Goal

Our project aims to easily and efficiently bring a smart lighting system to any home. This system can be implemented with any existing lighting design to allow wireless control and dimming capabilities from your smartphone. Our Android application wirelessly controls the lights using Bluetooth, Arduino, and NRF chips. Features like timers, optical sensors make this design more user-friendly.

Motivations and Objectives

- Making a substantial aspect of our daily lives more convenient without compromising the economic advantage.
- Smart Home automation devices provide both secure and comfortable control functions.
- Existing control systems have limited compatibilities and our open system will allow the users to choose between various available lighting products that matches their needs and cost cutting choices.

Research Challenges

- Establishing Bluetooth communication between the app and the hardware.
- Stabilizing brightness above certain levels.

Acknowledgement

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Methodology

Transmitted Bluetooth signal

Results

- Ability to control switching and dimming level of two rooms each with two nodes.
- Controlling is achieved using the smart switch or the android app.

References