

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN AND FABRICATION OF  
MANUAL DUST CLEANER FOR  
FLOOR**

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Dissertation submitted in partial fulfillment  
of the requirements for the degree of  
**Diploma (Mechanical Engineering)**

**College of Engineering**

**March 2022**

## **ABSTRACT**

Cleaning is a basic necessity for all human's kind, and it is required in the daily regular routine. The traditional road and floor cleaning machine is most commonly used in numerous applications such as highways, railway stations, airports, hospitals, bus stops, multi-story buildings, universities, and so on. This machine also needs human energy to operate. It is user friendly and environmentally friendly. I want to use low-cost materials that can be easily produced and controlled. It is a good alternative to a traditional machine. Generally, in this era, various machines such as electric motors, diesel engines, and robots are used to clean the floor and the road. These methods cause a lot of pollution, need a lot of maintenance, and are difficult to implement. The primary goal of this article is to convey the concept of my prototype road cleaner to everyone who is interested. As a result, the current effort aims to design and build a manually operated road cleaning equipment that is eco-friendly, cost effective, portable, and requires little maintenance.

## **ACKNOWLEDGEMENT**

Alhamdulillah, first of all I would like to thank God as finally I was able to finish my proposal final year project. This task had been done with all afford by myself and few of my friends that help me even though a little bit problem when writing the proposal. Besides that, big thank I address to my supervisor madam Nurrul Amilin because without her guide my project cannot be done properly like this. She always gives me supports and guide to us how to do my proposal in purpose to produce a good outcome from research that been studied. Finally, I want thank to my beloved friends and family that always stick together and also work hard to produce a good proposal with all afford and responsibility. I also want to thank also to my classmate that help me when I don't have any idea what to do. They always give me ideas and comments on my project so that I can improve my project in many ways.

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# CHAPTER ONE INTRODUCTION

## 1.1 Background of Study

Cleaning is an important element of daily routine process. Effective cleaning and protect human health both internally and externally. The floor cleaner is used to maintain the environment clean. So that we can feel refreshed surrounding with clean floor. In general, various machines such as electric motors, and robots are utilized to clean the floor in the modern era. However, such processes generate a lot of pollution, need a lot of maintenance, and are quite hard to carry out. So, in order to conserve energy and conserve the environment, a user-friendly road and floor cleaning equipment is required. A machine that will be operated manually in order to be used as an alternative to an electric powered cleaning machine. The dust cleaning machine system is comprised of a pair of wheels linked by a shaft. The shaft connects the wheels to one another. The wheels are moved to the location using manual force, which is given to move. The handle may be changed to the desired height using the four adjustment holes supplied. Each side has a chain drive that connects to the wheels and gear. The chain moves in accordance with the wheel and gear. The brush moves in the opposite direction that the wheels move, and it brooms the waste on the floor as well as dumps it into the trashcollecting box. The trash collecting box is removed in order to dispose of the trash at the proper locations. My aim is to create an invention that easy to use and can be use on every type of dirty floor. This invention will use stainless steel as its primary material with brush , wheel and Sprockets and chain to move the machine around by using force when we push the machine . The fabrication process will involve welding, milling and turning process. With this invention, I believe it will help user to move heavy loads beyond human capabilities with ease.

## 1.2 Problem Statement

Nowadays, most of the people using broom and dust collector to clean dust and trash on the floor in many places such as house, office , mosque , because