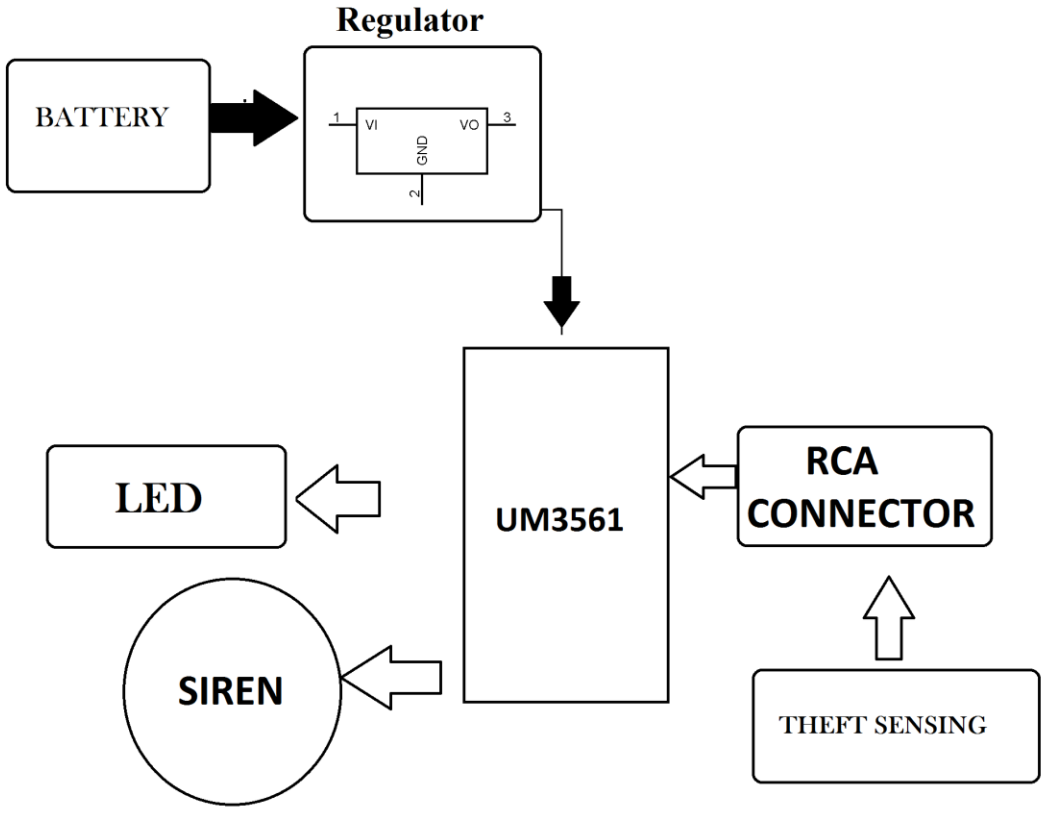
E Bicycle Locking System

Owning a bicycle is comes with a risk of it getting stolen away. Thus a system which can help prevent the theft is required for theft avoidance. This project does this task with very few components and a smart strategy that helps expose the burglary at the time it is happening through the help of a siren.
E-Bicycle locking project works with the help of an electronic circuit having a switch which acts as the key to the bicycle lock. A metal wire is connected to the system in such a way that the wire goes from in between the tyre spikes and into the system. So if someone wants to steal the bicycle, the wire has to be broken first then only the bicycle will move. And if the wire lock is broken it is sensed by the system to raise a siren alert. Hearing the siren the owner can get alert and try to avoid theft from happening.
The mechanical locking of the tyre happens due to the wire. The wire used is for demo purpose. A stronger metal pipe can be used to lock the tyre. This wire is connected on to the system through a RCA connector. When there is a connection the sensor IC detects it and cuts off the siren. On the contrary if there is no connection between the locking terminals the sensing IC will connect the siren to the supply and the siren will start ringing. In this way the theft situation can be handled better in an early and timely manner.

Block Diagram :



Hardware Specifications

- IC UM3561
- RCA connector
- Resistors
- Capacitors
- Siren
- LED

- Lock Wire