



اَبُو سَيِّدِي تَكُونُ لِي مَبَارَا
UNIVERSITI
TEKNOLOGI
MARA

EM110 DIPLOMA OF MECHANICAL ENGINEERING
FAKULTI KEJURUTERAAN MEKANIKAL
UiTM CAWANGAN JOHOR, KAMPUS PASIR GUDANG

MEC332 MECHANICAL ENGINEERING DESIGN

PROJECT: PORTABLE BBQ GRILL SET

SUPERVISOR'S NAME: NORHISYAM BIN JENAL

LECTURER'S NAME: MOHD NOOR HALMY BIN AB LATIFF

GROUP: J4EM1105I

NO.	NAME	STUDENT ID
1	AMAR SUHAIL BIN MOHD KARIM	2018246892
2	MOHAMAD IRSYAD HAKIM BIN MOHAMAD ZAHAIR	2018246052
	MUHAMMAD HAFIZZ ASYRAF BIN HAMIZUL	2017220824
3	NUR HADIRAH BINTI ALIAS	2018643694
4	NUR RAIHAN BINTI ZULKIFLEE	2018421862

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1.0 Introduction

1.1 Overview of the Project

In MEC332, we have been given a task for our final year project. We as a group have made a decision to create a new BBQ grill set with much better performance than others BBQ grill set. We found out that most people had a hard time using existing BBQ grill set nowadays. So we decide to made an improvements to the product make it much more easy for people to use it.

1.2 Design Objective

The main objective of this product is to create a new, simple and compact BBQ set. It means that our product will be a much more better BBQ grill set than the existing products. That is because some of the people are having a hard time using those products. Our product can be easily to deploy anywhere since it has a great design. Apart from that, our product can help unfreeze frozen foods with our special features. People do have a problems to unfreeze the frozen food they have since their BBQ grills set don't have this function. Next is our product can help to eliminate all of the problems that people nowadays have with their BBQ grill set. Last but not least, our product is made to ensure the safety operation of the machine also give the customer maximum safety while using our product.

1.3 Project Scope

During our progress in creating this product, we found out that our product needs to be at its best to make sure customers are satisfied with our products. So these are the scope of the project that we keep an eye for it. Firstly, are the material and strength. The BBQ grill set we created must be strong and stable, so it can be able to hold some load or forces act to it. Our product must be able to last long for a long-term use as well as saving customer money. Rather than customer keep continuing replace their defective grill set, customer can save money on using our product since it has a good strength. Choosing materials to use played an important part in making this product successful. We decide to use stainless steel on making our product s it has high tensile strength, a good durability and good corrosion resistance.

Secondly, is the portability of this product. We make sure that our product are easy to use and easy to carry. Most of others existing product use heavyweight material so that it hard to carry. Also, most of the products are big in size so that it is hard to deploy and take time for it to completely can be use. Weight of a product play a big role to ensure customers interest in buying our product. We make sure a convenient product size for customers. So, customers can easily setup the BBQ grill set.

Lastly, are time and skills used to complete this project. We had been given a total of 14 weeks to complete this project. And we able to successfully complete it with cooperation from group members and our supervisor. We make division on tasks within group members so it will take much shorter time than doing it alone. With this project, we develop our skills on using Solidworks software that required in completing this project. Every group members had their own part of this product and assemble it to make one great product.

1.4 Project Significance

The project type is introducing a new BBQ grill set with special features. This product must at least had a differences from existing BBQ grill set. So, our BBQ grill set project is to make sure an easy use for the users. Also, with our BBQ grill set, customers can save up space and cost since we have improve the weight and size of our product. The most important things is the safety criteria. Our product do provide a maximum safety to customers and also safety operation of this product. With the best decision on choosing material used, this can ensure the safety on customer using our product. A good product will always be the best in the market, so do our BBQ grill set. With special features we have, we can attract people on buying our product and make sure they has a good meal time with others.

1.5 Project Planning

A gantt chart is a bar chart that provides a visual view of tasks scheduled over time. A Gantt chart is used for planning projects of all sizes, and it is a useful way of showing what work is scheduled to be done on a specific day. It can also help us view the start and end dates of a project in one simple chart. Our group use a Gantt chart to target the time and improve our time management in completing this project. Plus, it also can help estimating the length of time required to accomplish the various tasks and scheduling to ensure that sufficient time is available to complete those tasks

8.0 Conclusion and Recommendation

8.1 Conclusion

As conclusion, our product that has been made can improve substantially less exertion. This is the fundamental objective of everyone in any field. To get the BBQ grill set done, we are guided by Sir Norhisyam bin Jenal as our supervisor to give us ideas and opinions. It is crucial to select the final design for the product. The main objective of the project is a compact BBQ grill set with special features. By accepting the primary venture as platform we attempt to introduce foldable BBQ grill set to diminish space and weight that unnecessary.

Despite the fact that this product had restrictions, for example, the strength of the design and function of the product, it is considered as a stage forward, on the off chance that it goes to the development of smart technology in BBQ grill set. During the progress completing this project, our group has realized that making a lightweight BBQ grill set could truly take our item similarity up by a score with regards to the customer's requirements. The item cost ought to be minimal as it can as indicated by the specifications that have been set by the group. This is to guarantee that each gathering of individuals can bear the cost of it.

With respect to the business part of this item, if the minimal effort can be kept up when the item is created, the acknowledgment of this item will be unreal. Presently, the contenders of this products are too many so we are doing our best to make this product the best in its category.

As an end, the recognizable proof of the requirements and assumptions for customer should be possible through the surveys predominantly done on the web. Through this project, we can gather and break down the information and think of the design specifications of this product dependent on the usefulness and quality to give the best BBQ grill set that is versatile, lightweight and easy to deploy. Last but not least, we hope that this final year project is successful in any ways. A big thanks to Sir Norhisyam bin Jenal for guiding us in completing this project.