MIFRATECH

Yelahanka Newtown, Bengaluru-64, Landmark: Opp. Airtel office IOT PROJECT TITLES 2020-21

PROJECT TITLE	**AQUACULTURE FOR FISHERIES**
PROJECT ID	SHES001
DOMAIN	IOT
ABSTRACT	Promote the effective fisheries management and improving standards of fisheries management. Provide the technical and general knowledge necessary for competent fisheries management. Advance the standing of fisheries management as a profession.

PROJECT TITLE	**WASTE MANAGEMENT IN RAILWAYS**
PROJECT ID	SHES002
DOMAIN	IOT
ABSTRACT	Waste management or waste disposal are all the activities and actions required to manage waste from its inception to its final disposal in railways. This includes amongst other things collection, transport, treatment and disposal of waste together with monitoring and regulation. It also encompasses the legal and regulatory framework that relates to waste management encompassing guidance on recycling. In this system the wastage is collected from the running train.Theesnsor is sense the availability of wastage in the tank and send to cloud computing .the station master will read the wastage levelin the tank from the cloud computing and arrange for disposal in the railway station .They will control the tap through the blue tooth technology

PROJECT TITLE	**Smart city for future : Design of Data Acquisition method using Threshold concept technique**
PROJECT ID	SHES003
DOMAIN	IOT
ABSTRACT	IOT deals with intricate systems that integrates multiple disperse components towards their synergetic use. Most of the world's population today lives in cities. By 2030, the population of the cities around the world is expected to grow from 3.3 billion to 5 billion people. Due to resource constraints, there will be a problem in the future to provide all the services to the residents.To continue to serve and improve the standard of living of the growing population, it is necessary to develop smart cities. The Smart City aims to make optimal and sustainable use of all resources, whilemaintaining an appropriate balance between social, environmental and economic costs. The wireless sensors are attached to street lamp, water tank, parking area and dustbin. Sensors are then attached to arduino microcontroller board where each and every necessary parameters for city are monitored and updated to cloud by PC. The cloud is connected with Blynk server in turn which is connected to built in Blynk application of user's Android phone. The technology we use is IOT In this paper a system of interconnected smart modules is developed where each and every parameter necessary for a city is monitored and updated to the cloud. Emphasis is given on how sensing and communication technologies of IOT can effectively be used in smart city monitoring. The project aims at developing a system which facilitates aids in collection of data with the help of interconnected modules consisting of multiple sensors useful for smart city monitoring. Further this project also includes controlling of some parameters like water and light.

PROJECT TITLE	**Smart health care monitoring**
PROJECT ID	SHES004
DOMAIN	EMBEDDED SYSTEM, IOT
ABSTRACT	• The project presents the design and implementation of an IOT- based health monitoring system for emergency medical services .

	• The proposed outcome of the project is to give proper and efficient medical services to patients.

PROJECT TITLE	**AN IOT-BASED SYSTEM FOR WATER QUALITY MONITORING**
PROJECT ID	SHES005
DOMAIN	IOT
ABSTRACT	Nowadays Internet of Things (IoT) and Remote Sensing (RS) techniques are used in different area of research for monitoring, collecting and analysis data from remote locations. Due to the vast increase in global industrial output, rural to urban drift and the over-utilization of land and sea resources, the quality of water available to people has deteriorated greatly. The high use of fertilizers in farms and also other chemicals in sectors such as mining and construction have contributed immensely to the overall reduction of water quality globally. Water is an essential need for human survival and therefore there must be mechanisms put in place to vigorously test the quality of water that made available for drinking in town and city articulated supplies and as well as the rivers, creeks and shoreline that surround our towns and cities. The availability of good quality water is paramount in preventing outbreaks of water- borne diseases as well as improving the quality of life. The development of a surface water monitoring network is a critical element in the assessment and protection of water quality. We developed a prototype of easy to install technology by which the different surface water (e.g. rivers,lakes) quality indicators can be measured. This paper presents a smart water quality monitoring system.

PROJECT TITLE	**EVALUATION OF TYPICAL SPECTRAL INDICES FOR DROUGHT** **SURVEILLANCE SYSTEM FOR DROUGHT HIT AREAS**
PROJECT ID	SHES006
	IOT
ABSTRACT	In India, droughts are one of the problems for farmers economic losses. However, there has been no development in these field to restrict or erase these problems. But still the governments provides some help in terms of finance to those farmers who are suffering from the drought. In this paper a novel method has been proposed where the drought hit areas are monitored through a remote place and help is provided later. Some of the Wireless sensors are used for monitoring and these are fed to the Arduino which is the heart of this project. The values are accessed through android app.

PROJECT TITLE	**PROTECTION OF CROPS AND PROPER USAGE OF RAIN WATER USING SATELLITE COMMUNICATION AND WIRELESS SENSOR NETWORK**
PROJECT ID	SHES007
DOMAIN	IOT
ABSTRACT	Promote the effective fisheries management and improving standards of fisheries management. Provide the technical and general knowledge necessary for competent fisheries management. Advance the standing of fisheries management as a profession.

PROJECT TITLE	**Design and Realization of the Accelerometer based Transportation System**
PROJECT ID	SHES007
DOMAIN	IOT
ABSTRACT	An accident is a deviation from expected behavior of event that adversely affects the property, living body or persons and the environment. Security in vehicle to vehicle communication or travelling is primary concern for everyone. The work presented in this article documents the designing of an accident detection system. The accident detection system design informs the police control room or any other emergency calling system about the accident. An accelerometer sensor has been used to detect abrupt change in g-forces in the vehicle due to accident. When the range of gforces comes under the accident severity, then the microcontroller activates the GSM modem to send a prestored SMS to a predefined phone number. Also a buzzer is switched on. The product design was tested in various conditions. The test result confirms the stability and reliability of the system.

PROJECT TITLE	**SMART FARMING USING IOT**
PROJECT ID	SHES007
DOMAIN	IOT
ABSTRACT	A robot is a mechanical, artificial agent and is usually an electromechanical system. It is a device that, because of software programming, makes complicated tasks easy to perform. Agricultural robotics is the use of automation in bio systems such as agriculture. It is replacing the conventional techniques to perform the same tasks, with efficiency. Applying automation to agriculture has helped create several advancements to the industry while helping farmers save money and time.

PROJECT TITLE	**DEVELOPMENT OF SMART DUSTBIN USING WIRELESS COMMUNICATION**
PROJECT ID	SHES008
DOMAIN	IOT
ABSTRACT	**WORKING OF THE PROJECT** The project smart dustbin consists of various modules like gsm ir sensor amd microcontroller the ir sensor is connected to microcontroller and the gsm is connected wirelessly to the modules. When ever the ir sensor is detected which means the dustbin is filled with the waste the ir sensor detects and the signals are sent to the microcontroller and then the gsm will be activated with the help of certain sets of codes and programs . the gsm will be activated thus sending a message to the concerned person that is initially fed to the system

PROJECT TITLE	**DEVELOPMENT OF AUTOMATIC SMART POWER SOURCE SELECTOR**
PROJECT ID	SHES009
DOMAIN	IOT
ABSTRACT	The main purpose of this project is to provide continuous power supply to a load, by selecting the supply from any of the four sources namely solar, inverter, main and generator automatically in case if one of the source is absent. The need of electricity is increasing day by day and the frequent power cuts of electricity are causing many problems in different areas like banks, colleges/schools, hospitals, houses and industries. Thus there is a requirement for an alternate arrangement of power supply. This arrangement can be designed by using microcontroller. When a source, say mains fails the supply will shift to next source generator and so on. LED can be used to show that which source is used to provide the supply. An important requirement of electric power distribution systems is the need for automatic operation. In particular, the rapid and reliable transfer of the system from one power source to another during certain system events is important to achieving the reliability goals for such systems and the facility serves.

PROJECT TITLE	**A METHOD OF WSN TO MONITOR AND CONTROL THE COLD CHAIN LOGISTICS AS PART OF THE IOT TECHNOLOGY**
PROJECT ID	SHSES010
DOMAIN	IOT
ABSTRACT	The Internet of Things (IoT) is a new evolution in technological advancement taking place in the world today. This paradigm allows physical world objects in our surroundings to be connected to the Internet. This idea comes to life by utilizing two architecture; the Sensing Entity in the environment that collects data and connects itself to the cloud and the Cloud Service that hosts the data from the environment and controls the parameters. The combination of wireless sensor networks and cloud computing is becoming a popular strategy for the IoT era. The cold chain requires controlled environment for sensitive products in order for them to be fit for use. The monitoring process is the first assurance which tells if a certain process has been carried out successfully and the controlling mechanism is performed by the Relays. Taking advantage of IoT and its benefits to monitor and control the cold chain logistics will result in better management and product handling. This paper looks at a system comprising of MCU wireless sensor network and server which can be an ideal system to monitor temperature and humidity of cold chain logistics and control them to required values.

PROJECT TITLE	**SAFETY SYSTEM FOR ELDERLY WANDERING PERSON**
PROJECT ID	SHES011
DOMAIN	EMBEDDED SYSTEM, IOT
ABSTRACT	We have developed a new mobile phone-based safety support system for transmitting information of a wandering elderly person's location and the environmental sounds around that person. The system consists of a wearable sensor and a conventional desktop PC with Internet access acting as the server computer. The wearable sensor, which is attached behind the neck of the elderly person's shirt, is composed of GPS module. The wandering elderly person's location is identified within 100 m from the mobile phone company's antenna ID via the W-

	SIM. The

	caregiver sets the elderly person's movement area by specialized computer software. The GPS module sends the wandering elderly person's location to the server computer. The server computer informs automatically the caregiver by a message on the app installed on the android smart phone. The caregiver can monitor the sound and the map of the wandering person's location via Internet.

