# Real time model of a lock gate system upon fingerprint with microcontroller

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**Abstract:**

*Safety is one of the most important things that we are keen to provide all aspects of our lives. Keyless lock gate with fingerprint access has many advantages over traditional systems such as passwords. Therefore, fingerprint identification represents the main part, which require that system is cheap, practical, easy to use and allows fast and securely. This paper discusses the design and implementation with real time model of a practical lock gate system for the achievement of high security by using fingerprint purification to control the mechanism of opening doors in banks, warehouses, laboratories and places of interest. In this paper, the microcontroller technology in the Ardonio board was used with an optical sensor to take the fingerprint, convert it into digital data, and insert it into a definition window to unify all input data and store it for use when compared to the system experience. After obtaining the result of the comparison, the appropriate commands are prepared for operating the servo of the lock mechanism for the doors used. In the testing of the system, the results are very accurate. The system also has other advantages such as small size and low power required for operation and ease of use.*