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AN INVESTIGATION ON SELF IMMOLATION INHIBITOR

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ABSTRACT: Tragically, many have taken their own lives recently, leaving behind loved ones, due to mental illness and overwhelming pressures in their life. Out of all the nations where reports of self-harm were documented between 1987 and 2017, India accounts for almost 17%. Among these methods, hanging oneself from a ceiling fan is a crucial one. A new security configuration for roof fans is proposed in this study to avoid self-destructive scenarios. Before anything else, we put every fan in our present model through its paces on the down bar to see how much power it required. In the event of an accident, the revised roof fan will improve the strategy. This innovative design substitutes a spring that attaches to the house's roof for the down street. The spring's design is so exact that it will burst under the load that is too much for it to safely support. The individual is spared from hanging death when the fan fails and the spring, disappointed by its inflexibility, expands. The roof fan's CAD model was created in Solid Works, while the down pole was investigated in ANSYS. However, the spring gathering's research is carried out using Solid Works.

Keyword: GSM module, buzzer, hanging, suicide prevention, and Arduino Uno.

INTRODUCTION

A major health and financial concern on a global scale is self-destruction. With over one million annual fatalities, hanging is among the top ten killers on Earth. In India, after hurting someone, hanging is the second most prevalent way to end things. More and more people, particularly young individuals, are taking their own lives by hanging. The staggering number of suicides in India, with 71% of victims being under the age of 44, is a tremendous economic, emotional, and social burden on our nation. Fighting it is still difficult for those who specialise in public health. Preventing self-destructive hangings in that specific geological location requires comprehensive understanding of the numerous variables related to the phenomenon. We planned our next research in India with this in mind, zeroing in on the different components.

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is necessary to pinpoint the problem regions associated with self-injurious hanging. The primary objective of the project is to mitigate these issues by decreasing the number of roof fan suicide attempts. The plan calls for an Arduino Uno, a potentiometer, a spring, a buzzer, a GSM module, an LCD screen, and a 4*4 lattice keypad, among other components. It also makes use of the Arduino IDE for programming. Just as the individual attempts to dangle, the shaft strains and snaps. It also sends a message to the appointed watchmen via GSM and sounds an alarm. The algorithm allows us to track the bar's development and pace. The primary objective of the undertaking is to decrease the number of roof fan suicide attempts.

OBJECTIVE

In order to stop someone from hanging themselves.

• For energy conservation and system scalability; to identify the area of intervention by focusing on several aspects linked with hanging suicide in India.

WORKING METHODOLOGY

The product is essentially a portion that needs to be connected to a regular fan; it is by no means a brand-new fan. Here, we are merely providing the cinch for the traditional fan, which is attached to the roof with a clip and covered by a cup. This clasp features a spring mechanism. If someone weighing more than 20 kg tries to swing from the fan, the spring essentially drops, preventing the understudy from hanging. Concurrently, an alarm located within the cup also sounds, alerting the police. They attempted to set up an alert as well because they didn't require the understudy to

This didn't work, so consider another self-destruction plan. "If the alarm sounds, that specialists will guarantee that the individual gets help else we just let go of the case."He also mentioned other related features, such as a warning system that would transmit information to the nearest CCTV camera so

that experts could pinpoint the exact location of the attempted self-destruction. It would also send a message to the front work area or directly to the person in charge

PROPOSED SYSTEM

The roof fan with Arduino Uno equipment parts, potentiometer, spring, roof fan, buzzer, GSM module, LCD display, and 4*4 lattice keypad are all included in the suggested project design. Additionally, Arduino IDE programming is used. The shaft stretches and falls at the moment the person tries to hang. Additionally, the alert sounds and the message is sent to the designated watchmen via GSM. With the use of computation, the bar's growth and speed are monitored. The endeavor's main goal is to reduce the self-destruction attempts made by roof fans.

- **HARDWARE DESCRIPTION**

The hardware components are used in this project is described below.

- **ARDUINO UNO**

The Arduino UNO is a great starter board for anybody interested in electronics and computer programming. The UNO is the best board to begin with if you're new to messing with the stage. The UNO is the most popular and widely archived primary board in the Arduino series. If you want to build an Arduino Uno, you'll need the ATmega328P, a microcontroller board (datasheet).

