عنوان مقاله:
Web-based Fingerprint Door Lock System

محل انتشار:
سومین کنفرانس بین المللی تحقیقات بین رشته ای در مهندسی برق، کامپیوتر، مکانیک و مکاترونیک در ایران و جهان اسلام (سال: 1399)

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خلاصه مقاله:
Nowadays, security is an essential requirement for everyone. People need to keep their homes, offices, and important documents and properties safe. There are different safety methods, such as simple manual keys, passwords, smart cards, and biometric recognition. Keys and cards can get lost or stolen, and passwords may be forgotten. Keys can also be used for buildings that require access control, but where the allocation of keys is impractical. However, fingerprint, as a biometric characteristic, is unique and unchangeable. So, fingerprint-based systems are reliable and secure. In this project, an optical fingerprint sensor is used to identify users quickly and accurately. So, a microcontroller opens the door by a servo motor. The motor is connected to the lock through a wire to control it. The microcontroller operates under the supervision of a web application that is written in Python programming language. Therefore, each user has access only at specific times that is determined by the administrator. When a user enters, the application records the time and date of entrance for further monitoring. There is a feature to set the application to notify the administrator via SMS, Email, etc., if a particular user enters. Besides, there are more features to be added in further projects.

کلمات کلیدی:
Biometrics, Mechanical lock, Python, NodeMCU, Servo Motor

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