

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN AND DEVELOPMENT  
OF CATAPULT BASED PING PONG  
BALL LAUNCHER**

**AMMAR IMRAN BIN SHAMSUDDIN**

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## **ABSTRACT**

This paper is about design and development of the catapult based on ping pong ball launcher. To design and fabricate this projectile launcher, it must possess all of the necessary characteristics for it to be powerful enough to launch an object. Before designing or fabricating the projectile motion, there are a lot of research that has been done. Research is critical because it can aid in the design, selection of materials, and fabrication process. It has the potential to improve the efficiency of projectile launchers. Initial time taken can also be determined through research. Following the design phase, the fabrication phase begins. Fabricating processes involve with many manufacturing processes using various type of machine, hand tool and different type of material. After the fabrication process is completed, the projectile launcher is tested to collect data such as horizontal displacement of projectile. Then, using the data, the projectile motion analysis equation is solved. The outcome indicates that the projectile launcher met the project's objective. Overall, this can provide motivation and experience operating a variety of machines, working under duress, and honing soft skills.

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