It has six primary data sources, a 16 MHz earthenware resonator (CSTCE16M0V53-R0), a USB connection, a power connector, an ICSP header, a reset button, and fourteen digital input/output pins, six of which are PWM outputs. The microcontroller may be started using an AC-to-DC adapter or a battery, or it can be connected to a PC using a USB link; everything required for this is included. If you mess up when playing around with your Uno, it's okay; if that happens, you can just buy a new chip and start again. The name "Uno" was selected to commemorate the introduction of Arduino Software (IDE) 1.0 since it means "one" in Italian. The Uno board and the Arduino Software (IDE) version 1.0 were the reference versions of Arduino, which have subsequently moved on to newer releases. You may find a complete catalogue of all the Arduino sheets—active, archived, and obsolete—in the record of sheets. As the foundational model for the Arduino platform, the Uno board is the first USB Arduino sheet.

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- **GSM MODULE**

GSM, which stands for "global system for mobile correspondence," is a portable modem for electronic correspondence. In 1970, the idea of GSM was created by Bell Laboratories. It's a very popular flexible communication system that many people use all across the globe. Global System for Mobile Communications (GSM) is a state-of-the-art, open-source cell technology that allows for the provision of versatile voice and data services in the 850 MHz, 900 MHz, 1800 MHz, and 1900 MHz frequency bands. Originally intended as a digital system for communication using the time division multiple access (TDMA) method, GSM technology has now evolved into much more than that.

Before being sent via a channel, the data is first digitised and compressed by a GSM. Then, at certain intervals throughout the day, two separate floods of client data are delivered. Data transmission rates range from 64 kbps to 120 Mbps on the computerised system. Full scale, micro, pico, and umbrella cells are the various cellular unit sizes that make up a GSM architecture. The region of execution determines the variation in each cell. Full size, small,

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pico, and umbrella cells are the five cellular sizes used in a GSM network. As the execution environment shows, every cell has its own unique inclusion zone.

Assigning different time slots to each client at regular intervals is the foundation of the time division multiple access (TDMA) protocol. Transmitting data at speeds ranging from 64 kbps to 120 Mbps, it effortlessly accommodates both voice conversation and information transfer.

- **LCD DISPLAY**

Disc with a liquid inside Crystal Display, a kind of level board display, incorporates flowing gems into its core mechanic. Customers and businesses have a plethora of options when it comes to using LEDs, as they are often found in many electronic devices such as mobile phones, televisions, computer displays, and instrument boards. Compared to its predecessors, the gas-plasma displays and light-transmitting diode (LED), LCDs were a huge step forward. Now that liquid crystal display (LCD) technology has replaced cathode beam tube (CRT) technology, showcases may be much slimmer. The idea of light obstruction rather than emission makes liquid crystal displays (LCDs) far more energy efficient than gas-show displays and light-emitting diode displays. An LCD's liquid precious stones create a picture by illuminating a backdrop light source via an LED. As more conventional presenting improvements have begun to supplant LCDs, new showcasing innovations such as OLEDs have started to do the same. The number of pixels in a show is in the millions. Pixel count is a common way to describe the style of a presentation; for instance, a 4K showcase might have 3840 x 2160 or 4096 x 2160 pixels. Every pixel is really made up of three smaller pixels, which are also called red, blue, and green. When the shading mixes of a pixel's subpixels change, a new tone may be generated. A presentation may provide an incredible range of tones when all of the pixels on the display work together. As soon as the pixels are quickly toggled on and off, a picture is generated.

There is a unique manner for each kind of display to control a pixel. For example, CRT, LED, LCD, and more modern forms of displays all control pixels in their own unique ways. Basically, liquid precious stone pixels are electrically spun to create mesmerising light on backlit LCDs. Both the front and back of each pixel include polarising glass channels, with the front channel angled at a right angle. Between the two channels, you'll find an electrical switch that you may use to turn the fluid precious stones on and off. When making an LCD, you may choose between an active framework display matrix and an inactive lattice.

