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UNIVERSITI  
TEKNOLOGI  
MARA

MEC 332

MECHANICAL ENGINEERING DESIGN

FINAL YEAR PROJECT

TITLE: WEIGHT LIFTING STOPPER

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## **8.0 CONCLUSION AND RECOMMENDATION**

### **8.1 CONCLUSION**

The designed prototype is considered as a successful build. It is fulfilled every requirement set by faculty of Mechanical Engineering, UiTM Pasir Gudang which focus on the innovation and inventions with fully mechanical elements. In addition, it is also fulfilled the criteria of visual prototype which is to build fully in Solidworks software since we cannot enter the workshop because of the Covid-19 pandemic. The prototype is build based on the safety to the people who hit the weight lifting machine in the gym all around the world.

There are several issues that each individual of the team experiences throughout the design process. We've faced many difficulties and instant decision-making processes that include critical thought. Moreover, we have developed and prepare a solution that innovatively identifies all needs and issues. During the visual prototype process, we have gone through so many difficulties since we have used different versions of Solidworks software. However, we managed to solve all the problems and successfully assembled all the parts and created an animation and simulation of our product using Solidworks.

As the conclusion, some aspects have been discussed in the team during the design process. Through this research, we can collect and analyse data and come up with the solution for a better design based on the surveys among people who use to hit the gym. Last but not least, we hope that the final year project is successful with flying colours. Not to forget the main reason why we make this weight lifting stopper is to improve the safety elements at the weight lifting machine. From this project, we can attract more people to use the weight lifting machine at the gym and keep stay a healthy lifestyle. Lastly, a big thanks to Mr Hazim bin Sharudin for guiding us in completing this project.

## **8.2 RECOMMENDATION**

Based on the product design, there are a few recommendations that can be considered and applied in order to improve the safety. For the first recommendation, use more quality of the brake pad to grip the cable. This is to increase the lifespan of the brake pad so it can save the cost because does not need to buy or change to a new brake pad.

Next, the quality of the oil brake in the pump and the flexible tube. By doing this, we can increase the lifespan of the oil brake. It is also can save the cost because we do not need to buy and change to the new oil for a long time.

Lastly, put the stopper to every cable to improve the safety system. By doing this, all cable can be stop by the stopper which mean the safety of the user will be guaranteed.