WOMEN SAFETY DEVICE

1. Title of Project: **WOMEN SAFETY DEVICE**
b. *Problem Description:*
- **When women or any person stay alone in a flat and if someone knocks on the door, they are always worried about opening the door for security reasons.**
- **Safety issues if some unknown person comes to deliver some parcel/courier / etc. when any Women / Children are alone at home.**
- **Wife of army persons and daily wage workers whose wives/children Stay alone in the houses when they are on duty.**

c. *Objectives of the Project:* **To Provide a safety alerting system during any forced entry or security problems.**

d. *Details of Solution Adopted to Solve the Problem:*
- **The device we have made is a pair of primary devices and a locket.**
- **The primary device has two inputs: a button and a fire sensor. If any of these gets activated, it buzzes a loud buzzer, makes calls and sends messages stating the reason for an emergency and the live location. It comes in the size of half of the palm, and hence, it is Portable. It is also rechargeable and lasts up to a week once fully charged.**
- **The locket is small in size and also rechargeable. On switching on the locket two times within 5 seconds, it gets activated and sends an emergency message, including the name of the person with whom it was registered to the primary device. Again, the main device buzzes the alarm, makes calls and sends messages stating the reason as an emergency for the respective person.**

e. *Brief Methodology with Photographs:*
- **People will be aware of the latest trends and technology with this kind of project.**
- **First, the knowledge of sensor-based systems will be given in the villages, and then the use cases will be shown with the help of our prototype.**
- **After designing and educating the people about our project, some free of cost devices will be installed in the houses of needy ones.**
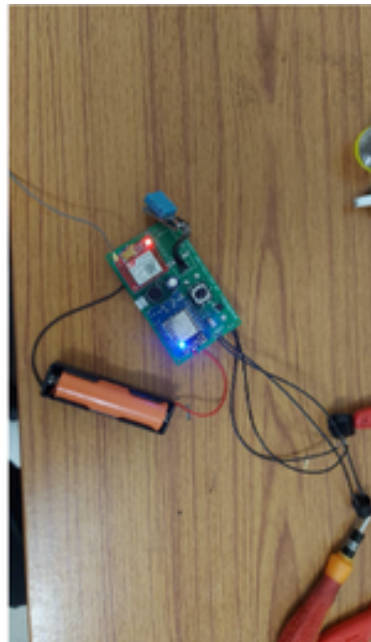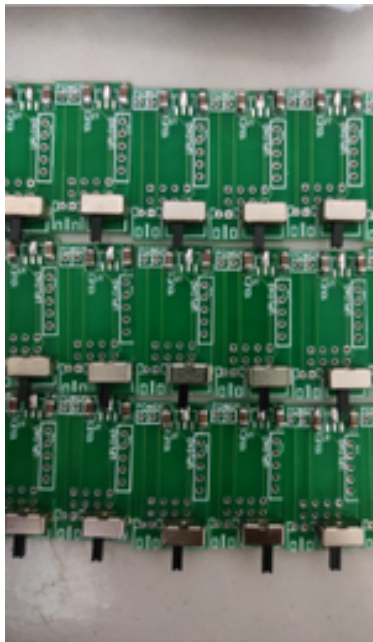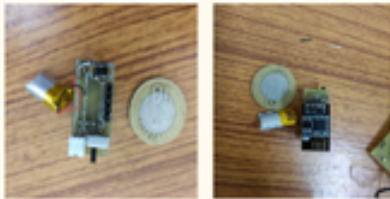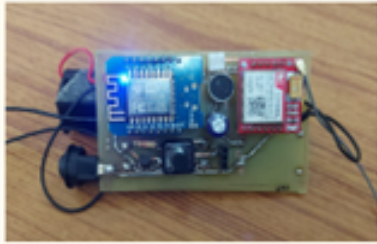- **And others can buy the same at subsidized rates.**

Circuit diagram and PCB layout of main device
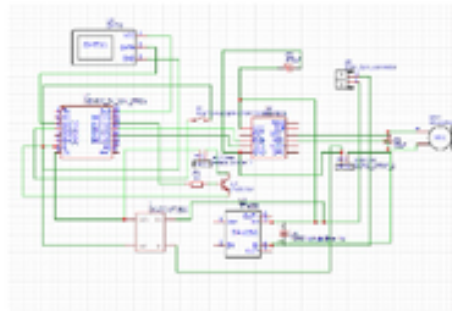
Circuit diagram and PCB layout of locket
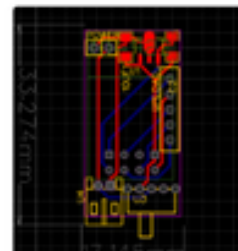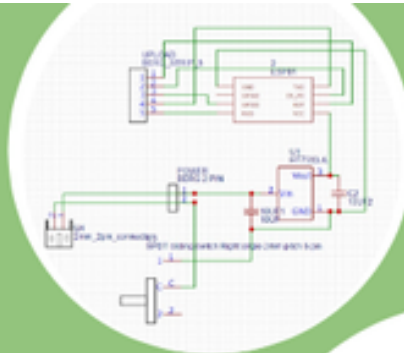
Prototype of the PCB and Enclosure Box

a. *Implementation Steps:*
- **Problem seen**
- **Prototype Design**
- **Bulk Production**
- **Distribution to the needy**
- **Feedback**

b. *Details of Resources and Skills Set up:*
- **It will stop any mishaps and security problems in the house of the persons who are on duty.**
- **People will initiate interest in this kind of technology as this is the future.**
- **The persons who are on duty can work without any worries for their families.**

c. *Budget of the Project:* **90000.00 /-**

4. Deviation Made from Original Objectives, if any, While Implementing the Project and Reasons: **Yes, it has been made more advanced by adding a WiFi-enabled Locket and a gas and fire sensor.**