PROJECT TITLE	**IOT BASED INDUSTRIAL POLLUTION MONITORING SYSTEM**
PROJECT ID	SHES012
DOMAIN	IOT
ABSTRACT	Internet of Things (IoT) is rapidly increasing technology. IoT is the network of physical objects or things embedded with electronics, software, sensors, and network connectivity, which enables these objects to collect and exchange data. In this paper, we are developing a system which will automatically monitor the industrial applications and update the pollution information continually on cloud so one can monitor it from anywhere. Using concept of IoT. IoT has given us a promising way to build powerful industrial systems and applications by using wireless devices, P.C, and sensors. A main contribution of this review paper is that it summarizes uses of IoT in industries with Artificial Intelligence to monitor and control the Industry. Here in this project Arduino is used as the main controller and through wi-fi the data is send to the concerned person about the different parameters of the industry.

PROJECT TITLE	**POWER MONITORING AND BILLING SYSTEM USING IOT**
PROJECT ID	SHES013
DOMAIN	EMBEDDED SYSTEM, IOT
ABSTRACT	The Internet of Things (IoT) is a new evolution in technological advancement taking place in the world today. This paradigm allows physical world objects in our surroundings to be connected

	to the

	Internet. This idea comes to life by utilizing two architecture; the Sensing Entity in the environment that collects data and connects itself to the cloud and the Cloud Service that hosts the data from the environment and controls the parameters. The combination of wireless sensor networks and cloud computing is becoming a popular strategy for the IoT era. The Existing domestic Energy meter reading systems universally exist many problems, such as difficulty in construction, too narrow bandwidth, too low rate, poor real time, not two way communication quickly etc. To solve above problems, this paper uses the wireless technology for Automatic Meter Reading system. A proposed method provides the communication between the Electricity Board section and the consumer section using IOT for transmitting the customer's electricity consumption and bill information that is calculated using Arduino. The information regarding the bill amount and payment are communicated to the consumer via **Internet of things**

PROJECT TITLE	**AN INTERNET OF THINGS APPROACH FOR MOTION DETECTION USING RASPBERRY PI**
PROJECT ID	SHES014
DOMAIN	IOT
ABSTRACT	This paper proposes the Smart Surveillance System using Raspberry Pi and PIR sensor. This system will serve as smart security module for monitoring. Traditional surveillance systems only records the activities based on motion, but this system serves the purpose of facial recognition so as to reduce the error caused due to motion detection .Raspberry Pi camera module is used to capture images once the motion is detected by the PIR Sensor. This system will monitor when motion detected and checks for the faces in the image captured and with the help of face recognition alerts if the face detected is not stored in the database. Send through SMS to alert even if he/she has internet issues he will get to know about the intruder.

PROJECT TITLE	**AUTOMATIC DETECTION AND NOTIFICATION OF POTHOLESAND HUMPS ON ROADS TO AID DRIVERS**

PROJECT ID	SHES015
DOMAIN	IOT
ABSTRACT	India, the second most populous Country in the world and a fast growing economy, is known to have a gigantic network of roads. Roads are the dominant means of transportation in India today. They carry almost 90 percent of country's passenger traffic and 65 percent of its freight. However, most of the roads in india are narrow and congested with poor surface quality and road maintenance needs are not satisfactorily met. Roads in India normally have speed breakers so that the vehicle's speed can be controlled to avoid accidents. However, these speed breakers are unevenly distributed with uneven and unscientific heights. Potholes, formed due to heavy rains and movement of heavy vehicles, also become a major reason for traumatic accidents and loss of human lives. To address the above mentioned problems, a cost effective solution is needed that collects the information about the severity of potholes and humps and also helps drivers to drive safely. With the proposed system an attempt has been made to endorse drivers to ward off the accidents caused due to potholes and raised humps.

PROJECT TITLE	**DESIGN AND IMPLEMENTATION OF A CHILDREN SAFETY SYSTEM BASED ON IOT TECHNOLOGIES**
PROJECT ID	SHES016
DOMAIN	IOT
ABSTRACT	The Internet of Things (IoT) is a new evolution in technological advancement taking place in the world today. This paradigm allows physical world objects in our surroundings to be connected to the Internet. This idea comes to life by utilizing two architecture; the Sensing Entity in the environment that collects data and connects itself to the cloud and the Cloud Service that hosts the data from the environment and controls the parameters. The combination of wireless sensor networks and cloud computing is becoming a popular strategy for the IoT era.

	In this paper a system for increasing children's safety is proposed. The focus is on the daily route from home to school and vice versa, assuming the use of school buses. IoT paradigm is exploited together with different localization techniques i.e. RFID and GPS, in order to design a solution for parents willing to make certain of their child's following the main to school or home, i.e. taking the school bus and entering school or leaving school and entering the school bus. In this paper the applicability of RFID technology efficient tracking capabilities is tested in children's tracking and monitoring during their trip to and from school by school buses. The proposed solution is discussed in terms of technologies and architecture and the first prototype is presented.

PROJECT TITLE	**SECURE MEDICAL TAGS FOR REDUCING MEDICAL ERRORS &DRUG INTERACTION WITH EHR SYSTEM**
PROJECT ID	SHES017
DOMAIN	IOT
ABSTRACT	We have proposed a secure healthcare service like Health Secure on a hybrid cloud to which all hospitals can subscribe. The Health Secure hybrid cloud provides service for maintaining Cryptographic servers for secure framework and Storage server to provide backup as well as space for extended EHR. Mobile ADMIN is a mobile device of an authorized medical admin. Android application is the patient's mobile device with the Health card and Mobile Doc is the doctor's mobile device. Since a larger screen would be better suited to view and update the health records, Mobile Doc could either be an NFC enabled tablet, for portability, or a laptop with external smart card reader. For NFC P2P based and card emulation based Health cards, we use patient's and doctor's set of

	public and private keys. Asymmetrical shared key is used for encrypting data. Hospital administration has an application for securely reading/writing with a mobile device, Mobile ADMIN; to manage smartcard based tags and patient Health cards. Mobile ADMIN can register with the proposed Health Secure cloud service on a hybrid cloud, which can issue security keys for our architecture. The mobiles use simple interfaces of NFC and Bluetooth for credential storage and communication. With the help of android application and with patient related data stored in database using in local server it helps to understand the patients better.

PROJECT TITLE	**IOT BASED SMART AND ADAPTIVE STREET LIGHTING SYSTEM**
PROJECT ID	SHES018
DOMAIN	IOT
ABSTRACT	The system is mainly used for smart and weather adaptive lighting in street lights. The project is implemented with smart embedded system that controls the street light based on detection of sunlight. During the night time the street light gets automatically OFF. The ON/OFF can be accessed anywhere anytime through internet. A camera is placed on top of the street light to track the actions performed on the road where the footages are stored in a server. In addition to this, a panic button is placed on the pole, in-case of any emergency or danger, the person in danger can press this button which raises an alarm at the nearby police station. Whenever the panic button is pressed, the footage at that time recorded by the camera is sent directly to the cloud account. The access of the account is given to the particular police station by which they can

	view the incident's spot. Each area's street lights are connected to the particular area's police station and each of them has a cloud accessible account. The manual operation using GSM technology is completely eliminated.Thus the system is mainly designed to ensure safety and to prevent energy wastage.

PROJECT TITLE	**Automatic Accident Detection and Ambulance Rescue System – SMART BIO SERVICES**
PROJECT ID	SHES019
DOMAIN	EMBEDDED SYSTEM, IOT
ABSTRACT	Road accidents and traffic congestion are the major problems in urban areas. Currently there is no technology for accident detection. Also due to the delay in reaching of the ambulance to the accident location and the traffic congestion in between accident location and hospital increases the chances of the death of victim. There is a need of introducing a system to reduce the loss of life due to accidents and the time taken by the ambulance to reach the hospital. To overcome the drawback of existing system we will implement the new system in which there is an automatic detection of accident through sensors provided in the vehicle. A main server unit houses the database of all hospitals in the city. A GPS and GSM module in the concerned vehicle will send the location of the accident to the main server which will rush an ambulance from a nearest hospital to the accident spot. Along with this there would be control of traffic light signals in the path of the ambulance using RF communication. This will minimize the time of ambulance to reach the hospital. A patient monitoring system in the ambulance will send the vital parameters of the patient to the concerned hospital. This system is fully automated, thus it finds the accident spot and helping to reach the hospital in time

PROJECT TITLE	**DESIGN OF IOT BASED SMART CRADLE FOR INFANTS**
PROJECT ID	SHES020
DOMAIN	IOT
ABSTRACT	Infants or a toddler needs parents' attention 24 hours a day and 7 days a

	week, which is practically impossible due to other priorities like house hold activities, official works and personal works. Baby care centre or nanny is the two options available which involves lot of passion. We live in a world where technologies are used all around us. The new generations of parents were raised with technology. There are many things these parents will buy to help them care for their baby (Cradle, Crib, Baby Monitor, etc.). So, there is a need for safe and secure place to take good care of the children's need with minimum human intervention, which can be accomplished with the help of a "Smart Baby Cradle". A "Smart Baby Cradle" provides parents a smart automatic cradle system to help these parents monitor and comfort the baby. The Smart Baby Cradle allows them to monitoring their babies, the cradle, play soothing music, even speak to the baby, observing the temperature of the infant, bed wet sensor which will caution the attendants for bunk wetting of the infant. The mother can keep an eye on baby through camera inserted in the cradle. All the fittings are done through Arduino and PIR sensor. Additionally, we provide a predefined nutrition food chart to help baby remain healthy.

PROJECT TITLE	**DEVELOPMENT OF SMART HELMET BASED ON IOT TECHNOLOGY FOR SAFETY AND ACCIDENT DETECTION**
PROJECT ID	SHES021
DOMAIN	IOT
ABSTRACT	The Internet of Things (IoT) is a new evolution in technological advancement taking place in the world today. This paradigm allows physical world objects in our surroundings to be connected to the Internet. This idea comes to life by utilizing two architecture; the Sensing Entity in the environment that collects data and connects itself to the cloud and the Cloud Service that hosts the data from the environment and controls the parameters. The combination of wireless sensor networks and cloud computing is becoming a popular strategy for the IoT era.

