

# 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 10

### Development Of a Prototype Automatic Sauce Dispenser

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#### PROJECT DESCRIPTION

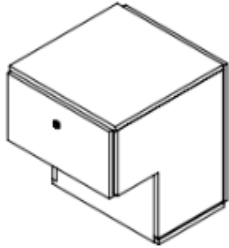

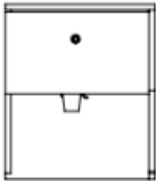
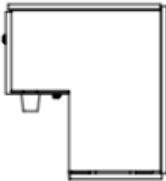
Currently, manual sauce dispensers are commonly used tools in many restaurants for dispensing condiments such as ketchup, mustard, and mayonnaise onto dishes. However, these manual dispensers can be messy and may result in uneven distribution of the sauce. An engineering solution to address these challenges is the Automatic Sauce Dispenser. This project aims to design, analyze, and fabricate an Automatic Sauce Dispenser that can automatically dispense sauce upon detecting the cup. The Automatic Sauce Dispenser is a machine that enhances the efficiency and speed of sauce dispensing, reducing the time required for users. It incorporates sensors and LED lights to indicate when the sauce needs to be refilled. By utilizing sensors, the dispenser automatically detects the cup's presence and dispenses the sauce accordingly. In conclusion, the Automatic Sauce Dispenser has been successfully designed, fabricated, and is fully functional. This product offers benefits to fast-food restaurants by reducing time consumption and improving hygiene in the surrounding area. The Automatic Sauce Dispenser provides a convenient and precise way to dispense sauce, potentially reducing waste and making meal preparation and cleanup easier.

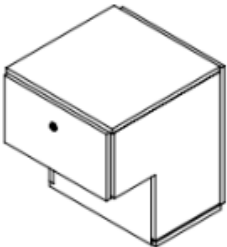
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#### PROTOTYPE



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