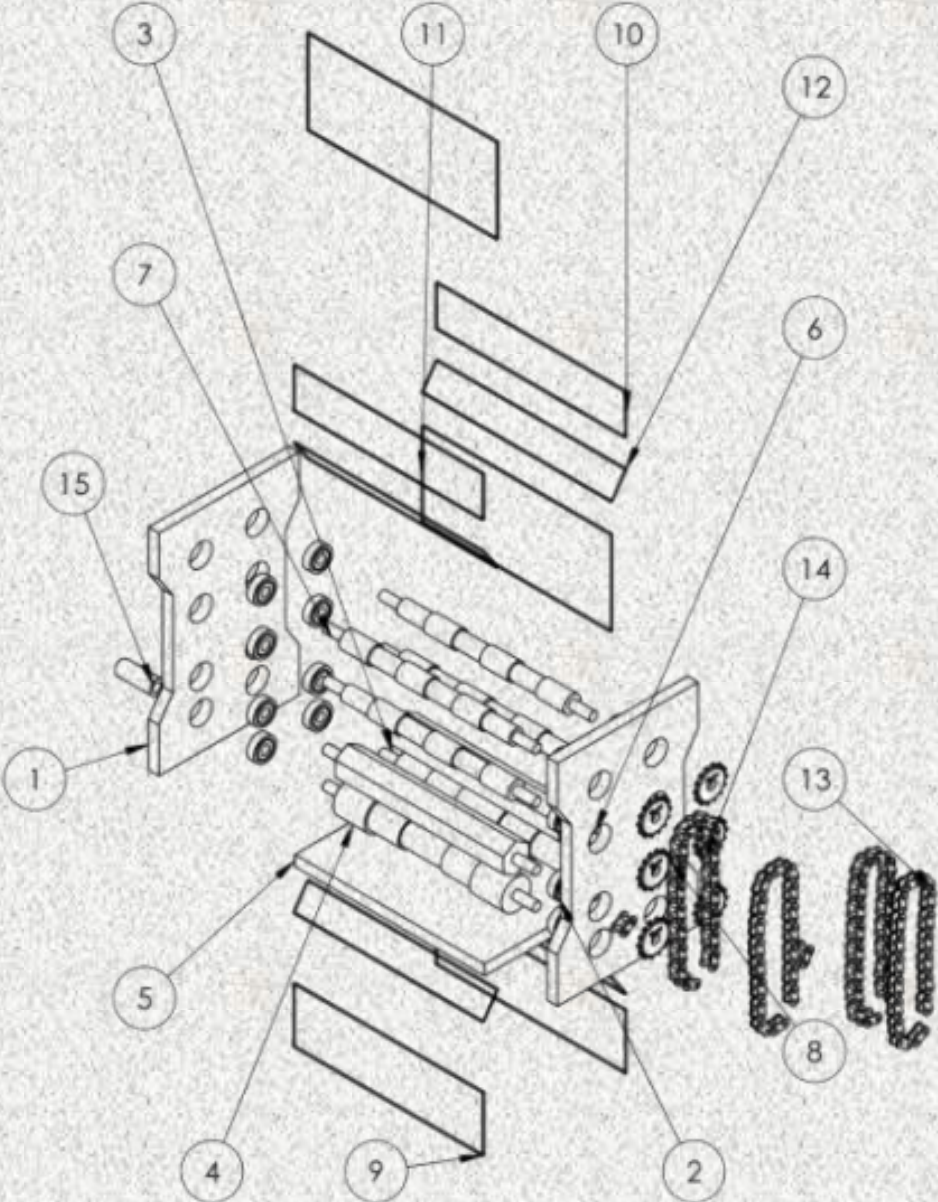
SERIES 4



Universiti Teknologi MARA
Pasir Gudang Campus

Prototype Design Collection

Series 4



Ahmad Najmie Rusli

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PUBLISHER:

Universiti Teknologi MARA
Cawangan Johor Kampus Pasir Gudang,
Jalan Purnama, Bandar Seri Alam, 81750 Masai, Johor
September 2025

eISBN: 978-967-0033-62-4

FOREWORD

This digital book on Prototype Design Collection Series 4 (PDC Series 4) 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 46

Development of a Prototype for 2 in 1 Folding Smart Chair and Stroller

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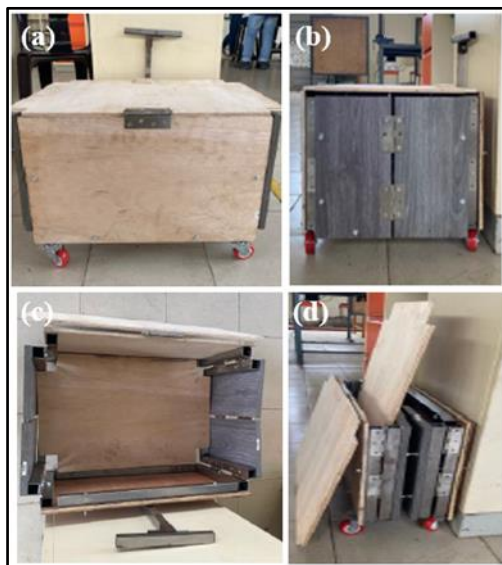
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PROJECT DESCRIPTION

A simple and comfortable lifestyle plays a crucial role in enhancing overall well-being, especially in the preservation of good health. Foot health is a crucial aspect that significantly influences human mobility. Studies indicate that conditions like leg pain, chronic wounds, and various lower limb complications are often misdiagnosed and inadequately managed. The 2-in-1 Folding Smart Chair and Stroller was developed as a solution to enhance foot health and mobility. This multifunctional product facilitates convenient item transport and serves as a reliable seating option, thereby reducing the need to seek distant resting places. The device integrates ergonomic chair comfort with the functionality of a compact trolley, emphasising versatility. The lightweight and durable construction, combined with a sleek aesthetic, renders it suitable for small living spaces, offices, and outdoor environments. The intelligent folding mechanism facilitates a smooth transition between chair and pram functionalities, providing convenience and optimising space utilisation. The 2-in-1 Folding Smart Chair and Stroller offers an efficient solution for improving mobility, comfort, and overall quality of life.

Keywords: *Mobility Aid, Foot Health*

PROTOTYPE



DESIGN PARAMETER