	IOT has enabled us to connect our day to day devices in a network for a sole purpose to exchange data. With the growing number of 2-wheel motor vehicles, frequency of accidents is on the rise. A major portion of the fatalities occur because the person was either not wearing a helmet, or his accident was not reported in time, and he could not be saved because of the delayed admittance to a hospital, or because he was riding while drunk. Today a number of countries has made it mandatory to wear helmet while riding. We propose mechanisms that can detect if one is wearing the helmet, detect accidents, and detect whether the person has over- consumed alcohol. These information is send to the concerned person about the status of the person who is accessing the vehicle.

PROJECT TITLE	**Multipurpose Agribot**
PROJECT ID	SHES022
DOMAIN	IOT
ABSTRACT	* A robot is a mechanical, artificial agent and is usually an electromechanical system. It is a device that, because of software programming, makes complicated tasks easy to perform. * Agricultural robotics is the use of automation in bio systems such as agriculture, forestry, and fisheries. It is replacing the conventional techniques to perform the same tasks, with efficiency. * Applying automation to agriculture has helped create several advancements to the industry while helping farmers save money and time. * Moreover the vehicle can be controlled through Bluetooth medium using a Android smart phone. * The whole process calculation, processing, monitoring are designed with motors and sensor interfaced with microcontroller.

PROJECT TITLE	**ANTI-THEFT PROTECTION OF VEHICLE BY CLOUD & GPS WITH FINGERPRINT VERIFICATION**
PROJECT ID	SHES023
DOMAIN	IOT

ABSTRACT	Recently vehicle tracking system is getting vast popularity because of the rising number of the stolen vehicles. Vehicle theft is happening on parking and sometimes driving in unsecured places. This research work explores how to avoid this kind of stealing and provides more security to the vehicles. The implemented system contains single-board embedded system which is equipped with Wi-Fi and global positioning system (GPS) along with a microcontroller installed in the vehicle. The use of Wi-Fi and GPS technologies allows the system to track the object and provides the most up-to date information about on-going trips. Moreover, fingerprint verification is done in the implemented system to ensure the driving of correct person. The implemented system is very simple with greater security for vehicle anti-theft protection and low cost technique compared to others.

PROJECT TITLE	**ANY TIME MEDICINE VENDING MACHINE**
PROJECT ID	SHES024
DOMAIN	EMBEDDED SYSTEM
ABSTRACT	ATM-Any Time Medicine, where the device can send out medicines. Device can fetch out the medicines automatically for the basic common symptoms for free of cost, and the medicines provided by the machine are only for the timely relief and in emergency case, where the person has to meet the doctor further. People at rural places cannot get access to medicines that are providing to them freely by the government. The aim of this project is that people would be able to access the drugs via patient kiosks in public places such as drug stores, malls, bus / railway stations, on highways, areas where medical stores are limited. Regular replenishment can help in not only tracking usage pattern and thus taking precautionary measures but also ensure availability of drugs 24x7. The device is designed taking under concern, such as lack of poverty and illiteracy in India.

PROJECT TITLE	**BATTERY MANAGEMENT SYSTEM**

PROJECT ID	SHES025
DOMAIN	EMBEDDED SYSTEM
ABSTRACT	A battery management system is essentially the “brain” of a battery pack; it measures and reports crucial information for the operation of the battery and also protects the battery from damage in a wide range of operating conditions. Battery management system (BMS) emerges a decisive system component in battery-powered applications, such as (hybrid) electric vehicles and portable devices. However, due to the inaccurate parameter estimation of aged battery cells and multi-cell batteries, current BMSs cannot control batteries optimally, and therefore affect the usability of products. In this paper, we propose a BMS such that continuously it monitors current, voltage and temperature and these parameters values are sent to the android app through PC.

PROJECT TITLE	**Bidirectional Smart Pill Box Monitored Through Internet And Receiving Reminding Message From Remote Relatives**
PROJECT ID	SHES026
DOMAIN	IOT
ABSTRACT	A smart pill box (SPB) for the elderly and nursing homes meets the needs of the market by integrating electronic technology and network functionality. The interactive SPB, which features a particular device that contains embedded sensors in each compartment that not only transmits detected signals to website when users are taking their pills but also receives are mind message back to the LCD screen on SPB by displaying words and/or patterns, or speaking a voice. This study uses the arduino module installed in SPB to achieve two-way messaging with remote relatives via internet of thing (IOT). The module first reads the sensing signal in the kit and uses Wi-Fi to transmit the signal to Wi-Fi Router, and then sends the medication information to a remote webpage or cell phone for monitoring(on LCD). Remote relatives can input care messages on the webpage or mobile phone to send a signal back to the Wi-Fi Router and then to arduino module. After receiving the signal, Arduino will send it to Arduino for text display and voice playback in the SPB. Therefore, the elderly staying in their home or nursing home institution can easily manage their medication via this application. The smart interactive pill box will be crucial for medical care management for elder persons of this aging population or in the future.

PROJECT TITLE	**BIOMETRIC SYSTEM BASED ELECTRONIC VOTING MACHINE**
PROJECT ID	SHES027
DOMAIN	IOT
ABSTRACT	This paper focuses on simple, low cost fingerprint based electronic voting machine using Arduino UNO. An electronic voting system is a voting system in which the voters' and voting data is recorded, stored and processed digitally. The proposed system consists of controller hardware and software. The hardware is implemented with arduino along with finger print module. The proposed system gives the best solution for minimizing the time taken for identifying the voter. The design implemented in the FP-EVM is portable, flexible and with minimum power consumption. The designed system is user-friendly, easily adaptable and cost-effective. Further, the designed system has simple architecture, fast response time and scope for further expansion. The system uses thumb impression for voter identification as we know that the thumb impression of every human being has a unique pattern. Thus it would have an edge over the present day voting systems. The purpose of such system is to ensure that the voting rights are accessed only by a legitimate user and no one else. In this, creation of a database consisting of the thumb impressions of all the eligible voters in a constituency is done as a pre-poll procedure. During elections, the thumb impression of a voter is entered as input to the system. This is then compared with the available records in the database. If the particular pattern matches with anyone in the available record, access to cast a vote is granted. But in case the pattern doesn't match with the records of the database or in case of repetition, access to cast a vote is denied or the vote gets rejected. The result is instantaneous and counting is done. The overall cost for conducting elections gets reduced and so does the maintenance cost of the systems. The postal type of voting is not convenient for everyone, Hence a new option like vote

	from any places in Karnataka by using the pre saved details of AADHAR card and by choosing the specific area for voting it comes in handy so that it becomes easy for the non home persons to vote from any place inside Karnataka. The age is verified before voting and if the voter does not vote for more than three elections the citizenship will be canceled. The disabled persons will have a swipe machine where they will use their AADHAR card to vote. These simulations results are verified with the help of Keil vision.

PROJECT TITLE	**Design and implementation of Authentication for Smart Vehicle Security System Using IOT**
PROJECT ID	SHES028
DOMAIN	IOT
ABSTRACT	Vehicle Security System is based on GPS and GSM technology. It is a classic example of wireless communications. The wireless communications industry is one of the fastest growing industries. Over the past few years, there has been an explosive increase in the theft of vehicles. Now with the help of GPS and GSM technology, theft can be prevented at a high security based system. There is no problem when your car is in your vicinity. By using the detection of theft using car buzzer it's easy to protect your vehicle from getting theft. But when your car is far away from you the buzzer detection might not be that beneficial. Here more efficient protection method is required to protect your vehicle. This is the reason for creation of Vehicle Security system. This system uses GPS and GSM technology. It provides the optimum level of safety to your vehicle when it's not in your vicinity. By using Vehicle Security, you can protect your vehicle positioned miles away from you. As system uses GSM technology so, just by sending a SMS you can control the ignition system of your vehicle. so it is more easier way to protect your vehicle from getting theft.

PROJECT TITLE	**EMBEDDED BASED FOOD QUALITY DETECTION USING IOT**
PROJECT ID	SHES029
DOMAIN	IOT

ABSTRACT	Food quality is the quality properties of food that is acceptable by consumers. This includes important factors as appearance texture, and flavor. food consumers are affected to any form of contamination that may occur during the manufacturing process. Many consumer give importance to standards of processing and manufacturing, mainly to know what ingredients it contains, because of dietary, nutritional requirement, or medical conditions .our proposed system may give the good quality management in food. It is based on many embedded sensors like temperature sensor, odour sensor, pH sensor depending on out coming electric signals or digital value quality of the food should be determined. Based on the combination of the sensor outputs quality of the food should be detected

PROJECT TITLE	**DESIGN AND DEVELOPMENT OF GREEN LEAF DETECTION AND SMART SPRAYER ROBOT USING ARTIFICIAL INTELLIGENCE**
PROJECT ID	SHES030
DOMAIN	IOT
ABSTRACT	During summers, most people are too lazy to water the potted plants on their rooftop gardens every day. Explained in this section is a simple and exciting automatic plant watering system that you can build yourself in just a few hours. It is an Raspberry and raspberry pi based automatic plant water system that uses a IR Sensor

PROJECT TITLE	**INTELLIGENT TRAIN ENGINE**
PROJECT ID	SHES031
DOMAIN	EMBEDDED SYSTEM
ABSTRACT	Whenever any engine observer a red signal on its track it will start decreasing its speed gradually and stops automatically at some distance from the signal pole. After then when it gets green signal the driver can maintain start the train and go on. In the mean time when train has not stopped yet and a red signal becomes green then it crosses the signal pole with low speed and then driver can slowly increase the speed. So now before the driver observes the red signal the engine itself

	observes it and automatically starts decreasing speed and then stops. The driver can feel relax in driving because he doesn't have to take care about red signals. Even if driver forgets to take any action on red signal then also we can avoid accidents by the implementation of this idea.

PROJECT TITLE	**Monitoring and Maintenance of Highway bridges Using Wireless Sensor Networks**
PROJECT ID	SHES032
DOMAIN	IOT
ABSTRACT	Usage of wireless sensor network increasing and becoming cost effective now a days. Many real time applications using this network system. One of the example for such application is monitoring a highway or railway bridges which plays an important role in transportation. Many bridges in world collapse due to some internal and external factors, those factors must be monitored in order to avoid this collapse. This paper proposes automatic bridge monitoring system using wireless sensor networks. The proposed system consists of Four sensors to monitor the bridge condition continuously i.e. Accelerometer to detect the jerks in the bridge or in pillar, flex sensor to detect the bend or orientation in the bridge, load cell to detect the overload on the bridge, Temperature sensor is to monitor the heat, This data from the sensors will be processed by Arduino controller and is transferred to the receiver node at the management center using the transmitter node at the transmitter end whenever the fault occure. At the receiver side laptop is used to monitor the received data which can also take further action about bridges.

PROJECT TITLE	**SMART WASTE MANAGEMENT IN MULTI STORAGE BUILDING**
PROJECT ID	SHES033
DOMAIN	IOT
ABSTRACT	The idea is simple and is driven by the fact that the collect the waste from the high rise buildings having a large numbers are floors are very difficult and dump in the vans it will take lot of effort. So in order to solve this issues a model is developed which is used to automatically collect the waste and segregate the waste and place in dustbins. For this we are using IR sensor, dc motor, arduinouno micro controller,

	roller, electromagnetic switch and relay. IR sensors are used to get the dustbin status as either filled or empty. DC motors which are connected at the bottom bins rotate and lift the bin and collect the waste and again come downwards. Later this waste is placed on the roller where segregation of waste is done. Relay is used to on the fan, seggregate lighter dust particles. By using electromagnetic switch iron dust particles are segregated.

PROJECT TITLE	**Pick and Place robot**
PROJECT ID	SHES034
DOMAIN	IOT
ABSTRACT	• Robotics is the branch of engineering science and technology related to robots, and their design, manufacture, application and structural disposition. • Robotics is related to electronics, mechanics, and software. • In this highly developing society time and man power are critical constrains for completion of task in large scales. • The automation is playing important role to save human efforts in most of the regular and frequently carried works. • Pick and Place robot is the one which is used to pick up an object and place it in the desired location. It can be a cylindrical robot providing movement in horizontal, vertical and rotational axes, a spherical robot providing two rotational and one linear movement, an articulate robot or a scara robot (fixed robots with 3 vertical axes rotary arms

PROJECT TITLE	**RFID BASED ATTENDANCE SYSTEM WITH SMS NOTIFICATION**
PROJECT ID	SHES035
DOMAIN	IOT
ABSTRACT	Now a days due to easy availability of all the information on the internet, students are less motivated to attend the classes, due to which most of the students are unable to maintain minimum attendance. This work is to simplify attendance recording system by using Radio Frequency Identification (RFID) technology. RFID based Attendance recorder with SMS alert System is a web based application that will be developed to overcome the above stated problem. The system will be developed by using GSM (Global System for Mobile communication) technology and database support. The information from RFID Database handling System will be used for taking attendance and for sending SMS alert also.

	This

	System interacts with parents by sending message. Therefore, the system functionality is not only records the student attendance, but also sends alert SMS to their parents when the student is absent.

PROJECT TITLE	**RFID BASED SMART RATION CARD**
PROJECT ID	SHES036
DOMAIN	IOT
ABSTRACT	RFID based automatic ration system is an approach in public distribution system useful for more efficient, accurate and automated technique of ration distribution. The conventional ration distribution system has drawbacks like inaccurate quantity of goods, low processing speed, large waiting time and material theft in ration shop. In this paper, proposed an Automatic Ration Materials Distribution Based on GSM (Global System for Mobile) and RFID (Radio Frequency Identification) technology instead of ration cards. To get the materials in ration shops need to show the RFID tag into the RFID reader, then controller check the customer codes and details of amounts in the card. After verification, these systems show the amount details. Then customer need to enter they required materials by using keyboard, after receiving materials controller send the information to government office and customer through GSM technology.

PROJECT TITLE	**RFID Based train identification, detection and unmanned railway crossing system.**
PROJECT ID	SHES037
DOMAIN	IOT
ABSTRACT	There has been an increase in the road trafficas well as the rail traffic, accidents at level crossing has increased and this has caused the concern for the Indian railways. The objective of this project is to provide automatic railway gate at a level crossing replacing the gates operated by the gatekeepers. In this project we are proposing a simple solution for the level crossing in which we fix the Radio Frequency tag (RF tag) on the train. The system reduces the time for which the gate remains closed. This type of gates can be employed in an unmanned level crossing where the chances of accidents are higher and reliable operation is required. The collision of trains running on same track is also prevented by employing IR Transmitter-Receiver system at each sections of the Station and passes the information to a master control

	room.

PROJECT TITLE	**WASTE SEGREGATION USING SMART DUSTBIN**
PROJECT ID	SHES038
DOMAIN	IOT
ABSTRACT	The economic value of the waste generated is not realised unless it is recycled completely. Several advancements in technology has also allowed the refuse to be processed into useful entities such as Waste to Energy, where the waste can be used to generate synthetic gas (syngas) made up of carbon monoxide and hydrogen. The gas is then burnt to produce electricity and steam, Waste to Fuel, where the waste can be utilized to generate bio fuels. When the waste is segregated into basic streams such as wet, dry and metallic, the waste has a higher potential of recovery, and consequently, recycled and reused. The wet waste fraction is often converted either into compost or methane-gas or both. Compost can replace demand for chemical fertilizers, and biogas can be used as a source of energy. The metallic waste could be reused or recycled.

PROJECT TITLE	**Automated Monitoring and Controlling System for green house ,sericulture using IOT and GSM and solar power**
PROJECT ID	SHES039
DOMAIN	IOT
ABSTRACT	Monitoring and control of greenhouse environment play an important role in greenhouse production and management. To monitor the greenhouse environment parameters effectively, it is necessary to design a measurement and control system. The objective of this project is to design a simple, easy to install, microcontroller-based circuit to monitor and record the values of temperature, humidity, soil moisture and sunlight of the natural environment that are continuously modified and controlled in order optimize them to achieve maximum plant growth and yield. The controller ARM Cortex and WIFI are used . It communicates with the various sensor modules in real-time in order to control the light, aeration and drainage process efficiently inside a greenhouse by actuating a cooler, fogger, dripper and lights

	respectively

	according to the necessary condition of the crops. An integrated Liquid crystal display (LCD) is also used for real time display of data acquired from the various sensors and the status of the various devices. Also, the use of easily available components reduces the manufacturing and maintenance costs. The design is quite flexible as the software can be changed any time. It can thus be tailor-made to the specific requirements of the user. This makes the proposed system to be an economical, portable and a low maintenance solution for greenhouse applications, especially in rural areas and for small scale agriculturists

PROJECT TITLE	**AUTOMATED SYSTEM FOR METRO TRAIN**
PROJECT ID	SHES040
DOMAIN	IOT
ABSTRACT	The main aim of this paper is to make an automated place announcement system for Train, ticket issuing and Open/close of Rail- gate using voice IC and the radio frequency wireless card for tracking the station data and issue of tickets. The paper consists of microcontroller with the RF receiver and the voice recorder chip with speaker. The whole system is attached to the vehicle (BUS or Train). The encoded RFID tags are placed in the BUS stops or the railway stations. The microcontroller in the TRAIN is programmed in such a way that every station name saved in the voice chip which is having a unique code. So whenever the bus or train reaches the station, the reader in the bus or in the train receives the codes, which are transmitted from the tag and the microcontroller receives this code and checks in the look up table, saved in the chip. Whichever matches, the controller will send the command to the voice chip to play that particular voice. At the same time the train stops for about 10-15 seconds in the station and then before leaving the station, it will again start to announce “PLEASE GET INTO THE TRAIN, THE TRAIN WILL LEAVE IN 6 SEC” and the train starts to move to next station. The voice chip will play the voice and this will be heard in the speaker. This voice is repeated till the train leaves the station.

PROJECT TITLE	**Designing a complete vehicle immobilization system integrated with a personalized alert mechanism**
PROJECT ID	SHES041
DOMAIN	IOT

ABSTRACT	In automotive applications, vehicle immobilization is one of the important aspects in the area of security system. A variety of prior art anti-theft devices such as, steering wheel locks, steering column locks, burglar alarms, automotive hood locks, ignition locks, truck guards, park interface locks, and computer coded keys, particularly with rolling code keys, have reduced vehicle theft . There is a need for an integrated control system that monitors vehicle status conditions and the right authentication.

PROJECT TITLE	**"DigiBin"- Smart Way for Sorting Waste In Commercial Places**
PROJECT ID	SHES042
DOMAIN	IOT
ABSTRACT	Waste Management is the pervasive problem. Nowadays and rising continuously with rise in urbanization. Waste is always the mixture of different types of material. The main goal of this project is to design and develop a sorting system that is portable and also sorts the waste automatically. It's an eco-friendly automatic system. With the Proliferation of Internet of Things(IOT) Devices as Such as Smart phones and Sensors, this Project describes the effective management of solid waste using embedded system. The solar panel and H-bridge are used by the motor to make the system portable. The moving system stops when a non-living obstacle arrives and takes a turn. Otherwise gets the inputs from the waste dumped by the person which is detected by the sensor. The sensor sends a signal to microcontrollerwhere it decides the type of waste(degradable and non- degradable) and separates it automatically and moves forward. Here the IOT module is used to control and monitor the waste. The system consist of mobile app which receives a message when the dustbin is full (3kg) makes the system to alert and the information is sent to the authority who own this app("Mr.Bin"). It even includes database of wastage collection on the particular day.

PROJECT TITLE	**GPS-GSM based Inland Vessel Tracking System for Automatic**

	Emergency Detection and Position Notification
PROJECT ID	SHES043
DOMAIN	IOT
ABSTRACT	In this paper, an upgraded version of vehicle tracking system is developed for inland vessels. In addition to the features available in traditional VTS (Vehicle Tracking System)for automobiles, it has the capability of remote monitoring of the vessel's motion and orientation. Furthermore, this device can detect capsize events and other accidents by motion tracking and instantly notify the authority and/or the owner with current coordinates of the vessel, which is obtained using the Global Positioning System (GPS). This can certainly boost up the rescue process and minimize losses. We have used GSM network for the communication between the device installed in the ship and the ground control. So, this can be implemented only in the inland vessels. But using iridium satellite communication instead of GSM will enable the device to be used in any sea-going ships .At last, a model of an integrated inland waterway control system(IIWCS) based on this device is discussed.

PROJECT TITLE	**WSN BASED ADVANCED IRRIGATION VEHICLE – AGRIBOT**
PROJECT ID	SHES044
DOMAIN	IOT
ABSTRACT	**Agricultural Robots** or **agribot** is a robot deployed for agricultural purposes. The main area of application of robots in agriculture is at the harvesting stage. Fruit picking robots, driverless tractor / sprayer, and sheep shearing robots are designed to replace human labor. In most cases, a lot of factors have to be considered (e.g., the size and color of the fruit to be picked) before the commencement of a task. Robots can be used for other horticultural tasks such as pruning, weeding, spraying and monitoring. Robots can also be used in livestock applications (livestock robotics) such as automatic milking, washing and castrating. Robots like these have many benefits for the agricultural industry, including a higher quality of fresh produce, lower production costs, and a smaller need for manual labor.

PROJECT TITLE	**IMPLEMENTATION OF SAFETY SYSTEM DEVICEFOR WOMENS**
PROJECT ID	SHES045
DOMAIN	IOT
ABSTRACT	India which sees itself as a promising super power and an economic hub, is still trapped in the clutches of various patriarchal evils like molestations, dowry, crime against women, worst among all is Rape. The atrocities against the women can be now brought to an end with the help of an embedded system based device. The systems are getting smarter day by day with the introduction of the speech signal to control the machine. In this paper, the sensor like vibration sensor is used to provide input along with that panic switch is also used which are given to the microcontroller. Zigbee and GSM is the Wireless transmission media used in this project.The information can be send to the concerned person through GSM.

PROJECT TITLE	**DESIGN AND IMPLEMENTATION OF THREE LEVEL SECURITY**
PROJECT ID	SHES046
DOMAIN	IOT
ABSTRACT	The main purpose of this paper is to develop a prototype of high security system for banks using three step verification of face recognition and OTP generation is GSM module.

PROJECT TITLE	**Development of unmanned railway gate controller and waste management**
PROJECT ID	SHES047
DOMAIN	IOT
ABSTRACT	There has been an increase in the road traffic as well as the rail traffic, accidents at level crossing has increased and this has caused the concern

	for the Indian railways. The objective of this project is to provide an automatic railway gate at a level crossing replacing the gates operated by the gatekeepers. In this project we are proposing a simple solution for the level crossing in which we fix the IR sensor. The system reduces the time for which the gate remains closed. This type of gates can be employed in an unmanned level crossing where the chances of accidents are higher and reliable operation is required .The collision of trains running on same track is also prevented by employing IR Transmitter-Receiver system at each sections of the Station and passes the information to a master control room via GSM MODEM. A common tank for waste of water, toilet in train to avoid the waste in rail track, the sensor will sense and send to cloud computing through the Wi-Fi technology. The station master will monitor from his android phone.

PROJECT TITLE	**AN IOT APPROACH TO VEHICLE ACCIDENT DETECTION, REPORTING AND NAVIGATION**
PROJECT ID	SHES048
DOMAIN	IOT
ABSTRACT	One particular concern that Public Safety Organizations (PSO) must account for whilst engaging in many activities is decreasing the effect of vehicle accidents, aiding as many injured people as possible and providing 24/7 on the spot rescue. The Red Cross humanitarian organization is one of the most known PSOs to be present on-site whenever an accident or a disaster takes place. However, some of the rescue teams face difficulty in reaching the injured people to due late alerts and insufficient information of the specific accident location. The advent of the mobile phone and Internet of Things (IoT) industries reshaped the way people communicate and brought a paradigm shift to

	public and private services.

PROJECT TITLE	**ANDROID SPEECH RECOGNITION BASED VOICE COMMAND NOTICE BOARD**
PROJECT ID	SHES049
DOMAIN	IOT
ABSTRACT	Today notice board has become an important thing in institutes/organization or public places like railway stations, bus stands and hospitals. But to use the paper notices stacked on a notice board is a time taking and expensive process and there is wastage lot of time, paper and labour. The notice board is used to display the information in an effective way to the people, but to update the messages instantly is not easy on the notice board. This project, deals about an advanced Hi- Tech wireless Notice Board. This system is enhanced to display the latest information through an Android application of smart phones or tablet

PROJECT TITLE	**BIRD REPELLER AND DETERRENT SYSTEM WITH AUTOMATIC BLACKBOX INFORMATION TO BASE STATION**
PROJECT ID	SHES050
DOMAIN	IOT
ABSTRACT	Birds can cause a lot of problem when aircrafts are flying. If a bird gets struck inside the motor of the aircraft, then it can lead an aircraft to be crashed. So it is necessary to detect that bird before itself. Although radar has been used for large area tracking of migrating birds for many years, the requirements of small-area bird detection, at a scale suitable for airport hazard assessment and management, has been a relatively recent development. Relatively inexpensive X-band and S-band marine radar transceivers have been developed specifically to track birds. With radar scanning rates typically of 24 rpm - once every 2.5 seconds, it is now feasible to use it for both the capture of data on significant bird activity for planning and strategic management purposes and for the real-time tactical monitoring of such activity. Whilst obviously still expensive, where the degree of bird hazard is high, radar provides an option which should be seriously considered. The very latest developments in survey are looking at the systematic detection and

	recording of bird strike 'Near Miss Events' - NMEs. The principle is that, if radar can detect 100% of near miss events in a way which permits structured - and automated - analysis, then hazard mitigation performance measurement will in future be able to be proactive - the detection of risk, rather than reactive - the recording of actual strikes. Hazard management may thereby be informed in a more timely manner and with real safety benefit where bird hazard is high. In our project we introduce a system which detects a bird before itself and sprikle the water to divert the bird's direction and also we design a blackbox, which can detect the faults in the engine, and send the information to the base station by using RF Transmitter and receiver.

PROJECT TITLE	**GSM CONTROLLED POWER MONITORING AND BILLING SYSTEM**
PROJECT ID	SHES051
DOMAIN	IOT
ABSTRACT	The Existing domestic Energy meter reading systems universally exist many problems, such as difficulty in construction, too narrow bandwidth, too low rate, poor real time, not two way communication quickly etc. To solve above problems, this paper uses the wireless technology for Automatic Meter Reading system. A proposed method provides the communication between the Electricity Board section and the consumer section using GSM for transmitting the customer's electricity consumption and bill information that is calculated using Arduino.The information regarding the bill amount and payment are communicated to the consumer via Global System for Mobile communication.

PROJECT TITLE	**TRANSMISSION LINE MULTIPLE FAULTS DETECTION AND INDICATION TO ELECTRICITY BOARD**
PROJECT ID	SHES052
DOMAIN	IOT

ABSTRACT	In this paper, a scheme for fault detection and identification of SIGNLE PHASE overhead transmission lines is proposed. Fault detection techniques based on mean square value of the difference between incoming and out going single phase currents of each section. These differences are compared against threshold setting values. Faulty phase identification is based on the analysis of single phase currents at one end of transmission line. The transient currents are processed by Discrete Wavelet Transform multi-resolution analysis. It is used as input to a rule-base system to identify the fault type. Many case studies are provided to validate the proposed algorithm.

PROJECT TITLE	**POWER MONITORING AND BILLING SYSTEM USING IOT**
PROJECT ID	SHES053
DOMAIN	IOT
ABSTRACT	The Existing domestic Energy meter reading systems universally exist many problems, such as difficulty in construction, too narrow bandwidth, too low rate, poor real time, not two way communication quickly etc. To solve above problems, this paper uses the wireless technology for Automatic Meter Reading system. A proposed method provides the communication between the Electricity Board section and the consumer section using IOT for transmitting the customer's electricity consumption and bill information that is calculated using Arduino.The information regarding the bill amount and payment are communicated to the consumer via **Internet of things**

PROJECT TITLE	**Prepaid energy meter**
PROJECT ID	SHES054
DOMAIN	IOT

ABSTRACT	• The conventional mechanical energy meter is based on the phenomenon of “Magnetic Induction”. It has a rotating aluminium Wheel called Ferriwheel and many toothed wheels. Based on the flow of current, the Ferriwheel rotates which makes rotation of other wheels. • Electronic Energy Meter is based on Digital Micro Technology (DMT) and uses no moving parts. So the EEM is known as “Static Energy Meter” In EEM the accurate functioning is controlled by a specially designed IC called ASIC (Application Specified Integrated Circuit). • In addition to ASIC, analogue circuits, Voltage transformer, Current transformer etc are also present in EEM to “Sample” current and voltage. The ‘Input Data’ (Voltage) is compared with a programmed “Reference Data’ (Voltage) and finally a ‘Voltage Rate’ will be given to the output. This output is then converted into ‘Digital Data’ by the AD Converters (Analogue- Digital converter) present in the ASIC • Since IOT is cost effective compared to SMS, monitoring of energy meters at lower cost is made possible. Daily consumption reports are generated which can be monitored through Android application and/or web portal. Also, android users can pay their electric bills from their android application . • Non-android users can monitor and pay their bills online. The system is more reliable and accurate reading values are collected from energy meters.

