VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

BELAGAVI– 590 018

A MICRO PROJECT REPORT ON

"ANTI THEFT ALARM IN BIKES"

Submitted By,

Shilpa R	4AL19EC074
Shwetha H M	4AL19EC075
Soupoorna Sukrappa Moger	4AL19EC076
Spoorthi.A.M.	4AL19EC077
Spoorti Hirur	4AL19EC078

Under the Guidance of

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2020–2021

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ABSTRACT

If anybody tries to steal your bike, this circuit turns on the horn of the bike to alert you of the impending theft. Usually, a handle lock is used on the handle bar for the safety of bikes, with the front mudguard in a slanted position. When the handle lock is freed, the front mudguard can be aligned with the body of the bike. This circuit consists of transmitter and receiver sections. The transmitter (IR LED) is fitted on the back end of the front mudguard and the receiver sensor (IR RX) is fitted on the central portion of the crash guard of the bike such that IR rays from the transmitter directly fall on the IR receiver sensor, this will occur when the front mudguard comes in line with the body of the bike. This signal from the IR Rx will be given to microcontroller which after waiting for some time disables the engine even though the Ignition switch is ON. In this project as the engine we are demonstrating a DC motor and to indicate the status we are using a LCD.

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A MICRO PROJECT REPORT ON

"AUTOMATIC ROOM LIGHT USING ARDUINO"

Submitted By,

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Pavitra kamba	4AL19EC054
Prajwal Bhatt Joshi	4AL19EC055
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Pratheek Kumar	4AL19EC057

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ABSTRACT

Automatic Room Light Controller Using Arduino and PIR Sensor can be used to turn ON and OFF the illumination system of home / office routinely by sensing the existence of human. Such Automatic Room Lights systems can be implemented in your Classrooms, faculty cabins, garages, staircases, bathrooms, etc. where we do not need constant light but only when individuals are existing. Also, with the assistance of this system, we can save the energy bill as power will be consumed only when human is present i.e. when required lights will be spontaneously turned ON or OFF. This project proposed a system of Automatic room light controller using Arduino and PIR sensor and relay module. PIR sensor will spot the human activity and based on response of PIR sensor unit will control the switching action. Proposed method can help us to reduce the consumption of electricity.

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A MICRO PROJECT REPORT ON

"BREAK FAILURE INDICATOR"

Submitted By,

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Suma	4AL19EC080
Sumanth k s	4AL19EC081
Sushma J	4AL19EC082
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ABSTRACT

Today, Machines are widely controlled by automated control system. To meet the need of growing population economic, effective and reliable control of machines as well as their control system is necessary. The main objective of this project is to continuously monitor the braking system at each and every time during the operation of the vehicle. Now a days, accidents are occurring due to lot of reasons, the one of the main reason is brake failure, it caused to due to poor maintenance, improper use and product defect, in order to safe guard the valuable human for accident the accident monitoring of brake is very important issue in automobile. The brake failure indicator circuit is a circuit that monitors constantly of the condition of brakes and provides an audio visual indication. When the brake is applied in order to slow down or to stop the vehicle the green LED blinks and the piezo buzzer beeps for about one second if the brake system is accurate and working properly. If brake system fails the red LED glows and the buzzer do not beep when the brakes are applied.

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A MICRO PROJECT REPORT ON

"DIGITAL CLOCK WITH ALARM TIME DISPLAY"

Submitted By,

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Dhanraj R B	4AL19EC029
Gagan K	4AL19EC031
Harini C G	4AL19EC033

