Course code: 21CSP-344

Course Name: Internet Of Things Lab

Date of Performance – 17th Aug 2023

Experiment1.2

Aim : Identification of different sensors used in IoT applications.

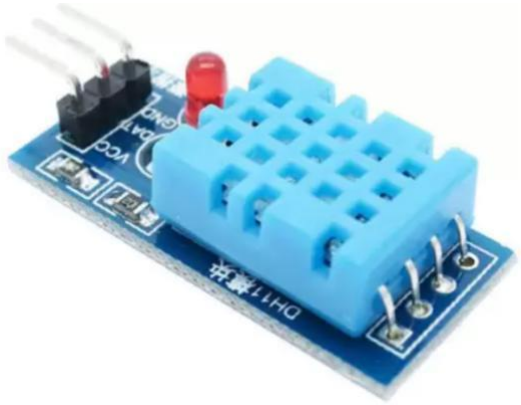
Objectives :

1. To study hardwares related to IoT.
2. to understand and identify different sensors used in IoT.

Hardware and Softwares : Various Sensors .

Description :

1. Temperature Sensor : A device, used to measure amount of heat energy that allows to detect a physical change in temperature from a particular source and converts the data for a device or user, is known as a Temperature Sensor



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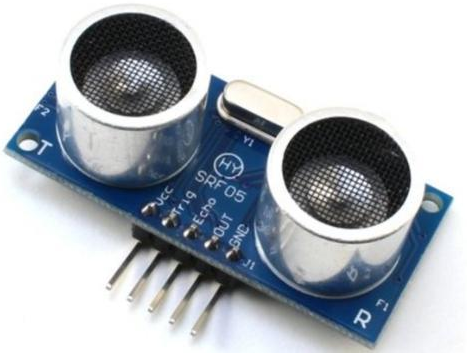
2. Proximity Sensor : A device that detects the presence or absence of a nearby object, or properties of that object, and converts it into signal which can be easily read by user or a simple electronic instrument without getting in contact with them .

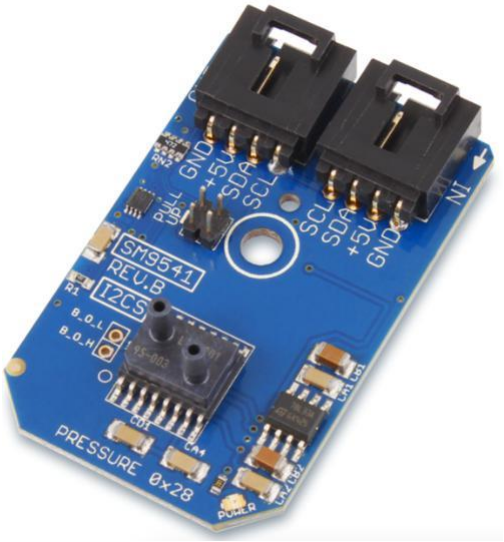
Course code: 21CSP-344

Course Name: Internet Of Things Lab

Date of Performance – 17th Aug 2023



3. Pressure Sensor : A pressure sensor is a device that senses pressure and converts it into an electric signal. Here, the amount depends upon the level of pressure applied.



4. Water Quality Sensors : Water quality sensors are used to detect the water quality and Ion monitoring primarily in water distribution systems.

Course code: 21CSP-344

Course Name: Internet Of Things Lab

Date of Performance – 17th Aug 2023

5. Chemical Sensor : Chemical sensors are applied in a number of different industries. Their goal is to indicate changes in liquid or to find out air chemical changes. They play an important role in bigger cities, where it is necessary to track changes and protect the population.

6. Gas Sensor : Gas sensors are similar to the chemical ones, but are specifically used to monitor changes of the air quality and detect the presence of various gases.

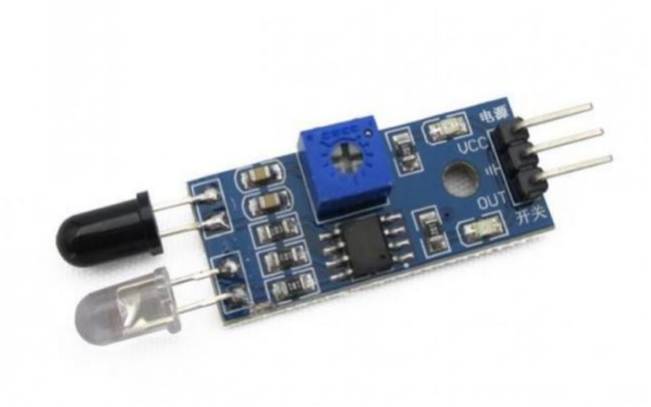
7. Smoke Sensor : A smoke sensor is a device that senses smoke (airborne particulates & gases), and it's level.