PROJECT TITLE	**Intelligent Wireless Patient Monitoring and Tracking System (Using Sensor Network and Wireless Communication)**
PROJECT ID	SHES055
DOMAIN	IOT
ABSTRACT	Aim of our work is to monitor the human body temperature, blood pressure (BP), Pulse Rate and ECG and tracking the patient location. The human body temperature, BP, Pulse Rate and ECG are detected in the working environment; this can be sensed by using respective sensors. The sensed information is send to the ARDUINO microcontroller through signal conditioning circuit in the patient unit. A desired amount of sensor value is set and if it is exceeded preliminary steps should be taken by the indicating by buzzer.The sensor information will be transmitted from the patient unit to the main controller unit with the help of Zigbee communication system which is connected with the microcontrollers in the both units. The main controller unit will send those sensed data as well as the location of that patient by the help of GPS Module to the observer/doctor. The observer/doctor can receive

	the SMS sent by GSM module and further decision can be taken. The message is sent to a mobile phone using Global system mobile (GSM) Modem. MAX232 was a driver between microcontroller and modem.

PROJECT TITLE	**WSN BASED DATA ACQUISITION SYSTEM FOR MULTIPLE FAULTS MONITORING AND CONTROLLING SYSTEM**
PROJECT ID	SHES056
DOMAIN	IOT
ABSTRACT	In this paper, a scheme for fault detection and identification process in industrial environment is developed. Fault detection techniques based on mean square value of the difference between incoming and outgoing sensors of each section. These differences are compared against threshold setting values. Fault identification is based on the analysis of sensor values and monitoring using pc. We are proposing a ZIgbee wireless communication device to acquire sensor values and control the outputs. Detect faults in remote Industrial equipments : ♣ Immediately transmit any fault information to the PC. ♣ Monitor multiple parameters such as voltage, current, Vibrations, Gas and temperature simultaneously ♣ Transfer data through a wireless medium such as Zigbee.

PROJECT TITLE	**Underground Cable Fault Detection and Alert with Voice Commands using FN-M16P.**
PROJECT ID	SHES057
DOMAIN	IOT

ABSTRACT	The project is intended to detect the location of fault in underground cable lines from the base station in kilometers using a Renesas micro- controller. This project uses the standard concept of Ohms law i.e., when a low DC voltage is applied at the feeder end through a series resistor to the Cable lines, then current would vary depending upon the location of fault in the short circuited cable.

	In the urban areas, the electrical cables run in undergrounds instead of overhead lines. Whenever the fault occurs in underground cable it is difficult to detect the exact location of the fault for process of repairing that particular cable. The proposed system finds the exact location of the fault. This system uses a Renesas micro-controller and a rectified power supply. Here the current sensing circuits made with combination of resistors are interfaced to Renesas controller with help of the ADC device for providing digital data to the microcontroller representing the cable length in KM's. The fault creation is made by the set of switches. The relays are controlled by the relay driver IC which is used for switching the power sequentially to all the lines. A 16x2 LCD display connected to the microcontroller to display the information. In case of short circuit (Line to Ground), the voltage across series resistors changes accordingly, which is then fed to an ADC to develop precise digital data to a programmed Renesas board that further displays fault location in kilometers. The project future can be implemented by using capacitor in an ac circuit to measure the impedance which can even locate the open circuited cable.

PROJECT TITLE	**DEVELOPMENT OF AIR POLLUTION MONITORING SYSTEM AND RESPIRATORY DISORDERS**
PROJECT ID	SHES058
DOMAIN	IOT
ABSTRACT	• **Background :** Air pollution due to vehicular and industrial emission has become menace to the living beings with respiratory disorders like Asthma, COPD etc. Due to this menace both indoor and outdoor air quality monitoring in real time has become mandatory. • **Statistical Analysis:** The evolution of Internet of Things (IoT) and Single Board Computers (SBC) has made real time remote monitoring as a ubiquitous process. Our project portrays the usage of SBC for integration of IoT with WSN for Air Quality Monitoring System (AQMS). • **Findings:** Sensor web node is proposed with commercial gas sensors for detecting the gases like CO, CO2, NH3 and NOx to monitor both indoor and outdoor air quality. The integration of open source cloud services for SBC in our proposed project confirms low cost, comfort, convenience and rapid application for flexible AQMS.

PROJECT TITLE	ATM- (development of Any Time Medicine)
PROJECT ID	SHES059
DOMAIN	EMBEDDED SYSTEM
ABSTRACT	ATM-Any Time Medicine, where the device can send out medicines. Device can fetch out the medicines automatically for the basic common symptoms for free of cost, and the medicines provided by the machine are only for the timely relief and in emergency case, where the person has to meet the doctor further. People at rural places cannot get access to medicines that are providing to them freely by the government. The aim of this project is that people would be able to access the drugs via patient kiosks in public places such as drug stores, malls, bus / railway stations, on highways, areas where medical stores are limited. Regular replenishment can help in not only tracking usage pattern and thus taking precautionary measures but also ensure availability of drugs 24x7. The device is designed taking under concern, such as lack of poverty and illiteracy in India.

PROJECT TITLE	**Blind Aid Stick : Hurdle Recognition, Simulated Perception, Android** **Integrated Voice Based Cooperation via GPS Along With Panic Alert System.**
PROJECT ID	SHES060
DOMAIN	IOT
ABSTRACT	Evolution of technology has always been endeavored with making daily life simple. With a fast paced life everybody today is harnessing the benefits of technology except some parts of the society .One of them is the visually impaired who have to rely on others for travelling and other activities. This paper aims at providing one such theoretical model which incorporates the latest technologies to provide efficient and smart electronic aid to the blind. We have used IR sensors along with ultrasonic range finder circuit for hurdle detection. Bluetooth module which along with GPS technology and an Android application for blind, will provide voice assistance to desired location and in panic situations will send SMS alert to registered mobile numbers The basic objective of

	the system is to provide a convenient and easy navigation aid for unsighted which helps in artificial vision by providing information about the environmental scenario of static and dynamic objects around them.

PROJECT TITLE	**SMART DUSTBIN**
PROJECT ID	SHES061
DOMAIN	IOT
ABSTRACT	Municipality takes many measures to maintain the cleanliness of the city. One of which is establishing dustbins in regular distance for the convenience of public to discard items. Cleaning this garbage is an important function of municipality which is directly related to health issues. We have designed a model for a 'Smart Dustbin' which indicates directly that the dustbin is filled to a certain level by the garbage and cleaning or emptying them is a matter of immediate concern. This prevents lumping of garbage in the roadside dustbin which ends up giving foul smell and illness to people. The design of the smart dustbin includes a soil moisture sensor to detect the wet waste and a dc motor to put the waste inside the dustbin. The message is sent to the concerned person with location if the dustbin becomes full.

PROJECT TITLE	**Automatic Accident Detection and Ambulance Rescue System**
PROJECT ID	SHES062
DOMAIN	IOT

ABSTRACT	Road accidents and traffic congestion are the major problems in urban areas. Currently there is no technology for accident detection. Also due to the delay in reaching of the ambulance to the accident location and the traffic congestion in between accident location and hospital increases the chances of the death of victim. There is a need of introducing a system to reduce the loss of life due to accidents and the time taken by the ambulance to reach the hospital. To overcome the drawback of existing system we will implement the new system in which

	there is an automatic detection of accident through sensors provided in the vehicle. A main server unit houses the database of all hospitals in the city. A GPS and GSM module in the concerned vehicle will send the location of the accident to the main server which will rush an ambulance from a nearest hospital to the accident spot. Along with this there would be control of traffic light signals in the path of the ambulance using RF communication. This will minimize the time of ambulance to reach the hospital. A patient monitoring system in the ambulance will send the vital parameters of the patient to the concerned hospital. This system is fully automated, thus it finds the accident spot and helping to reach the hospital in time

PROJECT TITLE	**WSN BASED DEVELOPMENT OF AUTO VEHICLE INFORMATION TO RTO - RTO SURVAILANCE SYSTEM**
PROJECT ID	SHES063
DOMAIN	IOT
ABSTRACT	In Transportation, vehicles play a vital role nowadays because of population growth and human requirements the usage of vehicles is increasing. For the vehicle's verification also a big task to them to checking the each vehicle. So avoid the problem to traffic police department .we are going with a project which we can monitor the vehicle information through Radio frequency technology. We can monitor the vehicle information like RC book, insurance, emission testing details , Driving license from the RTO office. With the advancement of technology we are designing the total project with the help of micro controller with the transmitter and receiver units.. The proposed system has two sections one is the receiver which is fixed in the vehicle and the second one is the transmitter which is fixed in the RTO office. Moreover, the details of the vehicle is monitored and transmitted to the RTO section and the details of the vehicle are displayed in the RTO section.

PROJECT TITLE	**RFID Based train identification, detection and unmanned railway crossing system.**
PROJECT ID	SHES064
DOMAIN	IOT

ABSTRACT	There has been an increase in the road trafficas well as the rail traffic, accidents at level crossing has increased and this has caused the concern for the Indian railways. The objective of this project is to provide automatic railway gate at a level crossing replacing the gates operated by the gatekeepers. In this project we are proposing a simple solution for the level crossing in which we fix the Radio Frequency tag (RF tag) on the train. The system reduces the time for which the gate remains closed. This type of gates can be employed in an unmanned level crossing where the chances of accidents are higher and reliable operation is required. The collision of trains running on same track is also prevented by employing IR Transmitter-Receiver system at each sections of the Station and passes the information to a master control room.

PROJECT TITLE	**ANDROID SPEECH RECOGNITION BASED VOICE COMMAND NOTICE BOARD**
PROJECT ID	SHES065
DOMAIN	IOT
ABSTRACT	Today notice board has become an important thing in institutes/organization or public places like railway stations, bus stands and hospitals. But to use the paper notices stacked on a notice board is a time taking and expensi ve process and there is wastage lot of time, paper and labour. The notice board is used to display the information in an effective way to the people, but to update the messages instantly is not easy on the notice board. This project, deals about an advanced Hi-Tech wireless Notice Board. This system is enhanced to display the latest information through an Android application of smart phones or tablet

PROJECT TITLE	**SMART LEARNING SYSTEM FOR DEAF AND DUMB USING HEARING AID AND MOBILE APP**
PROJECT ID	SHES066
DOMAIN	IOT
ABSTRACT	Communication is the only medium used to communicate with the other person in normal situation as well as emergencies situation but the dumb people feel difficult to communicate. The main of this paper is toassist the voice to the dumb people using the hand gestures made by them. This article discuss about the various systems built for differently disabled people, system overview and the system design. It also discusses about the application of the system.

PROJECT TITLE	**LIFE SAVING SYSTEM FOR ROAD ACCIDENTS**
PROJECT ID	SHES067
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	In the current scenario one of the major causes of road accidents in the world is the fact that after driving hundreds of kilometers at a stretch, the driver feels drowsy and eventually dozes off while driving or they are not aware of the environment they might just be entering. They might also be unaware of any defect in their cars. There is an alarming increase in hit and run cases caused by drivers driving under the influence of alcohol. So, there is a pressing need of a device which prevents this, so that a lot of lives can be saved every day. Safety is the primary concern for humans. When it comes to driving, we need to be extra cautious.

PROJECT TITLE	**TRAFFIC SIGNAL CONTROL SYSTEM WITH AMBULANCE ASSISTANCE**

PROJECT ID	SHES068
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Traffic congestion problem is a phenomenon which contributed huge impact to the transportation system in our country. This causes many problems especially when there are emergency cases at traffic light intersections which are always busy with many vehicles. A traffic light assistance system is designed in order to solve these problems. This system was designed to be operated when it received signal from emergency vehicles based on radio frequency (RF) transmission and used the Raspberry Pi microprocessor to controls the LEDs used in the traffic signals. The use of hazard LED in the system which helps the emergency vehicles to pass the traffic easily. This system will reduce accidents which often happen at the traffic light intersections because of other vehicle had to huddle for given a special route to emergency vehicle. As the result, this project successful analyzing and implementing the traffic assistance system for emergency vehicles.

PROJECT TITLE	**COSMIC POWERED IRRIGATION SYSTEM USING IOT**
PROJECT ID	SHES069
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	☐ IoT has become synonymous with progressive ideation in the present day modern world. The Internet of Things ,abbreviated as IoT, is a n ecosystem of agnate physical and digital entities, provided with unique identifiers and has the effectiveness of transferring data from one location to another without any physical medium . ☐ The concept has touched every sphere of life including field of energy and agriculture which are the basic necessity for the survival of the human species. It has not only circumscribed fields related to minimization of energy consumption, Smart Home automation ,RFID tagging of the appliances, optimization of sensors but also the minimal necessity for the human survival which agricultural sector. ☐ Agriculture is the backbone of all the global economy and with its allied sectors, is the incontestably the largest livelihood provider in India. India supports 15% of the world's water resources. Irrigation plays an important role in agriculture.

	☐ According to the World Bank data, only 35% of India's agricultural land is irrigated, leaving the rest 65% of farming dependent totally on rain. Understanding the sources of water for irrigation and how water quantity and quality effects irrigation methods is one of the key factors in this direction .

PROJECT TITLE	**NOVEL COVID-19 DETECTION AND DIAGNOSIS SYSTEM USING IOT BASED SMART HELMET**
PROJECT ID	SHES070
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Coronavirus is the new virus that has not been identified in humans before which it causes the coronavirus disease called COVID-19. This disease was firstly discovered in Wuhan, China, on December 2019 and spread to the world until now. The virus can easily pass from person to person which make it spreaded rapidly. One of the common symptom of COVID-19 that can be easily identified is fever. Since the virus outbreak, thermal screening using infrared thermometers are used at public places to check the body temperature to identify the indicated infectee among crowd. This prevention still lacking because it spends a lot of time to check the body temperature from every person and the most importance is the close contact of the infectee might lead to spreading it to the person who do the screening process or from the one in charge of screening to the checked people. This study proposes the design of system that has capability to detect the coronavirus automatically from the thermal image with less human interactions using smart helmet with Mounted Thermal Imaging System. The thermal camera technology is integrated to the smart helmet and combined with IoT technology for monitoring of the screening process to get the real time data. In addition, the proposed system is Equipped with the facial-recognition technology, it can also display the pedestrian's personal information which can automatically take pedestrians' temperatures. This proposed design has a high in demands from the healthcare system and can potentially help to prevent for coronavirus spreading wider.

PROJECT TITLE	**DOOR SECURITY SYSTEM FOR HOME MONITORING BASED ON ESP32**
PROJECT ID	SHES071
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Door plays an important role in home security. To secure the house, the occupants of the house will always have the door locked. However, sometimes the house occupants forget to lock the door due to hurry when leaving the house, or they may doubt whether they have locked the door or not. We propose an application called Door Security System which is based on Android using Internet of Things (IoT) technology to monitor the status of the door, controlling the door and increasing security in a house. MQTT cloud is utilized as the communication protocol between smartphone and door lock system. PIR sensor is implemented in the door lock to detect the movement near the door, while touch sensor is installed on the door handle to recognize the human hand. Should the door is opened by force, the alarm will ring and send notification to alert the house occupant on the existence of intruder in the house. The evaluation results show that motion detection sensor can detect movement accurately up to 1,6 meters ahead, and messages published between smartphone and door lock are encrypted properly so messages are safely sent

PROJECT TITLE	**IOT EARLY FLOOD DETECTION & AVOIDANCE**
PROJECT ID	SHES072
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	"IoT Early Flood Detection & Avoidance System" is an intelligent system which keeps close watch over various natural factors to predict a flood, so we can embrace ourselves for caution, to minimise the damage caused by the flood. Natural disasters like a flood can be devastating leading to property damage and loss of lives. To eliminate or lessen the impacts of the flood, the system uses various natural factors to detect flood. The system has a wifi connectivity, thus it's collected data can be accessed from anywhere quite easily using IoT.

PROJECT TITLE	**FOOT STEP POWER GENERATION SYSTEM USING MICROCONTROLLER**
PROJECT ID	SHES073
DOMAIN	EMBEDDED SYSTEM
ABSTRACT	This project is used to generate voltage using footstep force. The proposed system works as a medium to generate power using force. This project is very useful in public places like bus stands, theaters, railway stations, shopping malls, etc. So, these systems are placed in public places where people walk and they have to travel on this system to get through the entrance or exists. Then, these systems may generate voltage on each and every step of a foot. For this purpose, piezoelectric sensor is used in order to measure force, pressure and acceleration by its change into electric signals. This system uses voltmeter for measuring output, led lights, weight measurement system and a battery for better demonstration of the system.

PROJECT TITLE	**CONTROL HOME APPLIANCES USING GOOGLE ASSISTANT**
PROJECT ID	SHES074
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Google assistant is AI (Artificial Intelligence) based voice command service. Using voice, we can interact with the google assistant and it can search on the internet, schedule events, set alarms, control appliances, etc. This service is available on smartphones and Google Home devices. We can control smart home devices including lights, switches, fans, and thermostats using our Google Assistant. We will build an application that can control home appliances. Here, we will control a 60W bulb using Google Assistant service.

PROJECT TITLE	**INTELLIGENT GRAIN STORAGE MANAGEMENT SYSTEM BASED ON IOT**
PROJECT ID	SHES075
DOMAIN	IOT
ABSTRACT	India is an Agriculture country where 70% of the population depends on farming, the storage of grains plays a crucial role in national economy. • The traditional methods are limited to simply testing the temperature and humidity conditions which are relatively backward as the other factors have to be checked and monitored independently for contributing to their effective storage and maintenance. • The approach of monitoring grain storage system at real-time is designed by using DHT11, MQ2, MQ135 and PIR sensors based on IoT. Also the Blynk application will regularly update the system through notifications in continuous time stamps. • The experimental results shows that the intelligent grain storage management system proposed in this paper involves multiple features such as online detection, regular updation and easy system maintenance. • This improves the quality factor of stored grain and reduces the grain wastage during storage interval, man power and manual attention

PROJECT TITLE	**INTELLIGENT HEADLIGHT CONTROL SYSTEM**
PROJECT ID	SHES076
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	According to road accident data, majority of the accidents occur at night. Visibility at night is major issue for safe driving. Therefore negligent drivers continue to use high beam even though oncoming vehicle is suspected. These high beams create glare for oncoming drivers and cause temporary blindness. To solve this problem, night time vehicle detection holds a great importance. This paper reviews various attempts made to solve the problem. The purpose of this paper is to discuss need of study, existing relevant systems and related work, different approaches to solve problem and various possible applications. The survey shows that consideration of all types of vehicles can make a system more robust. However, a simple and cost effective system needs to be developed so that, it can be implemented in each vehicle.

