



Parshvanath Charitable Trust's  
**A. P. SHAH INSTITUTE OF TECHNOLOGY**  
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)  
(Religious Jain Minority)

**Department of Information Technology**

**Academic Year: 2018-19**

**Class / Branch: BEIT**

---

**Project Title :** An Automated Fruits Quality Detection Framework Using Colour Spectrography

**Group No:**16

**Group Members:**

- |                          |            |
|--------------------------|------------|
| 1)Surajkumar Yadav       | (15104022) |
| 2) Barun Roy             | (16204023) |
| 3) Khan Mohd Shoeb       | (16204029) |
| 4)Ajaykranti Vishwakarma | (14104022) |

**Guide:** Prof. Rahul Ambekar

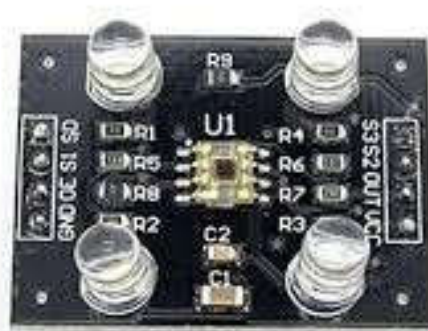
## Arduino Boards :



Arduino is an open source electronics platform based on easy-to-use hardware and software .arduino boards are able to read inputs-light on a sensors,a finger on a button,or a Twitter message -and turn it into an output-activating a motor,turning on a led.

The arduino project provides tge Arduino integrated development environment (IDE),which is a cross platform application written in the programming language java.

## Color Sensor TCS230 Module:



The TCS230 senses color light with the help of an 8 x 8 array of photodiodes. Then using a Current-to-Frequency Converter the readings from the photodiodes are

converted into a square wave with a frequency directly proportional to the light intensity. Finally, using the Arduino Board we can read the square wave output and get the results for the color.

If we take a closer look at the sensor we can see how it detects various colors. The photodiodes have three different color filters. Sixteen of them have red filters, another 16 have green filters, another 16 have blue filters and the other 16 photodiodes are clear with no filters.

Connected system:

