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INTRODUCTION

In today's world, many Countries waste large amounts of energy on lights that operate at unnecessary times, this problem costs these countries a lot of money and effects their economies. Also there are rationalization of consumption and poor solutions for this problem. Our invention is a lighting energy saver that will save energy and eliminate wasteful use of lights using a controlled mechanical movement on the power switch based on a motion sensor signal without altering or modifying any element of the lighting system, powered by rechargeable battery to allow wireless and portable use.

OBJECTIVES

- To design a system that takes advantage of non-use time of lights to save energy.
- To design a flexible system.
- To design a system that utilizes rechargeable battery to sustain a green environment.
- To produce a system that can be maintained and does not effect the available lighting system.
- To design a system that has high efficiency and low cost.
- To design a recyclable system.
- To design a system that is safe and easy to use.
- To design a portable and wireless system.

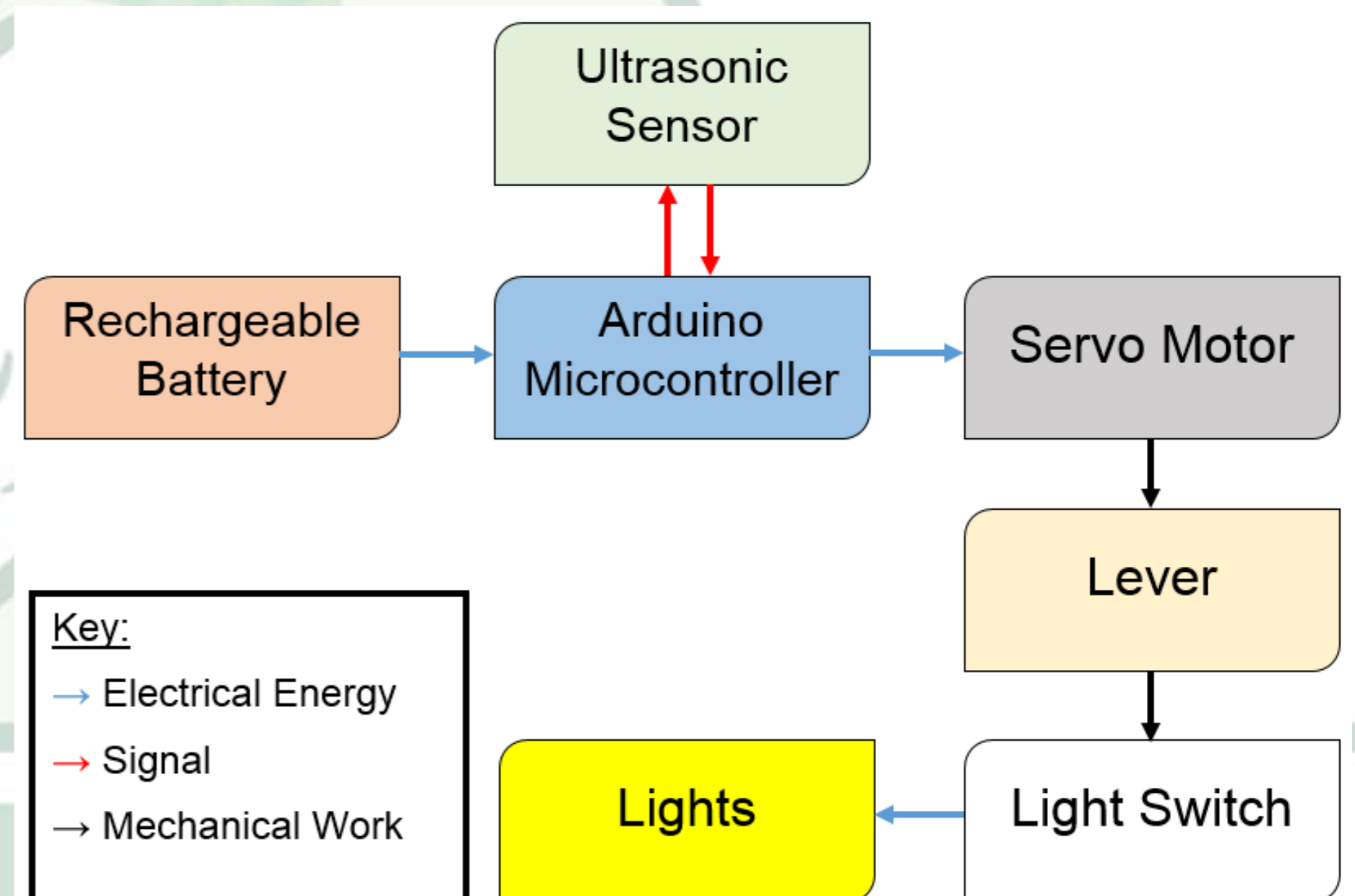
PROBLEM STATEMENT

How can we save the energy from lights by utilizing an external device that does not affect the available lighting system?

METHODOLOGY

An arduino microcontroller was used as the main component of this system. Motion feedback is received by an ultrasonic sensor which continuously sends signals reporting distance from nearby object/people to the microcontroller. If this distance is within the specified range, the microcontroller will energize the servo motor which will in turn move the lever upward to turn on the light switch and stay in that position until the person moves away. As soon as the person leaves a signal is sent to the microcontroller to make the servo motor move the lever downwards to turn off the light switch.

BLOCK DIAGRAM



CONCLUSION

Lighting energy saver is an eco-friendly approach that can be taken to eliminate the waste of lights not being used. All the objectives have been met.