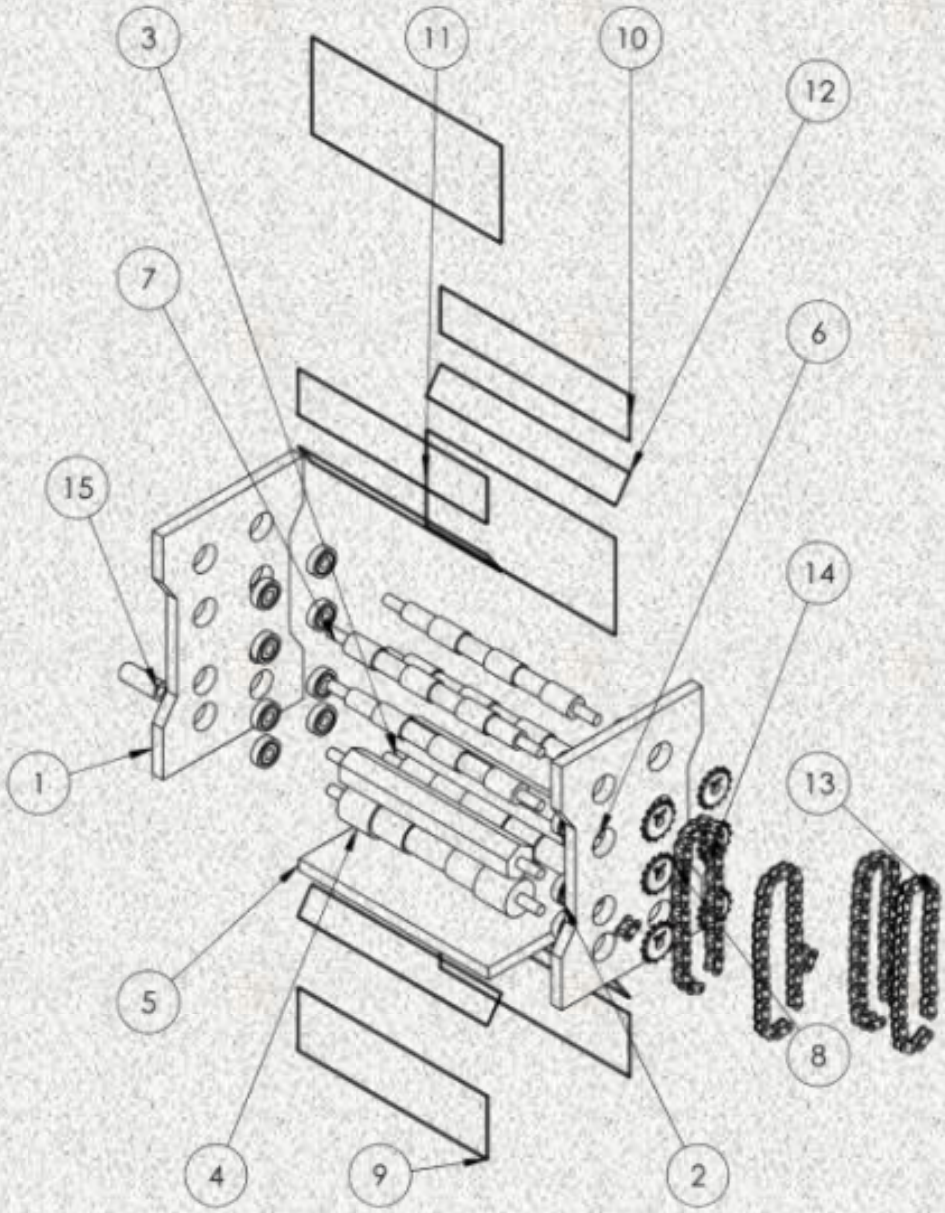
PROTOTYPE DESIGN COLLECTION

SERIES 4

Universiti Teknologi MARA
Pasir Gudang Campus

Prototype Design Collection

Series 4



Ahmad Najmie Rusli

CHIEF EDITOR:

Ahmad Najmie Rusli

EDITOR:

Nurul Nadiah Rasdi

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.

Table of Contents

e-ISBN: 978-967-0033-62-4

CHAPTER 23

RFID Smart Attendance System

Mira Elyana binti Mahadi [1] and Wan Muhammad Syahmi Bin Wan Fauzi [2*]

[1,2]*Faculty of Mechanical Engineering, Universiti Teknologi MARA Johor Branch, Pasir Gudang Campus, 81750 Masai, Bandar Seri Alam, Johor Darul Ta'zim.*
**Corresponding author (e-mail): wmsyahmi@uitm.edu.my*

PROJECT DESCRIPTION

The concept of attendance involves people, either individually or as a group, appearing at a location for a previously scheduled event. The measurement of attendance is of significant concern for many organizations, as such information can be used to gauge the effectiveness of their efforts and to plan for future endeavours. Attendance has traditionally been done manually, fostering student-teacher relationships but prone to errors and time-consuming. The RFID (Radio Frequency Identification) Smart Attendance System project aims to revolutionize the traditional method of tracking attendance by leveraging Radio Frequency Identification (RFID) technology to streamline the process efficiently and accurately. This innovative system seeks to address the problem of time-consuming manual roll calls and the potential for inaccuracies in attendance records. The objective of this project is to develop a user-friendly, automated attendance management system that minimizes human error and maximizes reliability. This project involves integrating RFID tags with an attendance management software, which records each student or employee's attendance as they enter or exit the premises. This system not only simplifies the attendance tracking process but also provides real-time data analytics for better management. By minimizing human intervention, this solution not only streamlines attendance tracking but also strengthens data integrity and operational efficiency.

Keywords: *RFID, Attendance*

PROTOTYPE

DESIGN PARAMETER