



Dwarkadas Jivanlal Sanghvi College of
Engineering

Synopsis for Physics Project

"Burglar Alarm Using Ultrasonic
Sensor"

Submitted by FE IT Batch – 1

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ACKNOWLEDGEMENT

We would really like to thank Supriya Mam and Tendulakar Sir, our physics teacher, to lead us through an idea to create something using physics ideas and concepts. It has given us an opportunity to come with an idea and lead over it.

We really appreciate her initiative towards us for the physics project. We really thank her for her support and for guiding us in our project and to make a successful project.

Apart from this, I really thank my team members for coordinating willingly and completing the project on time.

-Anish Sharma (Group Leader)
On behalf of FE IT Batch-I

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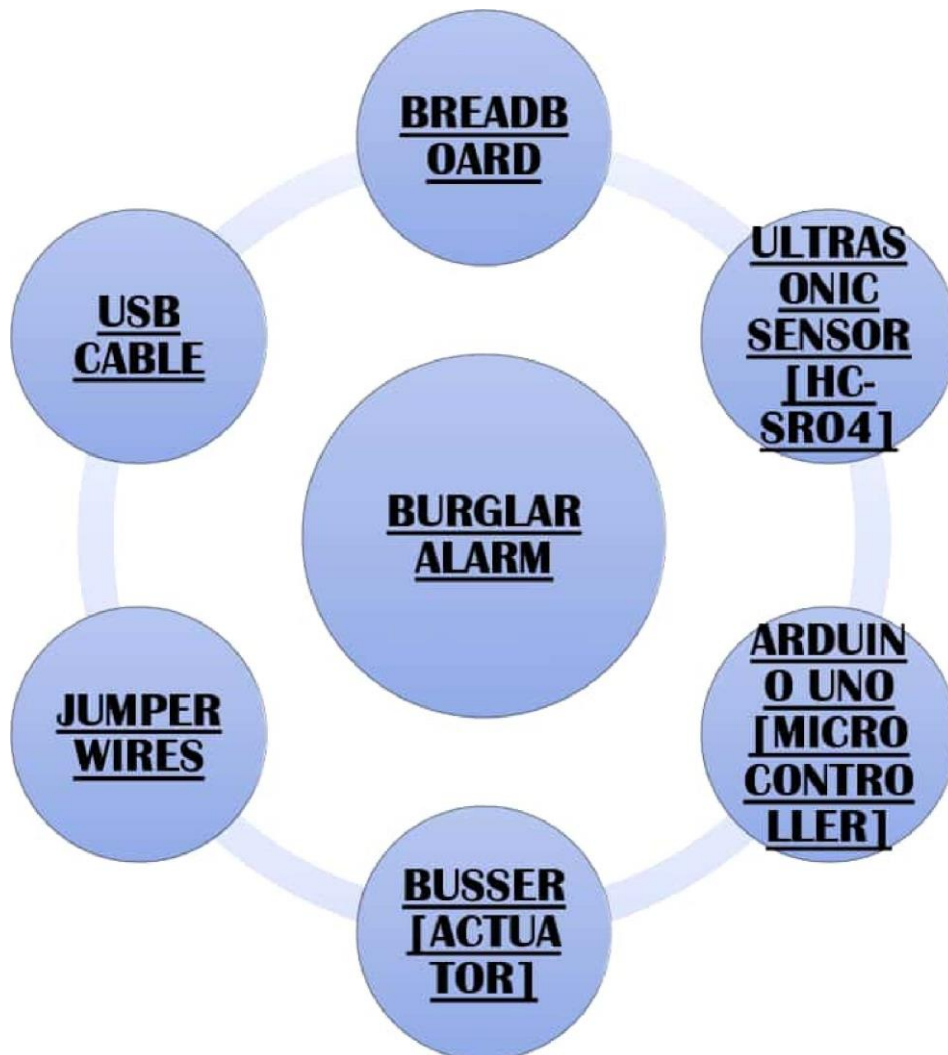
ABSTRACT

Security is important for every commercial property to prevent robberies and to ensure safety. We always want our family to be safe. But when we need to go out, we need to know they are protected from harm.

