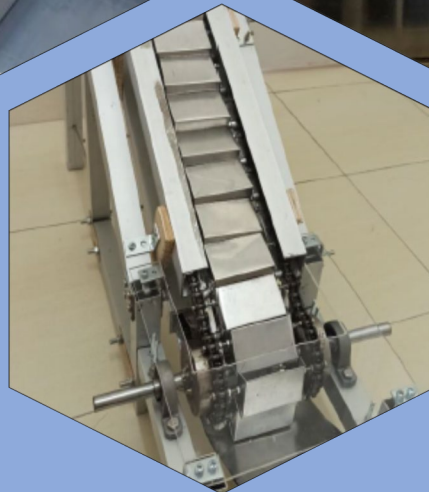
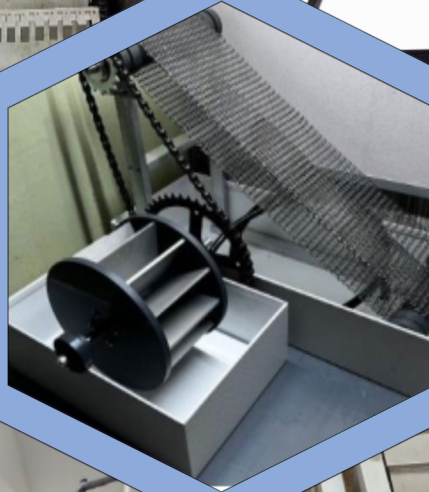


PROTOTYPE DESIGN COLLECTION

SERIES 1



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CHAPTER 47

Development of a Prototype Fingerprint Safety Padlock Using Arduino for Motorcycle

Muhammad Nur Eidham Bin Norizan and Wan Muhammad Syahmi Wan Fauzi

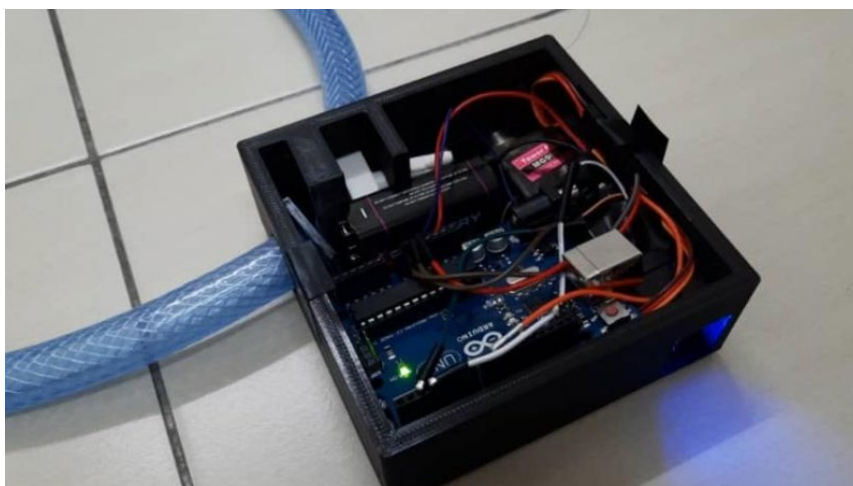
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PROJECT DESCRIPTION

As a mode of transportation, people nowadays prefer to use motorcycles rather than any other vehicles as it is easier to manoeuvre through a crowded area and better fuel consumption. Since motorcycles bring more advantages, especially in traffic problems, the number of motorcycles increases each year. However, there are also disadvantages due to the high number of motorcycles. One of the disadvantages is the rise of stolen motorcycle cases. To prevent the cases from increasing, padlocks are already invented and used to solve this common problem. The project for Final Year Project (FYP) is the adjustment and improvement of the product which is the existing padlock which is a fingerprint safety padlock using Arduino for motorcycles. The objective of this project is to design Arduino based fingerprint safety padlock for motorcycles using state-of-art SolidWorks 2017 and to fabricate the designed fingerprint safety padlock as a proof of concept. The methodology starts from the concept generation, followed by the design, and fabrication process of the product. The results of this project are that the product made has its own specifications, advantages, and disadvantages. The conclusion is the objectives are achieved since the product is successfully designed and fabricated.

Keywords: *padlock development, Arduino based, biometric security*

PROTOTYPE



DESIGN PARAMETER

ITEM NO.	PART NUMBER	QTY.
1	MAIN BOX	1
2	OPTICAL SCANNER	1
3	ARDUINO UNO R3	1
4	9V BATTERY	1
5	SERVO MOTOR MG90S	1
6	CHAIN	1
7	BOX COVER	1
8	BOLT	1
9	NUT	1
10	LOCKING COMP	1

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Group	J4EM1104F		
Approved	Checked	Drawn MUHAMMAD NUR EDHAM 01/07/2021	
Drawing Title	EXPLODED ASSEMBLY OF PROTOTYPE FINGERPRINT SAFETY PADLOCK USING ARDUINO FOR MOTORCYCLES		
Part Name	-		
Part No.	-		
Rev.	Scale	Projection	Weight
0	1 : 5		5.0 kg
			Sheet 1/2

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Drawing Title	ASSEMBLY OF PROTOTYPE FINGERPRINT SAFETY PADLOCK USING ARDUINO FOR MOTORCYCLES		
Part Name	-		
Part No.	-		
Rev.	Scale	Projection	Weight
0	1 : 2		5.0 kg
			Sheet 2/2