Under the Guidance of

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ABSTRACT

The aim of the project is to design a twelve hour Digital Clock that displays the time digitally, in contrast to an analog clock, where the time is indicated by the positions of rotating hands. With the help of counters and decoders, a digital clock to display time in hours, minutes and seconds can be constructed. Digital clock has a counter that receives a clock signal from any source and increases the number according to the clock signal. The main clock signal having 1 Hertz frequency is given to the decade counter which provides binary output to the decoder driver. This driver decodes the binary input to decimal and sends it to the seven segment display. The counter triggers the counter next to it when it resets. The remaining counters work in a similar fashion by receiving a clock signal from the previous counter and giving a clock signal to the next counter when it resets. Seven-segment display is a very common and efficient option for displaying a decimal value. The project focuses on building a digital clock with simple gates, flip-flops and counters with sequential logic rather than any programming based element.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

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A MICRO PROJECT REPORT ON

"DIGITAL STOPWATCH"

Submitted By,

Yashwanth E	4AL19EC089
Deepa	4AL20EC400
Mohan	4AL20EC401
Abhisekh N	4AL18EC002
Dhanya kumar	4AL18EC014
Pradeep Bhise	4AL18EC038

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ABSTRACT

Digital Stopwatches find use as time keeping device in many fields, namely sports. Stop watches may be analog or digital. Its function is to find out how long it takes in an activity .Digital stop watches are much more common the analog version owing to their higher accuracy and ease of use. The main is to design stopwatch which can count up to 9 minutes and 59.9 seconds .It is accurate up to one tenth of a second. The circuit is relatively simple and easy to realize. The circuit operates on 5-v dc supply. It uses a seven segment LED display of common anode type to show time.

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A MICRO PROJECT REPORT ON

"FALSE TRIGGERING ELIMINATOR USING 555"

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Sanjay.C	4AL19EC066
Sanjushree V	4AL19EC067
Sathvi	4AL19EC068

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ABSTRACT

The popular Timer IC 555 is extensively used in short duration timing applications. IC 555 is a highly stable integrated circuit functioning as an accurate time delay generator and free running multivibrator. But one of the serious problem in 555 timer design is the false triggering of the circuit at power on or when voltage changes. The circuit becomes inefficient especially when the load has to be energised only when desired. Hence aim of the project is to design a simple false triggering eliminator circuit for timer 555.

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A MICRO PROJECT REPORT ON

"FUEL RESERVE INDICATOR FOR VEHICLES"

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ABSTRACT

Nowadays vehicles come with a dash-mounted fuel gauge meter that indicates the fuel levels on an analogue display. The 'reserve' level is indicated by a red marking in some vehicles, but the needle movement through the red marking may be confusing and not precise. This fuel reserve indicator circuit monitors the fuel tank below the reserve level and warns through LED indicators and audible beeps when the danger level is approaching.

The fuel reserve indicator circuit system consists of a tank-mounted float sensor and a current meter (fuel meter), which are connected in series. The float-driven sensor attached to an internal rheostat offers high resistance when the tank is empty. When the tank is full, the resistance decreases, allowing more current to pass through the meter to give a higher reading. The fuel monitoring circuit works by sensing the voltage variation developed across the meter and activates the beeper when the fuel tank is almost empty.

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A MICRO PROJECT REPORT ON

"IC 555 timer tester"

Submitted By,

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ABSTRACT

The 555 Timer IC is one of the most popular and most frequently used integrated circuits. It performs an array of timing tasks in the electronic circuits and there is a huge list of experiments which can be performed with 555 IC. This simple and easy-to-use IC 555 timer tester not only tests the IC 555 timer in all its basic configurations but also tests the functionality of each pin of the timer. Once a timer is declared fit by this gadget, it will function satisfactorily in whatever mode or configuration you may try it.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

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A MICRO PROJECT REPORT ON

"MOBILE PHONE DETECTOR"

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ABSTRACT

A mobile phone detector can detect the activation of a mobile phone such as; incoming and ongoing phone calls, messages, and things in that nature. Mobile phone detectors can be used for spying on someone and for unauthorized video transmission. Whenever the phone is on silent mode, a mobile phone detector can detect various things from a mobile device. Overall, mobile phone detectors can prevent the use of mobile phones in prisons, movie theaters, classrooms, and in any facility that individuals do not allow cellphone usage.

