

PROTOTYPE DESIGN COLLECTION

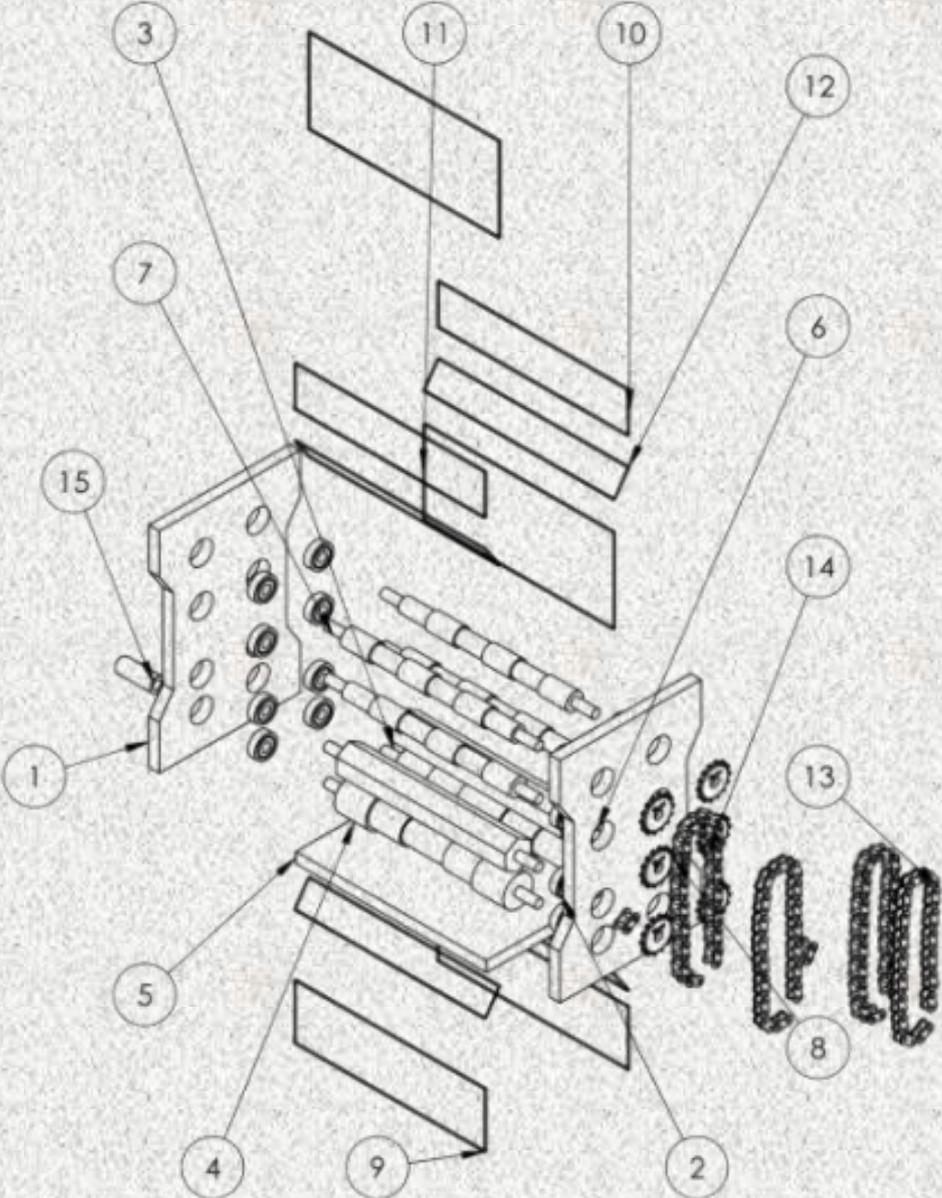
SERIES 4



Universiti Teknologi MARA
Pasir Gudang Campus

Prototype Design Collection

Series 4



Ahmad Najmie Rusli

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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 6

Prototype of a Candy Sorting Machine

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PROJECT DESCRIPTION

This project presents a prototype of a candy sorting machine designed to streamline the sorting process based on color detection. As the demand for efficient candy production increases, manual sorting becomes time-consuming and prone to errors. The proposed machine addresses this issue by automatically identifying and sorting candies according to their colors in a systematic and organized manner. The main objective is to achieve accurate color detection, uniform distribution, and efficient sorting using Arduino-based control. The system's design incorporates an Arduino microcontroller, color sensors, and motors to drive the sorting mechanism. The development also includes custom Arduino code to handle color detection and implement the sorting logic. This prototype provides a cost-effective and scalable solution to enhance productivity in small- to medium-scale candy manufacturing environments.

Keywords: *Candy sorting, Color sensors*

PROTOTYPE



DESIGN PARAMETER

