



**UNIVERSITI TEKNOLOGI MARA CAWANGAN
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MEC299

FOOD RACK PROJECT

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ABSTRACT

This study investigated how to design and provide solutions for any daily issue using the mechanical engineering design process. Many people who are troubled physically with issues like not having enough space in their rooms to store their food or other items, so people buy shelves or racks to solve their problems, such as not having enough room in their rooms to keep their food or other belongings. The objective for this project is to help student who lives in dorm/campus and housewives to save a lot of space and making it easier for them to manage their belongings and food.

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CHAPTER 1

1.0 INTRODUCTION

1.1 Background of Study

Many people face problem like not have enough space to put their food or items in their room and they bought a shelves/rack to solve this problem. This food rack also referred as baker's rack because this versatile storage furniture originally used by bakers. The shelves are made of a conductive material, often steel or iron, which served to help cool a baker's goods such as hot pies, breads, and pastries. Non-bakers have been using baker's racks for storage, kitchen use, houseplants, and decor. Some people use it to store non-baked food products such as fruits, canned goods, coffee, or liquor while others use it to display books, game boards, or picture frames. As the baker's racks have been used for different functions, their structure has also changed.

1.2 Problem statement

People face all kind of troubles when they don't have enough space like the place will be looks like a store. The cost to buy a new shelves will be costly, the cheapest one that I found cost about RM50 and some of them can reach about RM200. Furthermore, some of them take a lot of space because it size.

1.3 Objective

There are two objectives for this project:

- i) To design a food rack
- ii) To fabricate a food rack

1.4 Scope of work

The scope for this project is to help students and housewives who have problem ith managing their belonging in a small space room with low cost design.

1.5 Significant of Study

The significant of study for this project is we can save more space and can easily managing our belongings. We can find our items easily.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1. Food rack and Description

A food rack, also known as a baker's rack, is a piece of furniture with shelves constructed of wrought iron or another metal. Baker's racks have been a fixture of many houses throughout the world since the 17th century. A conductive substance, such as steel or iron, is used to construct the shelves. Metal's conductivity and thermal bulk allow heat to be transported quickly from the pan to the shelf and retained for a long period. The construction of baker's racks has altered as they have been utilised for various purposes. Some baker's racks now incorporate cupboards, drawers, and other storage capabilities, in addition to plain shelves. Baker's racks have also become more ornamental and may now be used as highlight items in the home. This is why their designs have also evolved. (Collection, 2018)



Figure 1: Food Rack

2.2. Things That You Can Do with Food Rack.

Bakery racks are an integral part of kitchen equipment, which helps to do the job efficiently and swiftly. A typical bakery rack is a rectangular prism with cross members and sides. The traditional rack, also known as a prism, is a framework created to hold the baking sheet pan and its contents often more than one pan. Additionally to the pans, this framework needs to be able to attach wheels or any other choice in order to fulfil its function. (Specialties, 2020)

Because of the evolution of the baker's rack for many century, it has many function based on their design. It can be used for the baker to cool their's good such as hot pies, breads and pastries.

It also can be design to be used for storage, kitchen use and décor. Some people use it to store non baked food such as fruits, canned goods, coffee or use it to display books.

This rack can also be a good decoration because of the design that have in evolved. (JSTOR, 2018)