

PERSISTENCE OF VISION

OBJECTIVES

- To demonstrate the concept of Persistence of Vision (POV) by creating a visual display using rapidly flashing LEDs.
- To design and implement a system that creates the illusion of continuous motion using discrete visual stimuli.

INTRODUCTION



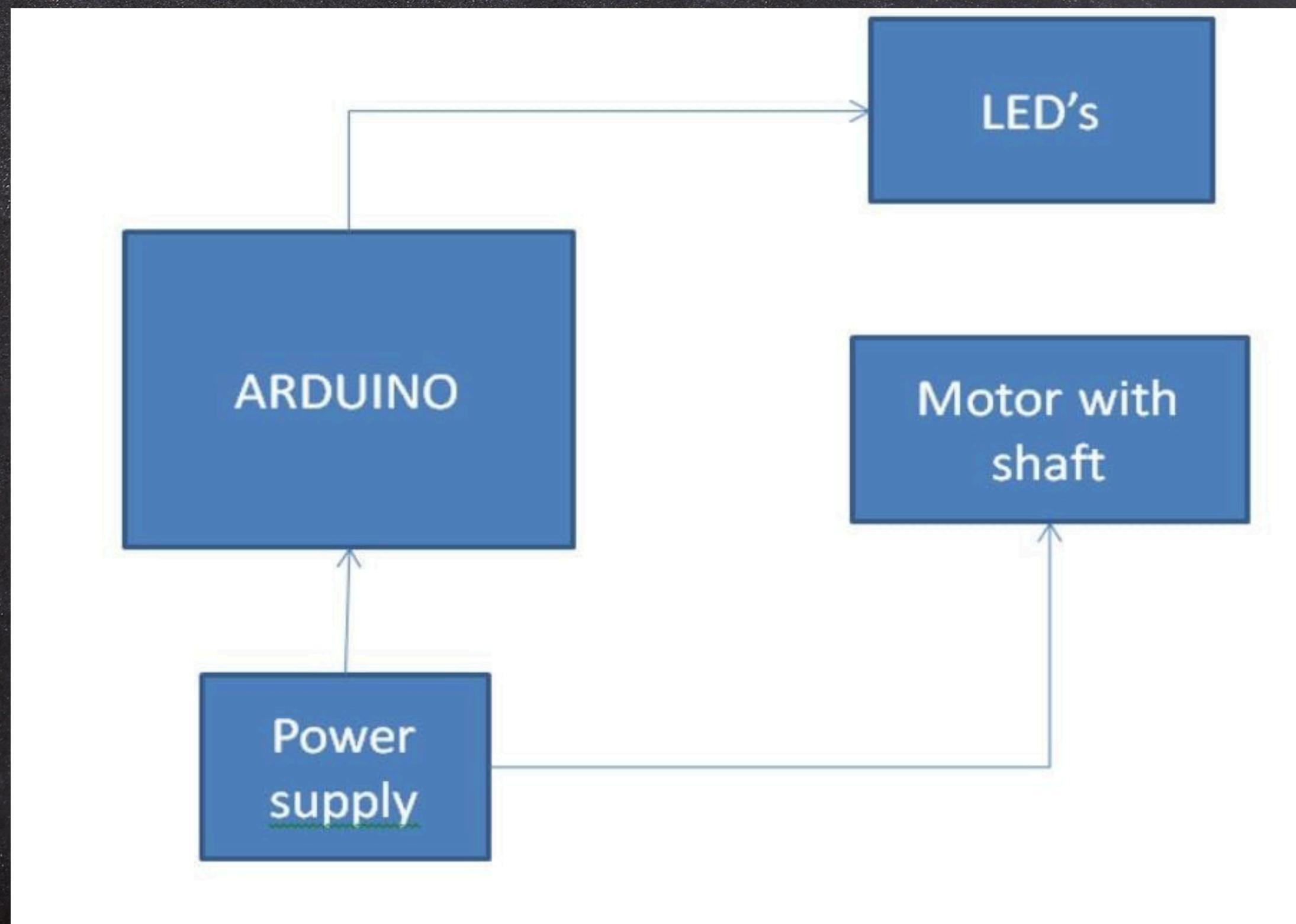
Persistence of Vision refers to the phenomenon where the human eye retains an image for a fraction of a second after the object has disappeared. This principle is utilized in various display technologies to create the illusion of smooth motion. In this project, we aim to explore and demonstrate this effect by developing a POV display.



LITERATURE

- Research on POV has been applied in various fields, including cinema, animation, and electronic displays. Early studies by pioneers such as Ptolemy and later advancements in modern LED-based POV displays provide a strong foundation for this project.
- Relevant literature includes studies on human visual perception, LED technology, and electronic circuit design for POV applications.

BLOCK DIAGRAM



METHODOLOGY

- **Design Phase:** Develop a schematic for the POV display, choosing appropriate components and creating the circuit design.
- **Component Selection:** Identify and procure necessary components, including a microcontroller, LEDs, and power supply.
- **Programming:** Write and upload code to the microcontroller to control the LED sequence.
- **Assembly:** Build the circuit based on the block diagram and test each part individually.
- **Testing and Debugging:** Fine-tune the timing and sequence of LEDs to achieve the desired visual persistence effect.

Identification of Components

- Microcontroller: Arduino Uno or similar
- LED Array: High-brightness LEDs
- Power Supply: 5V DC power supply
- Wood for Mechanical Setup
- Filament for 3D-Printing
- Miscellaneous: Resistors, capacitors, wires, and connectors

REFERENCES

- <https://www.hackster.io/>
- <https://hackaday.com/>

THANK YOU!

submitted by

- G.Dheekshith(1602-22-735-014)
- P.Gopi Krishna(1602-22-735-015)
- D.Rakesh(1602-22-735-044)