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Solar Powered Smart Emergency Light with Fire Detection and Alarm System

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Abstract: This study aimed to evaluate the effectiveness of the proposed project, which is a solar-powered smart emergency light with a fire detection and alarm system. It focuses on the primary usage, functionality, applicability, workability, and safety aspects of the project, as well as how it effectively assists people through innovative means. The project is tested out of 15 respondents that has knowledge regarding electricity, enough to understand the flow of the project its material used, functions, usage and how it works.The prototype demonstrates exceptional functionality, achieving an excellent rating. This indicates a high level of effectiveness in providing illumination and alarm signal during power outages and fire situations. The device exhibits versatility with high ratings across residential and commercial settings. Its adaptability to diverse environments underscores its broad applicability.The availability of tools, expertise, and readily accessible materials contributes significantly to the overall workability of the prototype, affirming its practicality in real-world scenarios.The prototype's utilization of solar power not only makes it environmentally friendly but also offers a cost-effective alternative, potentially reducing long-term energy expenses.The absence of harmful materials and the inclusion of overload protection prioritize user safety, further bolstering the device's reliability.Overall, the findings affirm the prototype's potential to significantly enhance emergency lighting and safety measures. The integration of solar power, intelligent features, fire detection, and alarm systems places this innovation at the forefront of safety technology.

Keywords: Solar Power, Emergency Light, Fire Detection, Alarm System

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