So, here we have an affordable alarm system which will protect the house members as well as all the belongings, it is one of the modern ways of security.

Monitored home alarm systems will not only warn home occupants of the presence of smoke in the home, but they will also warn against fire. This security system will provide a peace of mind against robbery.

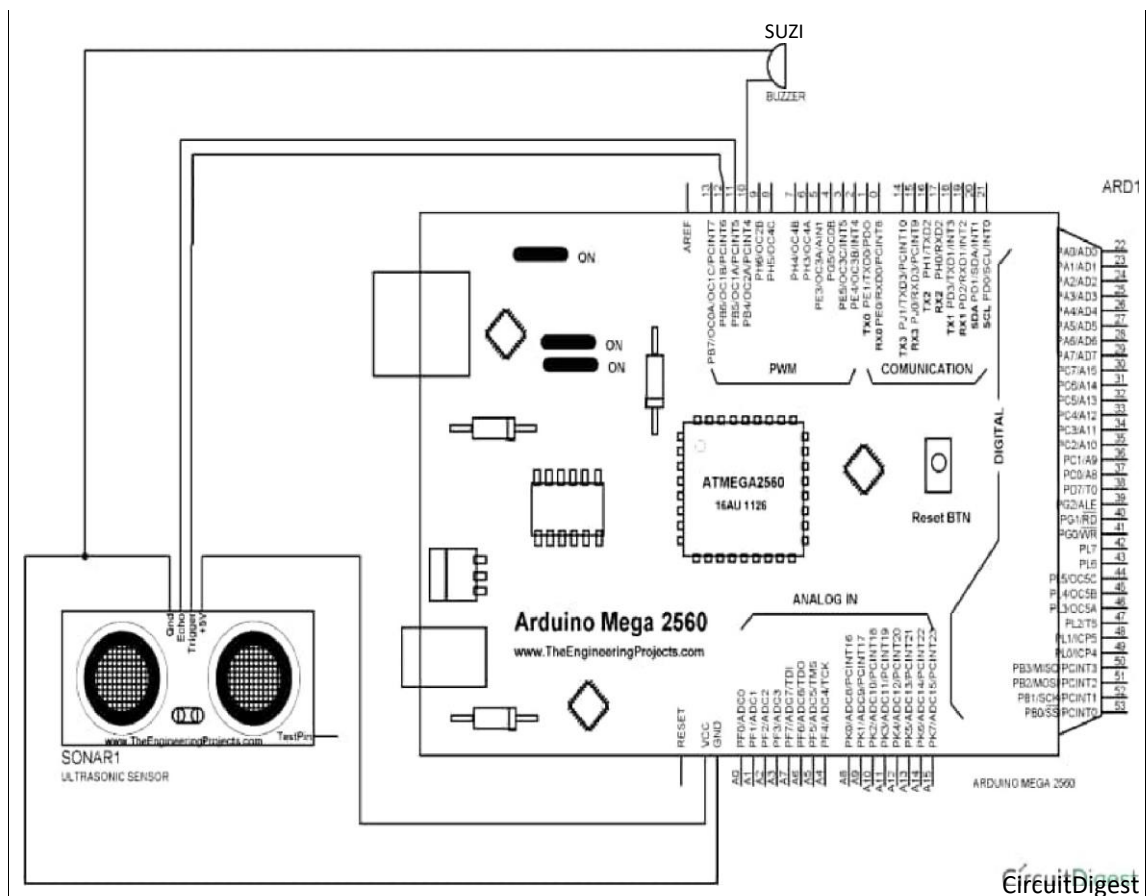
REQUIREMENTS



TOTAL COST: Rs.700

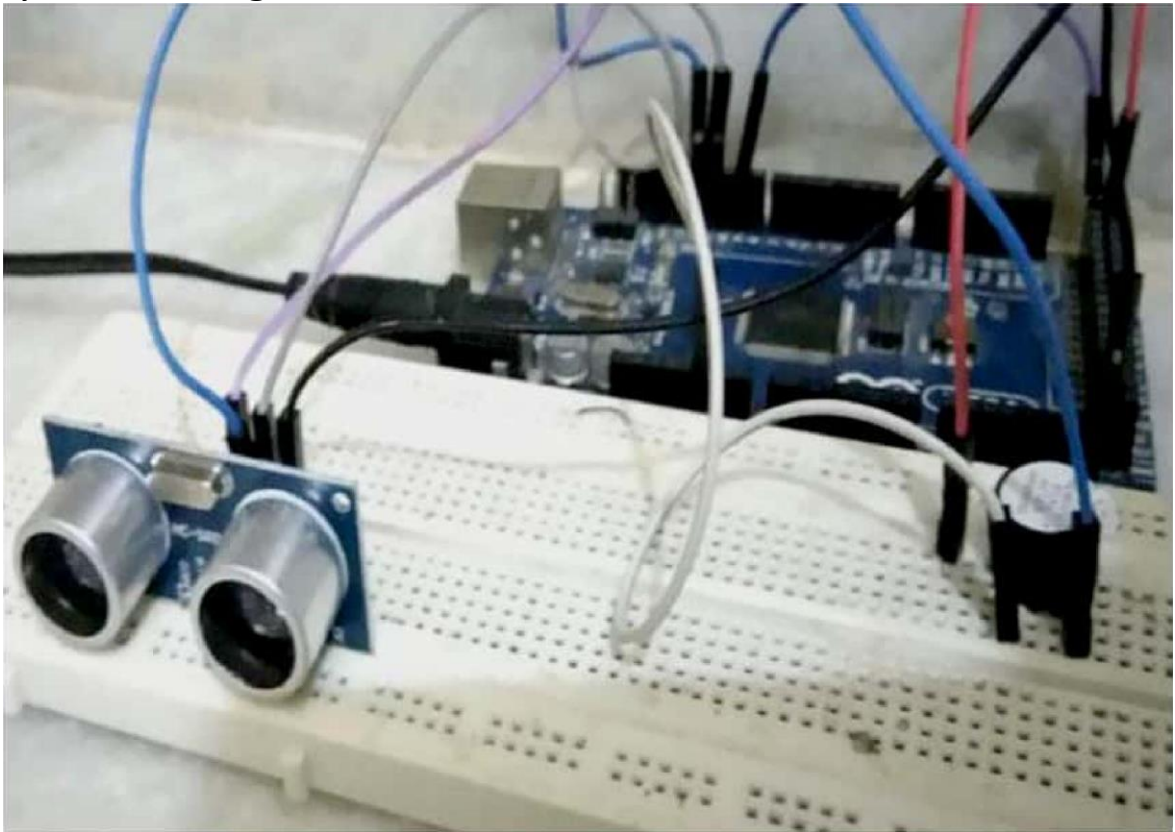
CONSTRUCTION

- Here, the burglar is constructed using the diagram as shown in the figure, All the components are connected according to the diagram.
- The breadboard acts as a base for all the components. The Arduino UNO is controlled according to the code. Battery is connected to the Arduino to supply current



WORKING

- The burglar alarm is controlled by three main components: the microcontroller [Arduino UNO], sensor [ultrasonic sensor] and the actuator [buzzer]. Its main function is to detect the presence of a burglar.
- Whenever the burglar comes in the range of the sensor, the microcontroller detects it by sending ultrasonic waves. If the burglar is in the defined range, the microcontroller sends a high signal to the buzzer and the buzzer starts beeping. This is the way how a burglar alarm works.



RESULT

- Bulgar alarm has been proved that useful for the security purpose.
- It increases the safety of the house, jewellery, Cash, belongings as well as members of the family. The burglar alarm can be modified in such a way that it gives an alert sound against fire too.
- It's one of the best and efficient way to move towards one step ahead closer to protection security.

REFERENCES

- IDEA OF PROJECT:
INSTRUCTABLE.COM