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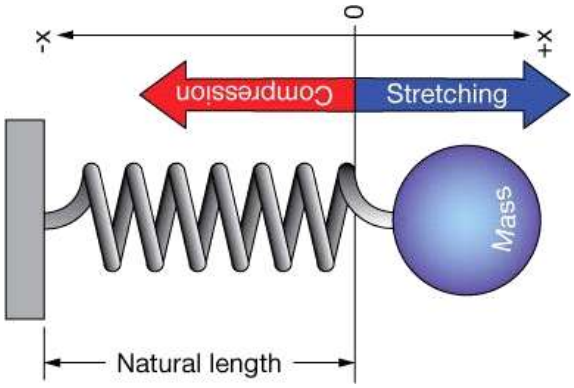
Transistor field-effect transistor (TFT) displays are another term for dynamic lattice liquid crystal display. Pixels are located at the convergence of each conductor matrix in the distant network LCD. By directing current between two conductors, the brightness of any given pixel on the network may be adjusted.

Less current is required to modify the brightness of a pixel in a functional network since every convergent pixel contains a semiconductor. Therefore, by adjusting the current in a functional lattice display more often, the screen recovery time may be enhanced. In order to achieve twice the output of the initial invention in the same amount of time, certain idle framework LCDs employ double checking, which means they filter the network twice with current. In any case, dynamic grid is still the better option.

- **SPRING**



The spring hangs in a relaxed, unstretched position. If you were to hold the bottom of the spring and pull downward, the spring would stretch. If you were to pull with just a little force, the spring would stretch just a little bit. And if you were to pull with a much greater force, the spring would stretch a much greaterextent.

- **BUZZER**

A buzzer or beeper is a sound flagging device,[1] which might be mechanical, electromechanical, or piezoelectric (piezo for short). Run of the mill employments of signals and beepers incorporate alert gadgets, clocks, and affirmation of client information, for example, a mouse snap or keystroke.

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- **CEILING FAN**

An engine in the roof fan converts electrical energy into mechanical energy. First, the electric engine starts and runs because the roof fan's capacitor pushes the engine forward. The electrical flow passes through wire coils that are folded over a metal base as it approaches the engine. When this current passes through the wire, it creates an attracting field that applies power even more in a

clockwise movement. Thusly, the electric energy is changed over into mechanical energy and makes the engine curls turn. The edges joined to the engine additionally turn over acquiring movement with the turning of the loops.

- **BATTERY**

A **battery** is a source of energy which provides a push - a voltage - of energy to get the current flowing in a **circuit**. A bulb uses the electrical energy provided by the **battery**, but does not use current. Whenthe energy in the **battery** is used up there is no current and the bulb does not light up.

- **SERVO MOTOR**

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A servo engine is a sort of engine that can turn with extraordinary accuracy. Regularly this sort of engine comprises of a control circuit that gives input on the current situation of the engine shaft, this criticism permits the servo engines to pivot with incredible accuracy.

- **POTENTIOMETER**

A **potentiometer** is a three-terminal resistor with a sliding or rotating contact that forms an adjustable voltage divider. If only two terminals are used, one end and the wiper, it acts as a variable resistor or rheostat.

- **4*4 MATRIX KEYPAD**

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In microcontroller applications, this 16-button keypad offers a helpful human interface aspect. The keypad's adhesive backing makes it possible to adhere it to a variety of surfaces with ease. The Keypad 4x4 has a total of sixteen buttons laid out in a matrix layout. With no moving components whatsoever, this keypad is membrane-based. It has a beautiful cover that depicts a phone-style keypad with four additional buttons that are functional. You may attach it to your microcontrollers' circuitry using the provided female 8-pin Berg connection.

CONCLUSION

There should be a multipronged approach to combating self-destruction since the issue is complex. Appropriate, appropriately sized, and community-relevant public arrangements need cooperation, accountability, coordination, and financial savvy to create and execute. As a social and overall wellness objective, self-destruction counteraction has surpassed its more conventional role as an emotional health exercise in India. Help prevent the suicide of thousands of young Indians by assuming strong and aggressive positions in the fight against self-destruction.

FUTURE SCOPE

In future scope, the system can be used to prevent the suicidal attempts in people who hangs in fan. Bythis we reduce suicidal wise percentage.

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