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A MICRO PROJECT REPORT ON

"OVER SPEED DETECTOR"

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Shashank	4AL19EC070
Shashank S Kashyap	4AL19EC071
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ABSTRACT

The most common rule in any country is speed limit in certain roads i.e. you will be in violation of the law if your car speed exceeds this limit. In order to detect the speed of a moving car, the patrolling officers usually depend on a handheld gun that works on Radar Technology or Lidar Technology. This is a tedious process as the officer has to manually check for over speeding for each vehicle.IR Sensors are the main part of the project that detect the speed of a car. Practically, you can implement the setup of IR Sensors in many ways but in this project, I have used two reflective type IR Sensors and placed them 10cm apart. When a car travelling reaches the first sensor, the IR Sensor gets activated. From this moment onward, a timer is initiated and will continue to keep time until the car reaches the second IR Sensor.

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A MICRO PROJECT REPORT ON

"OVERFLOW DETECTOR"

Submitted By,

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Abhaykumar	4AL19EC004
Deepika	4AL19EC028
Rashmitha	4AL19EC036
Abhinandan	4AL19EC005
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ABSTRACT

A water alarm detector is a self-contained electronic device that sounds an alarm when its sensor is in contact with water. It can be used near water heaters, washing machines, sump pumps, bathtubs, toilets, dishwashers and high-efficiency furnace pumps. In our homes, the water tank on the roof overflows. To avoid this, this alarm is installed, this alarm is very cheap and durable, so it has become quite in vogue. Inside the alarm is a transistor that has its base connected to the water tank level and a positive vein connected to the water level. As soon as the water touches both ends and the positive supply comes to the base of the transistor. And our transistor is on. On which both the LED and the buzzer are turned on. Because water is a conductor of electricity. It is a good conductor due to which the positive passes through the water and reaches the base of the transistor.

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A MICRO PROJECT REPORT ON

"REMOTE CONTROL FOR HOME APPLIANCES"

Submitted By,

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Jeevan C M	4AL19EC038
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Under the Guidance of

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2020–2021

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CERTIFICATE

This is to certify that the Micro-Project entitled **"REMOTE CONTROL FOR HOME APPLIANCES"** has been Successfully Completed By

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Micro Project Guide

Dr. D V Manjunatha
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ABSTRACT

With everyone being on the move in a fast-paced world, technologies have been increasing rapidly. The use of standard remote controller, temperature, humidity and touch screen as a user input device. The inconvenience in controlling the home devices has been solved by this home automation system. In this proposed home automation system different attractive features are combined together which is not found very often in other home automation system. This offers a low cost, complete and efficient system for remote operation of a room. This project involves the use of Bluetooth communication and the Arduino Uno Rev 3 Microcontroller. The whole idea is to design an app on an Android cell phone to control home appliance remotely such as lights and fans using AC power.

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A MICRO PROJECT REPORT ON

"SIMPLE LOW POWER INVERTER"

Submitted By,

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Akhilesh patil c	4AL19EC012
Amrut Belavi	4AL19EC013
Anand	4AL19EC014
Ankita Sannadurgya Naik	4AL19EC017

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ABSTRACT

Inverters are used for many applications, as in situations where low voltage DC sources such as batteries, solar panels or fuel cells not be converted so that devices can run off of AC power. One example of such a situation would be converting electrical power from a car battery to run a laptop, TV or cell phone. The method, in which the low voltage DC power is inverted, is completed in two steps. The first being the conversion of the low voltage DC power to a high voltage DC source, and the second step being the conversion of the high DC source to an AC waveform using pulse width modulation. Another method to complete the desired outcome would be to first convert the low voltage DC power to AC, and then use a transformer to boost the voltage to 120 volts. This project focused on the first method described and specifically the transformation of a high voltage DC source into an AC output.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

