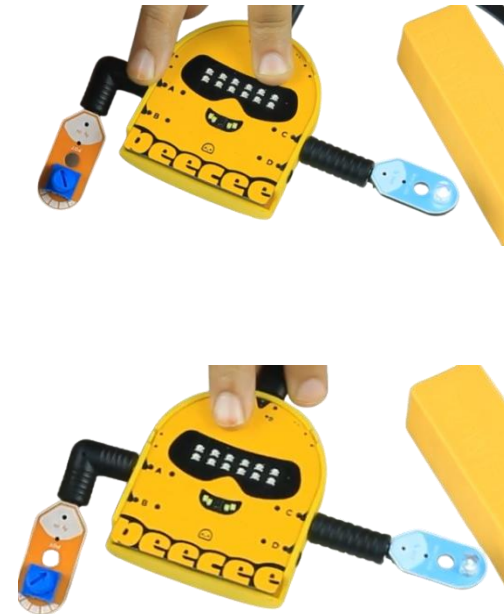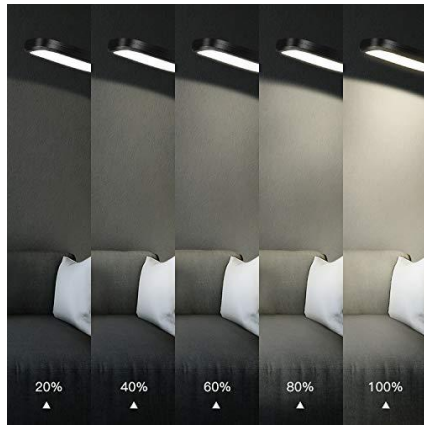# LED Controlling System

Project Overview: In this project, we control external LEDs using various controlling devices through coding. The system can be scaled and modified based on the desired complexity, ranging from simple on/off control to advanced automated systems with multiple functionalities.

Prerequisite

- Waves
- Wavelength
- Frequency
- Luminance
- Intensity/ luminance intensity

Learning Outcomes

We Will Learn About-

- Waves, wavelength

- Frequency, Intensity, brightness

- What is energy?

- Understand the Intensity and Luminous intensity.

- Resistor and Resistivity of light.

- Application of light

Ask About….

- How is intensity different from brightness?

STEAM

SCIENCE: Energy, Light, Resister, resistivity of light, luminous, luminous intensity.

ARTs: make different brightness sequences

Mathematics: you will get values from 0 to 1023 when you tune the knob of the potentiometer. For the brightness variable, we converted the values from the potentiometer to fall with the range of 0 to 255: Brightness=(255.0/1023.0)*potValue

Technology/**E**ngineering: Introduction to microcontrollers and coding, Sequential programming for LED operation.