

UNIVERSITI TEKNOLOGI MARA

**INDOOR SMART VASE
SELF-WATERING PLANT**

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ABSTRACT

This project is called “Indoor Smart Vase of Self Watering Plant”. The idea of this project is to help people that live in a condominium to plant a tree in their houses. It is hard for them to plant any trees in their house because of the lack of space and soil. The objectives of this project are to design an indoor smart vase self-watering using waste materials such as plastic water bottles and used soils. On the other hand, this project is to analyze the recycled water flow along the tube channel to the plant and going down after it absorbs into the soil. Furthermore, this project covered the three main elements which are design, analysis, and fabrication. This project will be using “Solid work” to design the whole project with a motion for the presentation later. There will be some calculations in this project as well. Several thermodynamics’ equations will be used to calculate the water flow at every critical joint of the vase. Lastly, the expected result for this project is that everyone can plant any trees that they desire in their house, and it would only cost a small amount of money to run this project.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

This project is called “Indoor Smart Vase Self-Watering Plant”. The idea of this project is to help people especially who live in a condominium to plant flower or ornamental tree or vegetable with less sunlight source in their houses. The lack of space and soil in their house causing difficulty to do gardening and planting. By using an Indoor Smart Vase Self-Watering Plant, they can plant any suitable plant because it is user friendly. On the other hand, it would only cost a small amount of money to fabricate this mini vase. The waste material such as plastic water bottles will be connected with the tube inside the vase as well organic soils which easy to find in nursery. Scissors and other cutting machines will be used to fabricate the vase which is made from plastic water bottles.

1.2 Problem Statement

Existing literature related to the project of indoor smart vase has demonstrated designer seeking to improve the existing conventional vase either added extra function by modifying the structure or mechanical part of the new design of smart vase. Since the condominium people have issues to planting due to the lack of space and of course the soil as well. The working people also have no time to make sure their plants get enough water and preserved well. The ignorance by the busy people towards their plants has caused the plant die and withered.

Learning from the previous design of vase and issue, the conventional vase had inspired many useful innovations and can save a lot of money. Therefore, this study is to make improvements and a better version of the