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A MICRO PROJECT REPORT ON

"SIMPLE VIBRATION DETECTOR"

Submitted By,

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Arun	4AL19EC018
Dhanush	4AL19EC030
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ABSTRACT

Simple vibration and motion sensors can be made using a pendulum switch, mercury switch or one of many other methods. The Vibration Sensor Project uses no moving parts to detect vibration. Instead, a piezo speaker element is used as a sensitive vibration sensor. Vibration sensors are piezoelectric accelerometers that sense vibration. They are used for measuring fluctuating accelerations or speeds or for normal vibration measurement. Maintenance professionals use the sensors in order to predict the maintenance of the machinery, to reduce overall costs and increase the performance of the machinery.

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A MICRO PROJECT REPORT ON

"SPEED CHECKER FOR HIGHWAYS"

Submitted By,

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Abhishek M O	4AL19EC009
Ashish Shetty	4AL19EC020
Megha R	4AL19EC046
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ABSTRACT

Accidents due to rash driving on highways are on the rise and people are losing their lives because of others mistakes. While driving on highways, drivers should not exceed the maximum speed limit permitted for their vehicle. A highway speed checker comes handy for the traffic police, especially against the speed limit violators because it provides the digital display as well as buzzing sound or alarm to detect any vehicle speed if the vehicle exceeds the permitted speed limit. To overcome this problem, we have implemented a circuit called as a speed checker for highways. This kit is inexpensive and it is used for considering the average and high speed of vehicles that move on the highways or roads. By taking all these considerations in mind, we have designed a highway- speed checker circuit to detect the rash driving by using different electronic components such as timer, counter, logic gates, microcontroller, seven segment display and all other components.

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A MICRO PROJECT REPORT ON

"STRESS METER"

Submitted By,

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Thrishala M	4AL19EC085
Vinay S	4AL19EC086
Vybhav Gowda M	4AL19EC087
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ABSTRACT

The purpose of a stress meter is to assess a person's emotional pain. Depression can cause hair loss, acne breakouts and many other problems. This manifestation of depression can cause additional anxiety. This stress monitor allows you to assess your emotional pain. When the pressure is too high, it provides a visual indicator with an LED diode indicator that emits light and a warning beep. The gadget is small enough to be worn on the wrist. The LM3915 is an integrated monolithic circuit that detects analog electricity levels and drives ten LEDs, LCDs or fluorescent vacuum displays, providing an logarithmic 3db / step analog display.

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A MICRO PROJECT REPORT ON

"THERMISTOR TEMPERATURE SENSING ALARM"

Submitted By,

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Nikhil C R	4AL19EC049
Nikhil S	4AL19EC050
Nithish Kumar	4AL19EC051
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ABSTRACT

Temperature monitoring is a very important and frequently used application in industries and in many other places where the temperature should be kept below a maximum allowable level. This circuit comes to our rescue when a situation of that sort arises. This circuit is a temperature sensing as well as alarm circuit. The circuit raises an alarm whenever the temperature crosses a certain limit. The circuit is made to be low cost and reliable so that you can make it with less resources and without compromising on the performance. Although it is not an industry level calibrated circuit, it is quite sufficient where it is not a mission critical application.

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A MICRO PROJECT REPORT ON

"WATER LEVEL INDICATOR"

Submitted By,

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Bhavya Y R	4AL19EC022
Bhoomika M Gowda	4AL19EC023
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ABSTRACT

A Water Level Indicator is used to detect and indicate the water level in an overhead tank or any other water container. In this project, the design of a water level sensor device using Arudino UNO is investigated, that can detect the level of water in a water storage system. An ultrasonic sensor is used to generate ultrasonic waves, a water sensor to detect the water level, LEDs to signify the importance of different water levels, PC to observe the levels of water. We indicated a green LED for safe water level, one red LED for about to reach max level and two red LEDs for maximum water level. This circuit is efficient and can be used for any application involving the levels of any liquid.