

AUTOMATIC DOOR UNLOCK SYSTEM USING ARDUINO

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Abstract:

Security is always an issue to be addressed especially when a room or building is shared among several personals. There are several manual and automatic methods to address the different issues but still have their limitations.

In this contrast, a system is proposed which unlocks the door by detecting and identifying a specific knock pattern. The project is based on programmable ATmega328 microcontroller interfaced with necessary electronic components, electronic strike lock, piezo buzzer and a piezo pressure sensor. New knocking patterns can be stored using a push button

The microcontroller programmed using Arduino platform which provides an easy way to burn the code in the microcontroller. The program provides a learning part where new knocking pattern can be stored by pressing the push button mounted on the circuit, while the another part of program provides testing part where knock is sensed and matched with sorted pattern and according to matching results the door is unlocked.