COMPONENTS REQUIRED:

- Arduino UNO.

- Perf-board

- Buzzer.

- LED.

- Relay Switch.

- Jumper Wires.

- Power Supply.

- RFID-Reader

- GSM Module
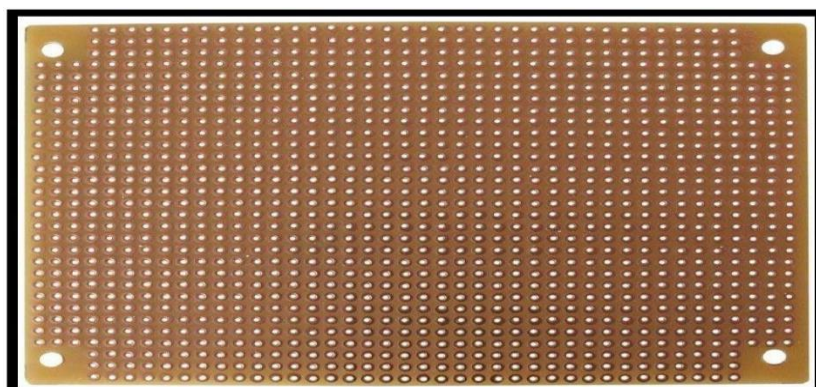
- Solenoid lock

ARDUINO UNO:

The Arduino Uno is a microcontroller board which has ATmega328 from the AVR family.

- There are 14 digital input/output pins, 6 Analog pins and 16MHz ceramic resonator.
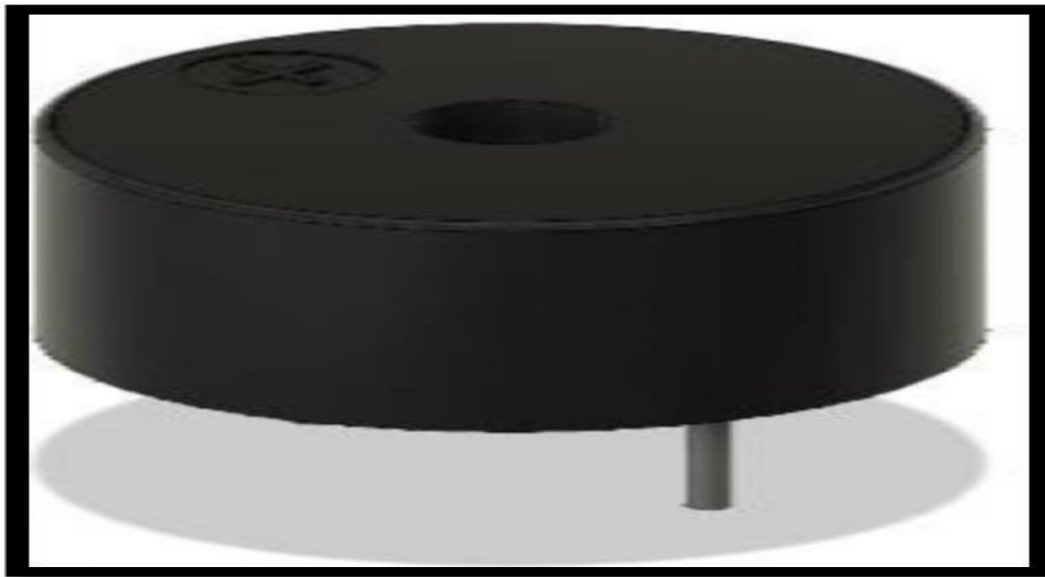

PERF – BOARD:

Perf-board is material for prototyping electronic circuits (also called DOT PCBs). It is a thin, rigid sheet with holes pre-drilled at standard intervals across a grid, usually being a square grid of 0.1 inches (2.54 mm) spacing. These holes are ringed by round or square copper pads, though bare boards are also available. Inexpensive Perf-board may have pads on only one side of board, while better quality Perf-board can have pads on both sides (plate-through holes). Since each pad is electrically isolated, the builder makes all connections with either wire wraps miniature point to point wiring techniques. Discrete components are soldered to the prototype board such as resistors, capacitors, and integrated circuits.
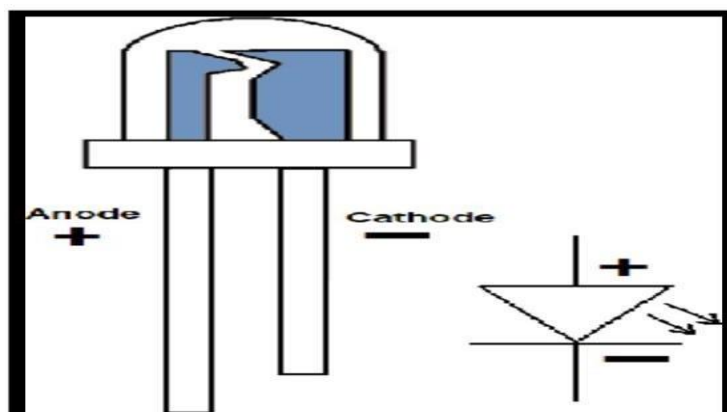
BUZZER:

A buzzer or beeper is an audio signaling device, which may be mechanical, electro-mechanical, or piezoelectric (piezo for short). Typical uses of buzzers and beepers include alarm devices, timers, and confirmation of user input such as a mouse click or keystroke.

LED:

A light-emitting diode (LED) is a semiconductor light source that emits light when current flows through it. Electrons in the semiconductor recombine with electron holes, releasing energy in the form of photons. The color of the light (corresponding to the energy of the photons) is determined by the energy required for electrons to cross the band gap of the semiconductor.
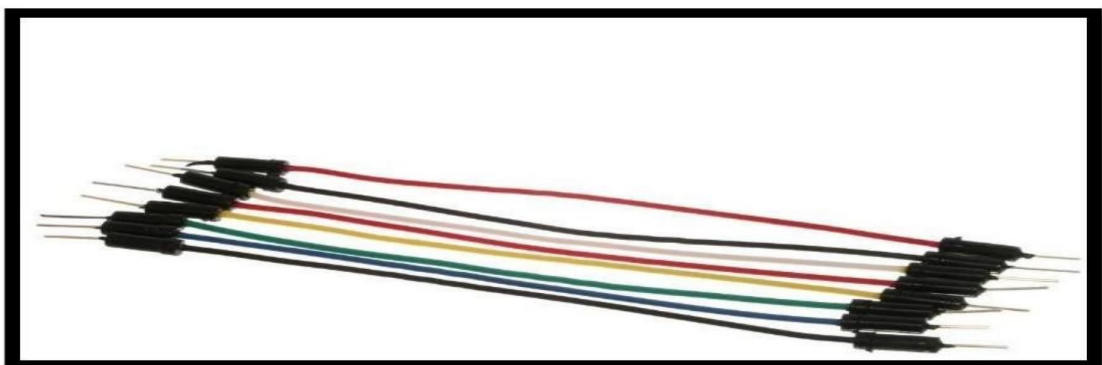
RELAY

A **relay** is an electrically operated switch. Many relays use an electromagnet to operate a switching mechanism, but other operating principles are also used. Relays find applications where it is necessary to control a circuit by a low-power signal, or where several circuits must be controlled by one signal.

JUMPER WIRES:

Stranded 22AWG jump wires with solid tips. A jumper wire (also known as jumper wire, or jumper) is an electrical wire, or group of them in a cable, with a connector or pin at each end (or sometimes without them – simply "tinned"), which is normally used to interconnect the components of a breadboard or other prototype or test circuit, internally or with other equipment or components, without the soldering.

EM 18 RFID Reader

RFID is an acronym for Radio Frequency Identification**.** RFID (radio frequency identification) is a technology that incorporates the use of electromagnetic or electrostatic coupling in the radio frequency (RF) portion of the electromagnetic spectrum to uniquely identify an object, animal, or person. RFID is coming into increasing use in industry as an alternative to the bar code. The advantage of RFID is that it does not require direct contact or line-of-sight scanning.

SOLENOID LOCK:

Features:

- Iron Body Material
- High quality ultra-compact electric lock.
- Rustproof, durable, safe, convenient to use.
- Suction which tightly sucks the iron, thus locking the door.
- Applicable for being installed in the escape door or fire door electronic controlled system.

- Adopts the principle of electric magnetism, when the current through the silicon, the electromagnetic lock will achieve a strong.

GSM

- **Global System for Mobile Communication (GSM)**

Definition:

GSM, which stands for Global System for Mobile communications, reigns (important) as the world's most widely used cell phone technology. Cell phones use a cell phone service carrier's GSM network by searching for cell phone towers in the nearby area. Global system for mobile communication (GSM) is a globally accepted standard for digital cellular communication.