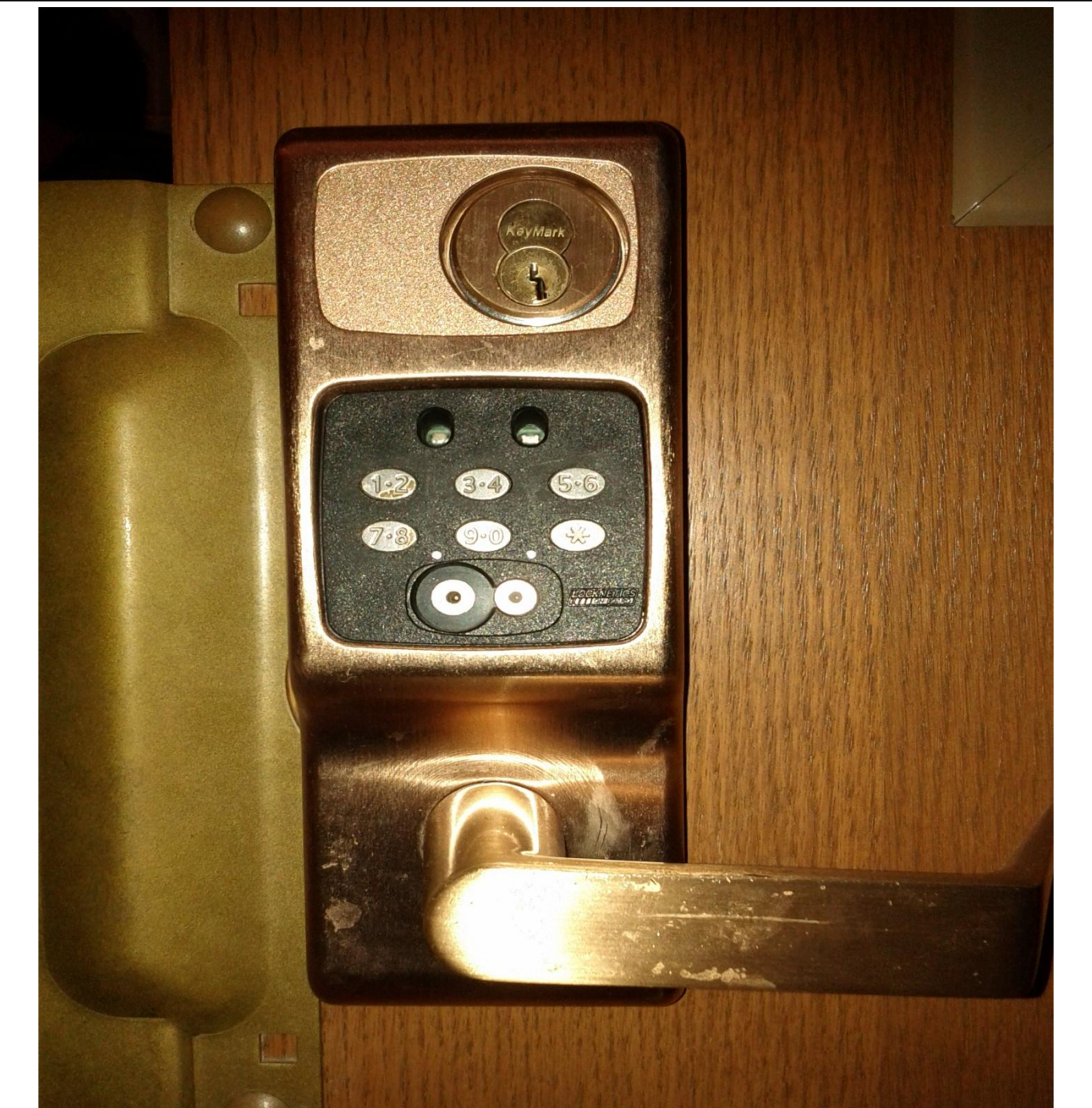


Secure Keypad Entry System

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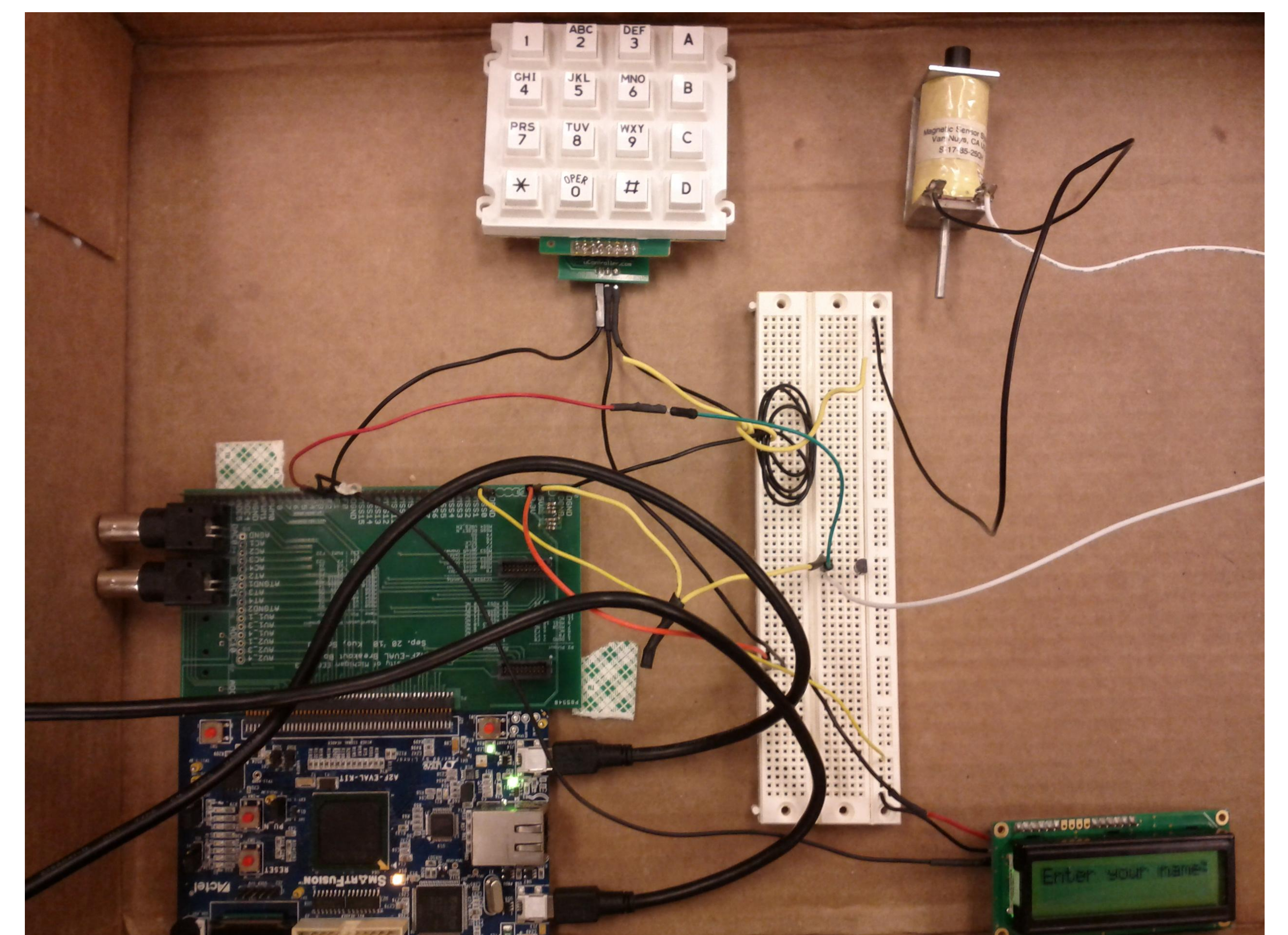
Introduction: Old insecure entry system

People are always looking for an easy, secure, user-friendly way to access buildings, unlock doors and ensure items are kept as secure as possible. As technology develops such demands are met, however, such systems are usually insecure to a certain extent and somewhat counterintuitive.



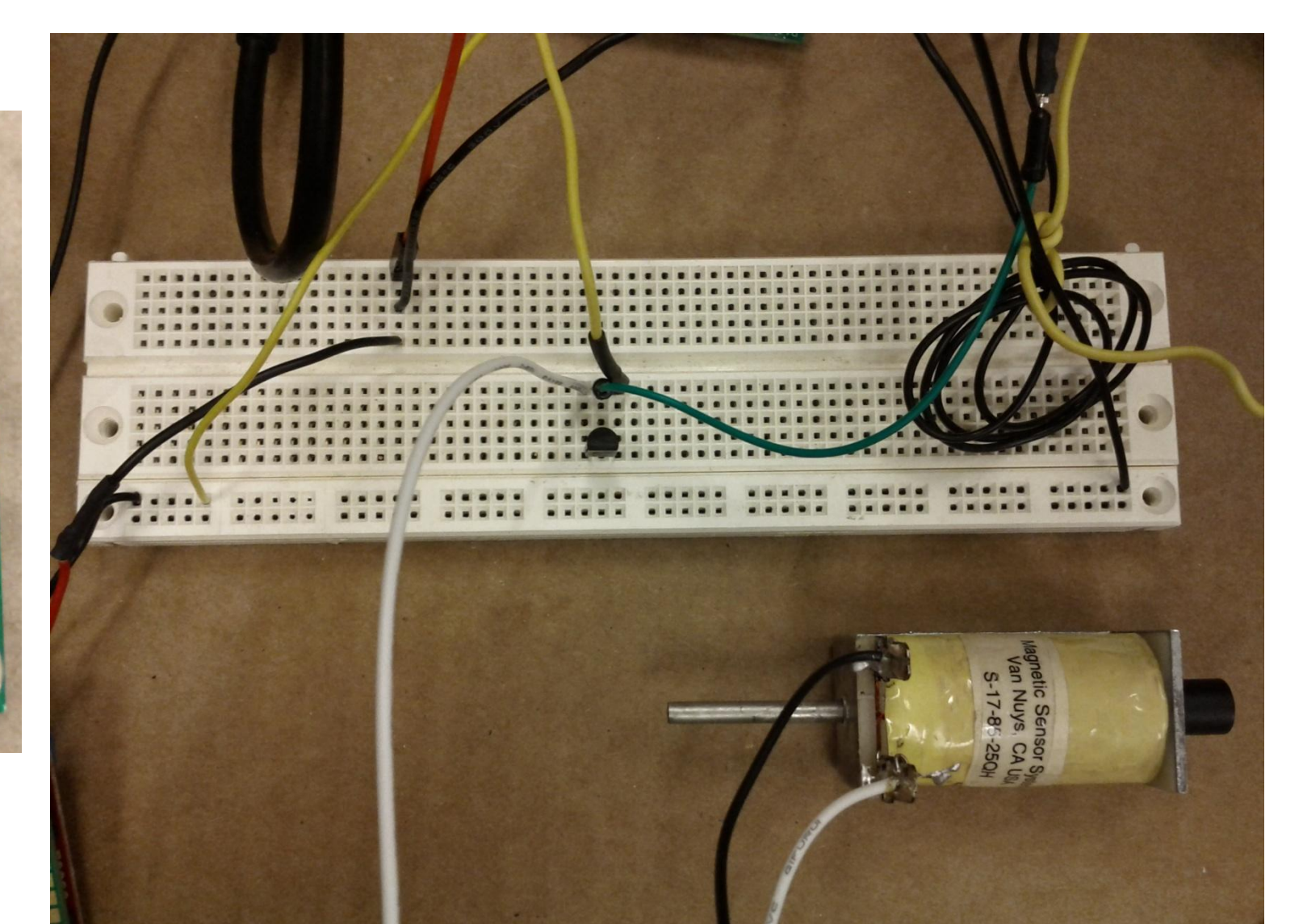
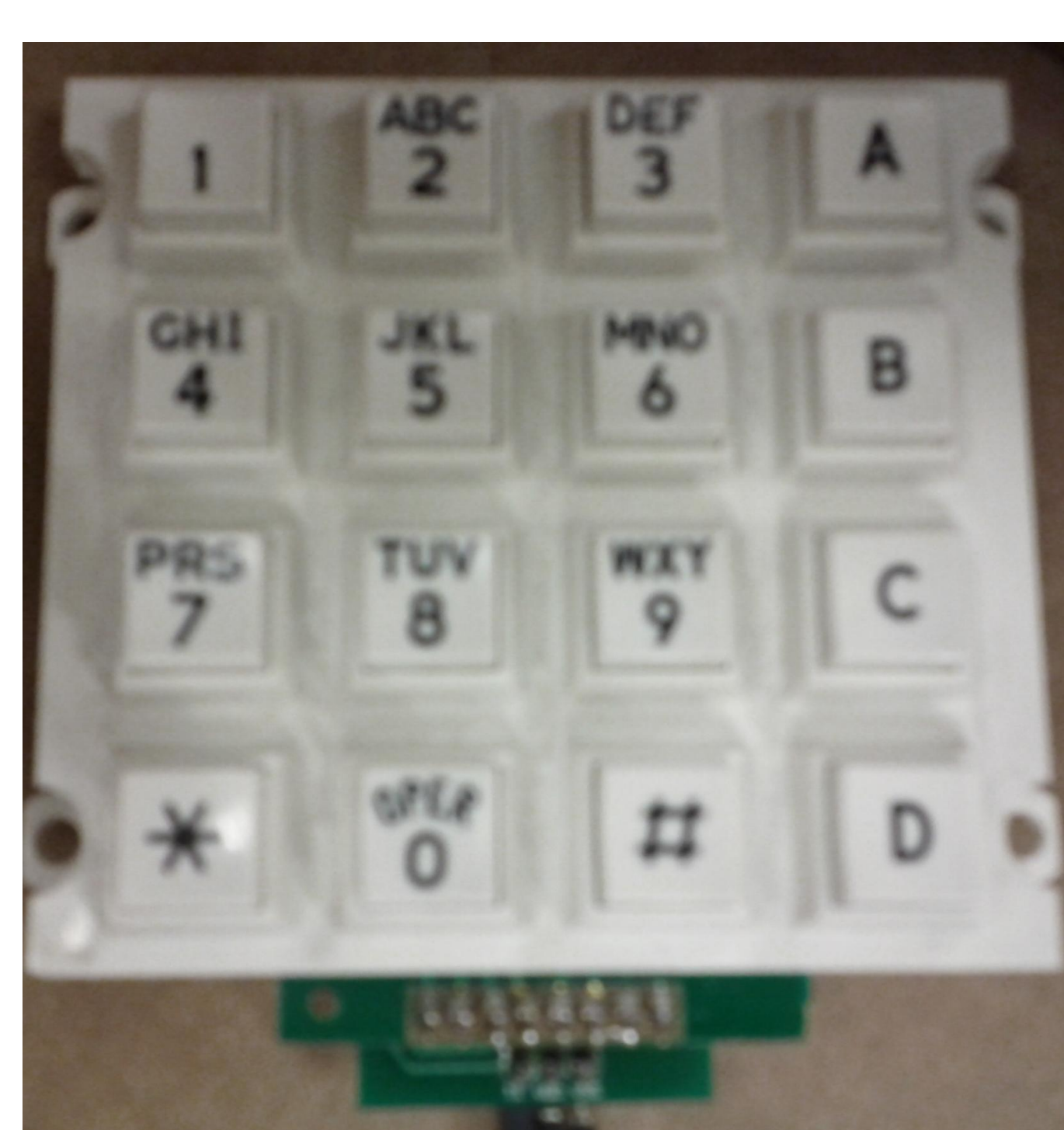
Proposed Solution: New secure digital entry system!

We've created an intuitive simple system that allows users to enter a username and a password as they would on a computer login screen, it would print out a welcome message and power up the solenoid to unlock a door/safe if the user has access. There only exists one master and only he has access to add and remove users from the system. The master is hardcoded into the system thus making it more secure as no one can attempt to change it or cut the power to reset the master username and password.



Communication and Interfacing

- **Actel SmartFusion Board:**
Interfaces with peripherals through UART
- **Keypad:**
For users to enter names and add/delete users
- **LCD Screen:**
To prompt user to enter data and display welcome message
- **Solenoid:**
Locks and unlocks door depending on access codes



Conclusion

You can use our entry system to enter new users, delete existing users and unlock doors/locks using the solenoid. Our system can be used as the basis to a more durable design in real life.