



FACULTY OF MECHANICAL ENGINEERING UITM PASIR GUDANG MECHANICAL ENGINEERING DESIGN (MEC332)

THEME: 2 [HOUSEHOLD]

PROJECT NAME: STUPENDOUS LETTER BOX

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ABSTRACT

Nowadays, we know that delivery system is among the main activity in Malaysia since the growth of online shopping and country. Thus, letter is one of the important method in receiving information. The problem that we had realize that people did not want to waste their time for checking letter in their letterbox. Letter does not have any permanent date to be received and it required the user to go and check the letterbox every day. Sometimes, people will forget and have unchecked letter and they will miss out the important notice or information. This is very important since some letter have their due date of action especially for confidential; letter from court or promotion letter which have a specific date.

Moreover, the letterbox in high building such as apartment requires large space and low security. .Normally this letter box will be hang in high place. Plus, it is also not secure because people can easily access and check our letter when the letter is not fully inserted into the letter box. People also will easily break the letterbox since the e is no supervision. This will lead to vandalism in community.

Besides, current letter box also give difficulty to the deliver. It happen when postman want to distribute the letter or parcel and there is no recipient at home. The postman need to leave the notification letter to inform the owner and the parcel will be return back to the post office. So it will difficult for recipient to receive the par el because they have to go to the post office during office hours.

Our project is to make all those problems stated are solved. In this letter box it can give straight away notification through phone via application. It also compact in size which requires smaller space. Next, we will secure the letterbox with security system including password before receiving their letterbox.

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1 INTRODUCTION

1.0 Product background

The name of our product is "Stupendous letter box". We would like to innovate and provide to the community, the stupendous letterbox by adding several automatic systems and improved the mechanisms based on our country mission to commercialize the 4.0 technology industry. The stupendous letterbox can hold up to 8 houses for one letterbox. This amazing letterbox also can receive not only letter but also parcel.

Firstly, when the postman want to deliver their item, the postman just need to key in his postman id and also number house of the required house. The letterbox will rotate to the house number and the window will open. Once the window open, the postman can put the item. And when the window is closed, the Arduino controller will sent the signal to android studio apps to send message to user. The owner then will receive the notification through their phone.

Next, when the owner want take their item. They have to put their house number and key in their password in the android studio and automatically the machine will rotate to the house number and the window will open. The process will repeatedly for every house that the postman want to deliver.

Last but not least, many types of materials are use in the process of making stupendous letterbox based on their specification for every parts.