

## Used Components - Short Notes:

| Component Name           | Purpose / Use   |
|--------------------------|---|
| Arduino UNO              | Used to control the RGB LEDs and handle the logic.                            |
| RGB LED (600-800 pixels) | These LEDs change color and can display a variety of patterns based on input. |
| Resistors                | Used to prevent excess current from damaging the LEDs.                        |
| Jumper Wires             | Used for making connections between the Arduino and the LEDs.                 |
| Power Supply (5V)        | To provide power to the Arduino and the LEDs.                                 |

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## Project Description (Short Note)

This project demonstrates how to control a large array of RGB LEDs (600-800 pixels) using an **Arduino**. The RGB LEDs are connected in a way that allows them to produce a variety of colors by mixing **Red, Green, and Blue** light. The system allows users to create different lighting patterns or effects on the LEDs by adjusting the values of the individual colors.

- **Objective:** Create a simulation where users can control the colors and brightness of the LEDs using the **Arduino**.
- **Functionality:** The system can produce different color patterns (e.g., red, green, blue) depending on the user input or pre-defined sequences. This can be used for creating custom lighting effects or displays.
- **Code Logic:** The Arduino reads inputs from buttons or other sources and adjusts the colors of the LEDs accordingly, creating various visual effects.