

<onlyinclude>**Current Status** - Became [Madlab\\_Storage](#).</onlyinclude>

This project will enable a door to be unlocked from the outside using an RFID tag with a unique number on it, and be able to identify that person on a connected PC. The accepted tags will be stored on the Arduino (or compatible hardware). The system will eventually have the ability to edit the accepted cards from a connected PC, and have a log file that can be accessed over the internet to monitor comings and goings of users.

## Project Aim

The aim of this project is to create a Door Control system that

- is secure, simple and reliable
- uses RFID cards and possibly an accompanying PIN code to open the door
- will still work in the event of power failure, with a Battery backup.
  - Fail closed door Strikes also an option, so that it will need a key to unlock instead.
- will run on an Arduino or compatible hardware
- will communicate with a PC to log who is in the space at what time.
- will still run without a PC, except for administration.

## Project Members

- [TBSliver](#)

## Hardware

The current idea for the hardware is to use

- any Arduino or compatible hardware
- an [ID12 RFID Reader Module](#)
- several [RFID Tag's](#)
- Several LED's or a screen to provide feedback for whats happening.
  - Starting with LED's due to lack of screen, plus keeps it simple.

## Schematic & Breadboard

Using [Fritzing](#), have quickly designed a schematic and breadboard layout for this circuit. It is only basic, using LED's instead of a screen or a lock mechanism.

This is the [schematic](#).

This is the [breadboard layout](#).

## Prototypes

**Version 0-1** Basic functionality with a switch and a random number generator. (This version is more of a proof of concept, and to teach me some of the required code to get this project to work.)

**Version 0-2** Full RFID only functionality. This release allows the user to add tags to a DB, and remove them as needed (although with certain limitations...), and will unlock ONLY for those RFID tags in the Database.

**Version 0-3** This version will extend the functionality to include a Keypad for inputting a Pin. For this, the DB functions will have to be re-written, aswell as several other functions to allow a seperate Pin for each RFID tag. (This'll teach me for defining things explicitly....) This release will (hopefully) also address the limitations of Version 0-2, with a De-frag function for the database, as well as a password for the menu system.

**Database** Testing the database function outside of the main program. Also working on a better menu system.

## Future Upgrades

- Add a screen for custom messages
- Add bluetooth detector as secondary method for pin entry
- Computer side interface for setting up different things
  - Add specific pins for events, so that directions can be shown to which floor the event is on.

## Related Projects

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