

TEAM - GOOD GAME

EN1070 Electronic Product Design and Manufacture

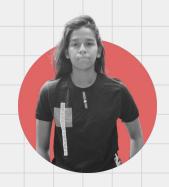
Our Team



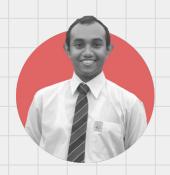
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Problem Description







Eliminating the need to get up and physically turn the lamp on and off



HOW

Bulb holder containing the receiver The remote carrying the transmitter



WHY

Potential to save energy.

Enhancing comfortability within the household.

Personalize Household.



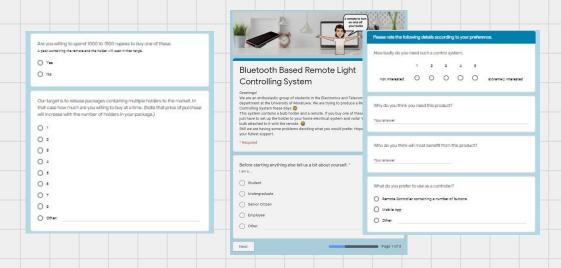


This system helps the disabled immensely.
This makes their lives easier and helps lift their mentality by removing their need to have a caretaker 24/7.



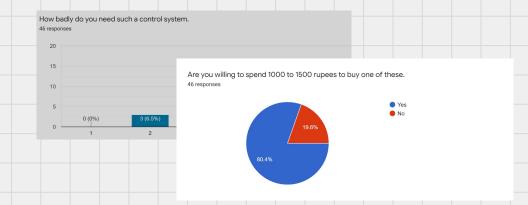
Justification

Our team created a survey to check the preference of the community for a product like this.



Problem Description

Justification



Thus, the need for our product and our initial predictions of the market value is justified.



Technical Specifications

For Remote Controller

For Bulb Holden

Operation Voltage : 6V, DC Maximum Current : 16.43mA Operation Voltage : 230V, AC Maximum Current : 1 A

Maximum Range : 10m

Technical Feasibility

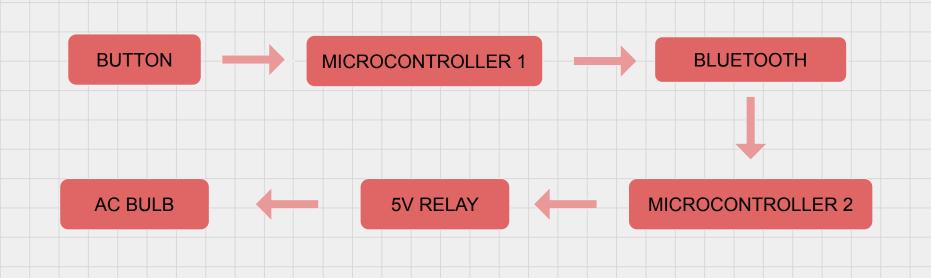
Hardware Requirements

- Inter connection method :- HC 05 Bluetooth Module
- Microcontroller :- ATmega328p
- Input Components :- Push buttons
- Output Components :- Thread Holders



- To operate the remote controller, we need to give 6V DC supply
- To operate the bulb holder, it require 230V AC supply
- To achieve effective transmission, we have to place both remote controller and bulb holder within bluetooth range

Product Anchitecture





Remote Controller

- Power Regulation :- 5V DC Regulator
- Input Buttons :- We have implemented two buttons.
 One for powering the remote controller. Other one is for control of the bulb.
- Send a signal relevant to the switch

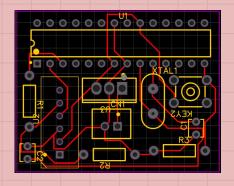
Bull Holden

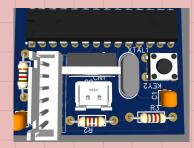
- Power regulation:- FWR with DC Regulator
- 5V Relay :- It's obvious that we can't control an AC current by microcontroller directly. We have to use relay to pass this obstacle.
- Receive the signal from the remote and trigger the correct bulb.



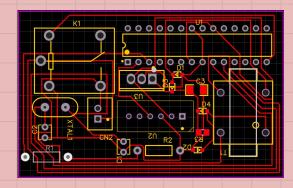
PCB designs 🚄

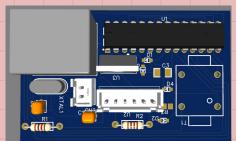






Remote





Bulb Holder

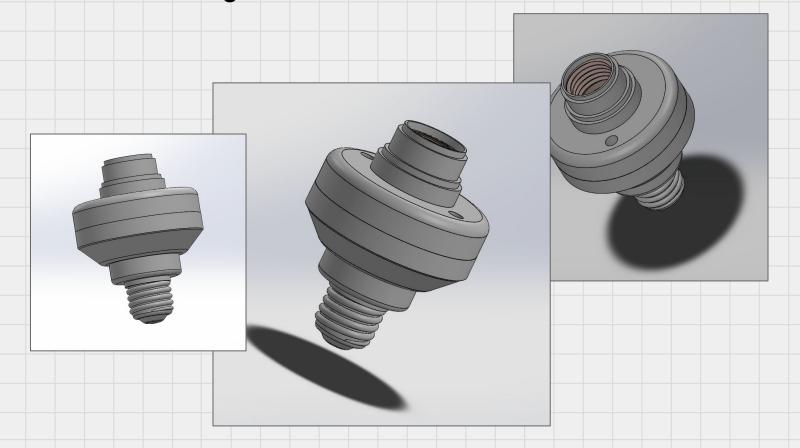


Enclosure Designs 4





Enclosure Designs





Proposed Budget 4

Component	Price (Rs.)	Component	Price (Rs.)
2 AAA batteny case	35.69 *2	6 pin header	2* 15
7805 Voltage Reg.	2 * 20	2 pin headens	2 *7
Atmega328p	2*330	diodes	4*2
hc 05 bluetooth	2*200	nesiston	6*1
16 Mhz crystal oscillator	2*11	push button	2* 15
22pf	5*2	copper clad board	400
Transformer	1*280	fennic chlonide	150
Relay	1*50	Plastic for Enclosure	1000



Marketing and Sales 4

Packaging	Attractive cardboard packaging		
Marketing	Social media (LinkedIn, Facebook and Instagram) Video campaigns through TV and Youtube Posting testimonials/recommendations of the customers in LinkedIn and official website		
Installation	A member of our team will deliver and install the system.		
Repair	Free of charge within the warranty period (5 years) After the warranty period some cost will be charged.		
Reuse/Recycle	Enclosure can be reused by replacing the PCB. As enclosure is made up of plastic it can be recycled.		
Disposal	Since the product contains electronic components and chemicals it must be disposed safely.		

