

**RFID(NFC) APPLICATION EMPLOYMENT ON
INVENTORY TRACKING TO IMPROVE
SECURITY**

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ABSTRACT

The possibility of getting a product identity from being stolen is likely to happen where and the replication of the product will be made from third parties and it will almost look the same as the original version. The introduction of new technology in security enforcement for product which is RFID called Radio Frequency Identification that can scan and detect the details of the product much easier without the need any line of sight unlike barcodes system being used nowadays. With the new technological upgrade from the RFID system called the NFC that have an upgraded security system compared to RFID. Nowadays, retailers and consumers alike will face a time when they are uncertainty about a particular product since product identity replication being abused everywhere since barcodes is the only way to determine the original details of a product which can easily be forged so this project proposes an NFC based application to ensure that the product originality can be determined easily to help track the item from the factory to the stores. The system consists of an NFC module that can be attached to the mainboard and it will be programmed using C language programming. The NFC stands for Near Field Communication. It is a short-range radio technology that enables communication between devices that either touch or are momentarily held close together. This device will be used along with a card or tags in the form of a sticker or a simple card that containing an antenna to communicate with the NFC allowing the information within the card to be read. The received data will be processed by the mainboard and are connected through a display LCD to show the product specifications and whether it is original or not. So as a result the tag that has been written with a specific key can be written onto it and when it is swiped onto the board the board will match they keys from the card and the device, once the key is matched the details of that product will be shown and it will provide a warning if the keys did not match. This NFC capability has a potential to replace the use of barcodes that can easily be scraped off and replaced. It is expected that the system can track the originality of a product from being fraud by third parties.

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