Course code: 21CSP-344

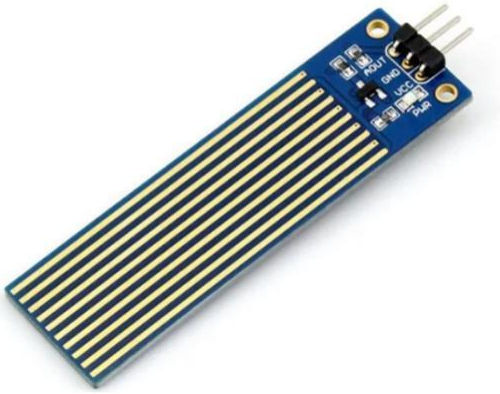
Course Name: Internet Of Things Lab

Date of Performance – 17th Aug 2023

8. IR Sensor : An infrared sensor is a sensor that is used to sense certain characteristics of its surroundings by either emitting or detecting infrared radiation. It is also capable of measuring the heat being emitted by objects.



9. Level Sensor : A sensor which is used to determine the level or amount of fluids, liquids or other substances that flow in an open or closed system is called Level sensor

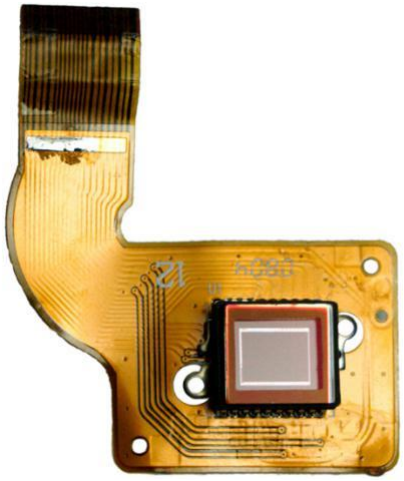


10. Image Sensor : Image sensors are instruments which are used to convert optical images into electronic signals for displaying or storing files electronically.

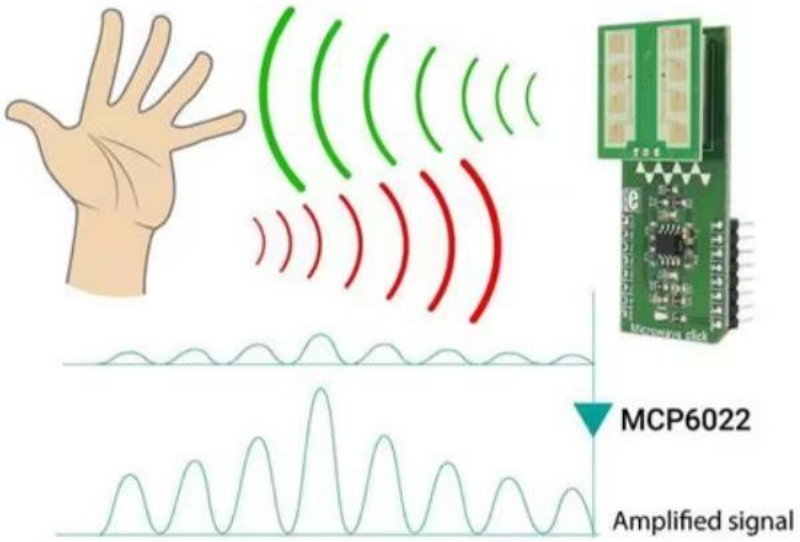
Course code: 21CSP-344

Course Name: Internet Of Things Lab

Date of Performance – 17th Aug 2023



11. Motion Detection Sensor : A motion detector is an electronic device which is used to detect the physical movement (motion) in a given area and it transforms motion into an electric signal; motion of any object or motion of human beings .

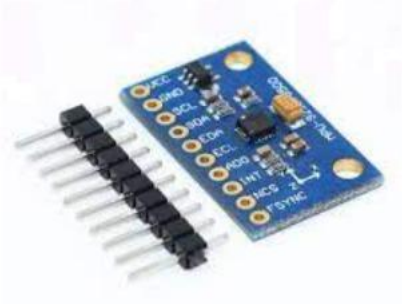


12. Accelerometer Sensor : An accelerometer is a transducer that is used to measure the physical or measurable acceleration experienced by an object due to inertial forces and converts the mechanical motion into an electrical output. It is defined as rate of change of velocity with respect to time .

Course code: 21CSP-344

Course Name: Internet Of Things Lab

Date of Performance – 17th Aug 2023



13. Humidity Sensor : Humidity is defined as the amount of water vapour in an atmosphere of air or other gases. The most commonly used terms are “Relative Humidity (RH).

Learning Outcomes :

1. Which are the most used Sensor .
2. What are Various Sensors
3. Difference between a wireless sensor network (WSN) and the Internet of Things(IoT) network..