Arduino Project Proposal

Team Name :- Safe box using knock pattern

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Problem Statement:-

Common lock systems available today are keylock. These types of lock systems are very costly and have a low level of security as someone with a duplicate key can easily open the lock and if the key is lost by mistake then there is no other way to open the lock except breaking it. Lockers with multiple keys are also low on security. Face recognition, Eye detection and fingerprint sensors also present problems for multi-person access. They are out of reach for normal families and small shopkeepers as they are very costly.

What is the Solution?

Solution:- The idea is to build a lock system for a safebox which can be used by multiple users and there is no need to carry any key or card as the password. Moreover, it will be cost-effective and in everyone's reach. The lock will use a

knock pattern as the passcode for opening the lock only if the pattern of knocking is correct . Knocking pattern can be shared in case of a multi user locker and there is no need to carry any additional key or card as the passcode. In this way, the above discussed problem can be solved very efficiently and effectively.

Working of Project:-

1)Feeding of lock pattern-
First of all we would press and hold the button and feed the lock pattern by knocking in a particular way, for eg: 3 times 2 knock each.

2) Testing for correctness of pattern-
Then we would again press the button to enter the pattern to unlock the locker by knocking in a similar way as the knock pattern has been set by us.

3) Result-
The door opens only if we knock in the similar manner the password has been set by us else the door remains closed.

Tentative Technical Details:-

Software Tools:- Arduino IDE

Hardware Tools:-
Arduino uno
A breadboard
A piezo
A servo motor
A switch
3 different colour LEDs
Resistors
Capacitor
Wires