5. Whether the Problem Identified/Issue has been Resolved by Implementation of this Project?: **Yes**

6. Achievements of the Project

g. *Outcome of the Project:*
- **Safety Alerting System: Successfully developed and implemented a safety alerting system that sends SMS alerts to the designated contacts and local police stations in case of a forced entry or security issue.**
- **Educational Outreach: Educated villagers on sensor-based systems and demonstrated the use cases with the prototype.**
- **Deployment: Installed free devices in the homes of the needy and offered the devices at subsidized rates to others.**

h. *Tangible and Intangible Benefits:*

<u>Tangible Benefits:</u>

- **Reduction in Security Incidents: The device helps in preventing security incidents and forced entries, ensuring the safety of individuals who are alone at home.**
- **Employment Opportunities: Generated employment through workshops and training sessions in villages.**
- **Accessible Technology: Provided access to the latest security technology to rural and vulnerable populations, including army wives and children of daily wage workers.**
- **Prototypes and Kits: Distribution of prototypes and kits to needy households in adopted villages.**

<u>*Intangible Benefits:*</u>

- *Peace of Mind: Provided peace of mind to individuals who live alone or those who are away from their families for work, knowing their homes are monitored and secure.*
- *Community Awareness: Increased awareness and interest in modern security technologies among rural communities, promoting a culture of safety and vigilance.*
- *Empowerment: Empowered women and vulnerable groups by providing them with tools to enhance their personal security.*
- *Social Responsibility: Fostered a sense of social responsibility by distributing the devices to the needy, enhancing the community's overall safety and well-being.*
- *These achievements highlight the project's significant contributions to enhancing security, spreading technological awareness, and improving the quality of life for vulnerable populations.*

1. The Final Impact of this Project in the Adopted Villages (in 100 words) in Livelihood, Agriculture, Infrastructure, Rural Energy, Literacy, Others etc.: **The "Door Based Safety Device in Case of Forced Entry" project significantly improved security in the adopted villages, leading to enhanced livelihood and peace of mind, especially for women and vulnerable individuals. It fostered technological literacy and interest, contributing to a safer and more aware community. The deployment of these devices created employment opportunities through workshops and installations, boosting the local economy. By ensuring the safety of homes, the project indirectly supported rural energy conservation and infrastructure development, as secure households are less likely to suffer from theft-related damages and energy misuse.**

2. Number of Student Participation/Involvement with details: **(03)**

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3. Number of Faculty Participation/Involvement: **(01)**

- **Dr. Jayendra Kumar (Mail – jkumar.ece@nitjsr.ac.in, Mob- 9835169351)**

<u>Status of the Project Post 18 Months of the Implementation</u>

1. Sustainability of Implemented Solution after 18 Months:

⬜ **Community Ownership: The success and continued use of the devices depended on the community taking ownership and valuing the technology. This was fostered through initial educational workshops and community engagement.**

⬜ **Local Support and Maintenance: Training local individuals to maintain and troubleshoot the devices ensured long-term functionality and built local expertise.**

⬜ **Financial Viability: Offering devices at subsidized rates and exploring potential funding or sponsorships for replacements or new installations helped maintain financial viability.**

⬜ **Technological Adaptation: Periodic updates and adaptability to new technological advancements ensured the devices remained effective and relevant.**

1. What was the Impact Envisaged at the time of Implementation and What is the Impact Achieved?

Impact Envisaged:

- **Enhanced Security: To provide immediate alerts in case of forced entry, reducing security concerns for women, children, and vulnerable individuals.**
- **Technological Literacy: To increase awareness and understanding of modern security technologies in rural areas.**
- **Community Empowerment: To empower individuals with tools to enhance their safety and security.**

Impact Achieved:

- **Security Enhancement: Successfully reduced incidents of forced entry and improved the sense of security among residents. Testimonials indicated increased peace of mind and safety.**
- **Technological Literacy: Workshops and educational sessions increased community awareness and interest in sensor-based security systems, leading to a more technologically informed population.**
- **Community Empowerment: The project empowered vulnerable groups, providing them with effective security tools, and fostered a culture of proactive safety measures.**

1. Project Learnings :

- **Community Engagement was Crucial: Involving the community from the planning stages and ensuring they understood and valued the technology was essential for successful implementation.**
- **Local Training: Training local individuals to maintain and support the technology ensured sustainability and built local capacity.**
- **Adaptability: Flexibility to adapt the solution to specific community needs and feedback was vital. Tailoring the approach based on feedback improved acceptance and effectiveness.**
- **Scalability Potential: The project's success in the initial villages demonstrated its potential for scalability. Identifying additional funding sources and partnerships helped expand the initiative to other regions.**
- **Continuous Improvement: Regular follow-ups and assessments were necessary to ensure the devices remained functional and effective, allowing for improvements and updates as needed.**