IOT BASED DOOR ACCESSING SYSTEM USING RFID

ABSTRACT

For companies where security is vital and access to certain areas must be controlled and monitored, there should be an access control system that allow companies to manage and monitor all access points and locks, allowing for auditable security and quick responses to any security breaches.

REQUIREMENTS

Hardware:

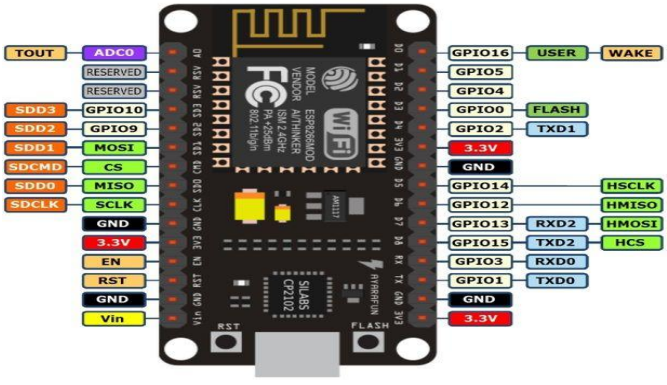
- Node MCU ESP8266 WIFI Development Board
- DC 5V 1 Channel Relay Module
- RC522 Chip IC Card Induction Module RFID Reader
- RFID Tag Cards or Key Rings
- Solenoid Switch Door Lock
- One Diode from 1N4001-1N4007
- Cables
- Breadboard

Software:

- Web technologies.
- Aurdino IDE.

PROPOSED SYSTEM

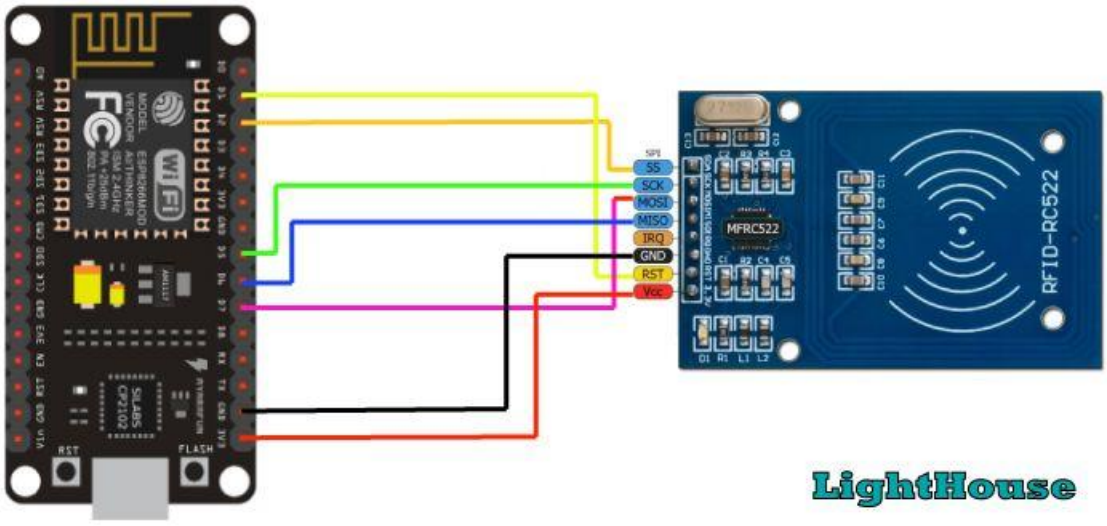
IOT based door accessing system is worked as follows, first connect the Node MCU to the WiFi network so as we can transfer the data from the Node MCU to the database.



Second step is to connect the RFID reader to the Node MCU so that it can read the input from the user and checks whether the particular person can enter in to the room or not.

Since it is highly secured system only some particular people can enter in to the room. The next step is to set up the basic configuration. First the Node MCU takes the input from the RFID card data through PHP and it checks whether the data is authorized id or not. If the ID is authorized then the solenoid lock will be opened. If the ID is unauthorized then the beep sound will be produced for the security purpose.

CIRCUIT DIAGRAM



APPLICATIONS:

- Library management
- Campus management
- Industrial management
- Home management

CONCLUSION

In conclusion this project was a great learning experience of the Arduino platform and circuit design .We learned a lot about Arduino programming and our electronics knowledge has grown considerably and we can apply this on real time robotic applications

Management has provided budget to buy below hardware components to develop **"IOT BASED DOOR ACCESSING SYSTEM USING RFID"** projects.

	Quantity Required	Estimated Cost	Total
RC-252	**2**	**250**	**500**
Solinoid Lock	**2**	**400**	**800**
Mini Bread Board	**2**	**100**	**200**
12 V Adapter	**2**	**200**	**400**
Charger Adapter	**2**	**250**	**500**
Wires	**2**	**100**	**200**
Total Amount			**2600**