PROJECT TITLE	**IOT BASED SMART GRID**
PROJECT ID	SHES077
DOMAIN	IOT
ABSTRACT	Smart grid is one of the features of smart city model. It is energy consumption monitoring and management system. Smart grids are based on communication between the provider and consumer. One of the main issues with today's outdated grid deal with efficiency. The grid become overloaded during peak times or seasons. It is also possible to hack the system, and basically, take free electricity. By using smart grid consumer and owner get daily electricity consumption reading and owner can cut electricity supply remotely through internet if bill is not paid. One more thing, the data collected from the smart meters should not be accessed by any unauthorised entities. In case meter tempering is happened then owner and consumer get message and then owner take the action accordingly. Fitting the circuit on customer's energy meter, from that energy consumption data can be acquired. After acquiring of data, that data can be updated on cloud service, so that consumer and provider can access that data through internet. The main part of project is smart grid meter. When LED in smart meter gives 3200 blinks this means one unit is consumed. Second feature of this project is one micro switch is fitted in meter. This is to prevent meter tempering. There is one hidden switching circuit in that, whenever any person try to open the meter switch will get popup and controller send the message to owner and consumer. Third feature of project is control meter, if bill is not paid by customer then owner can cut the meter. Acquiring of data needs human resources, we can save this critical resource by using smart grid application.

PROJECT TITLE	**LEG MOTION TRACKER**
PROJECT ID	SHES078
DOMAIN	EMBEDDED SYSTEM

ABSTRACT	The purpose of this project was to design and build a low cost device to emulater body motion in a virtual environment. Tracking human motion attracts significant attention from several areas such as animation production, ergonomics, sport medicine, and biomedical analysis. First, it was intended to detect human motion by using accelerometers. However, after conducting many research and experiments, it was concluded that accelerometers have limitations in detecting motion. In other words, one accelerometer alone cannot detect horizontal movements (on any horizontal ring on a sphere) when there is no dynamic acceleration. One of the proposed and tested solutions was to use compass sensors to compensate for the accelerometers limitations. Therefore, three accelerometers were used to detect the motion of arms, head, neck, and back and the horizontal movement of the back at various angles. The experiment was successfully done and satisfactory results were obtained. The other proposed method which was tested for one body segment and compared to the first solution was to use gyroscopes along with accelerometers. Even though using a gyroscope would improve the results significantly, due to the high cost of gyroscopes and time limitations this method was not implemented. However, using gyroscopes are highly recommended for future design. The 3- D virtual LSM used in this project to validate how well the system tracks.

PROJECT TITLE	**PATIENT HEALTHCARE MONITORING SYSTEMS USING LI-FI**
PROJECT ID	SHES079
DOMAIN	IOT
ABSTRACT	In this project we will monitor the health of the patient with modern technology called LIFI for health care, this will be controlling and monitoring of patient using biomedical sensors is also introduced here with the help in diagnosis of patients medical conditions, and made available to all emergency point through light, also called tele-monitoring, It will be more efficient as it can travel through areas where human intervention is not possible.

PROJECT TITLE	**SMS BASED E-NOTICE BOARD FOR COLLEGE**
PROJECT ID	SHES080
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Wireless communication has announced its arrival on big stage and the world is going mobile. We want to control everything and without moving an inch. This remote control of appliances is possible through Embedded Systems. The use of "Embedded System in Communication" has given rise to many interesting applications that ensures comfort and safety to human life. The main aim of this project will be to design a SMS driven automatic display board which can replace the currently used programmable electronic display. It is proposed to design receiver cum display board which can be programmed from an authorized mobile phone. The message to be displayed is sent through a SMS from an authorized transmitter. The microcontroller receives the SMS, validates the sending Mobile Identification Number (MIN) and displays the desired information. Started off as an instantaneous News display unit, we have improved upon it and tried to take advantage of the computing capabilities of microcontroller. Looking into current trend of information transfer in the campus, it is seen that important notice take time to be displayed in the notice boards.

PROJECT TITLE	**HOVERCRAFT RESCUE TUBE**
PROJECT ID	SHES081
DOMAIN	IOT
ABSTRACT	The project that we are going to describe here is a rescue team that uses its designed systems and utilized detection methods to help people and help rescuers to accurately detect victims when natural disasters such as floods and earthquakes occur. we propose an emergency response, and a

	flood emergency response system is developed. He we proposed a system for providing an emergency needs for the people those whose stuck in flood or for the seafarers stuck in unreachable area in the sea. However, The technologies used in this project can be implemented in various industrial fields, specially the virtual reality technology for communicating with the environment and better control that greatly expand the functionality of such howercraft rescue model, The system or the vehicle that can be controlled by android phone that carry medicine or the food or it can be used for taking the picture in the unreachable areas in the remote area consisting of river and also dealing with victims stuck in floods. By using IOT technology we had implemented through wifi communication protocols.

PROJECT TITLE	**AUTONOMOUS CAR USING RASPBERRY PI**
PROJECT ID	SHES082
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	In the modern era, the vehicles are focused to be automated to give human driver relaxed driving. In the field of automobile various aspects has been considered which makes vehicle automated. In this paper, considering the different features and the cost, on a small scale a three-wheel vehicular robotic prototype has been designed that will follow the lane and avoid obstacles. Autonomous cars are a developing technology which may prove to be the next big evolution in personal transportation. This report begins by describing the landscape and key players in the self-driving car market. Current capabilities, as well as limitation and opportunities of key enabling technologies, are reviewed, along with a discussion on the impact of such advances on society and the environment. Most impact, including reduced traffic and parking congestion, independent mobility for poor people, increased safety, and energy conservation and pollution reductions will only be significant when autonomous vehicles become common and affordable to common people. Raspberry Pi is the central processor of our Autonomous car.

	Various images are captured by the camera module, on this images various Image processing techniques are used to achieve Artificial Intelligence.

PROJECT TITLE	**SMART DUSTER**
PROJECT ID	SHES083
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Report has been written on design and fabrication smart board cleaner to introduce a new advance mechanism for erasing the board. In previous project, the mechanism used for erasing the board was belt drive, controlling it by switches. So to erase the board, he/she has to come near the board and press the button. Hence, this makes discomfort for the lecturer. Along with this erasing was done from one side to another side. So it was not possible to erase section wise or partially. The above mention problems/ limitations of previous project is resolved in our project by controlling the project by mobile phone at a range of 10m from board as well as we can erase the board partially by dividing the board in four sections and duster into two parts. The significance of our project is that the project can be controlled by lecturer anywhere from the classroom. Electronic kit used is portable, light is weight, compact in size and for accuracy Lead Screw is used.

PROJECT TITLE	**SMART MIRROR**
PROJECT ID	SHES084
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Everyone knows what a mirror is. It is an object found in most people's homes and office. In mirrors we see our reflections. But what happens when you combine the idea of a mirror with technology? What possibilities are there and how smart could a mirror be? The device was to go beyond an ordinary mirror, to have a screen inside that you would be able to interact with by using voice commands, hand gestures and smartphones or other devices.

	Multimedia is a very broad area and We like every aspect of it so it was difficult to choose a specific area and We had many ideas. However, a smart mirror is a great combination of many things we have studied: web technologies, electronics, UI design, etc. The smart mirror table is a popular project among DIY enthusiasts and it usually consists of aone-way mirror with a screen attached to it that displays a static web page.it needs a suitable one-way mirror and a computer screen, as well as some sensors to physically interact with the device. To obtain the final result it requires many different technologies.

PROJECT TITLE	**AUTOMATIC DETECTION AND NOTIFICATION OF POTHOLES AND HUMPS ON ROADS TO AID DRIVERS**
PROJECT ID	SHES085
DOMAIN	IOT
ABSTRACT	India, the second most populous Country in the world and a fast growing economy, is known to have a gigantic network of roads. Roads are the dominant means of transportation in India today. They carry almost 90 percent of country's passenger traffic and 65 percent of its freight. However, most of the roads in india are narrow and congested with poor surface quality and road maintenance needs are not satisfactorily met.Roads in India normally have speed breakers so that the vehicle's speed can be controlled to avoid accidents. However, these speed breakers are unevenly distributed with uneven and unscientific heights. Potholes, formed due to heavy rains and movement of heavy vehicles, also become a major reason for traumatic accidents and loss of human lives. To address the above mentioned problems, a cost effective solution is needed that collects the information about the severity of potholes and humps and also helps drivers to drive safely. With the proposed system an attempt has been made to endorse drivers to ward off the accidents caused due to potholes and raised humps.

PROJECT TITLE	**ARDUINO BASED COLOR SORTING MACHINE USING TCS3200 COLOR SENSOR**
PROJECT ID	SHES086
DOMAIN	EMBEDDED SYSTEM
ABSTRACT	Sorting of object is an essential mechanical process in which difficult work is quite required. Chronic manual arranging makes consistency troubles. Machines can perform mainly dreary assignments superior to human beings. Laborer exhaustion on sequential manufacturing structures can result in decreased execution, and purpose troubles in retaining up object fine. A employee who has been appearing research undertaking over and over may additionally in the end forget about to recognize the color of item, but a machine in no way. On this paper a compact records close to arranging of articles based totally totally on shading has been implemented making use of TCS3200 shading sensor with SERVOMOTORS associated with AURDINO UNO.

PROJECT TITLE	**IOT BASED AUTOMATED WATER SUPPLY AND BILLING SYSTEM**
PROJECT ID	SHES087
DOMAIN	IOT
ABSTRACT	The purpose of this project is to present a product designed to assist with urban home water billing system in India. The project integrates a water flow rate sensor, designed to create a carefree solution to urban water metering and monitoring of the water usage using cloud, and mobile application. Node MCU, a rapid prototyping ESP8266 based microcontroller based platform is used to develop a prototype which measures the water flow rate through the household pipes and sends an Notification at the end of every month .In addition to that, detailed water usage can be obtained from a cloud platform called “Blynk” and also can be viewed in the LCD display. A mobile app (Blynk app) is also designed to serve as a user interface helping to access the cloud and monitor the

	water consumption and payment details in the Blynk mobile application.

PROJECT TITLE	**SMART WHEELCHAIR**
PROJECT ID	SHES088
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Here we propose wheelchair with safety features. The system utilizes microcontroller along with Blynk server, and motorized circuit in order to achieve this system. Our proposed system consists of a controller circuit and a wheelchair circuit. The controller circuit allows the user to provide direction commands to the wheelchair through a directional push button. The wheelchair circuit consists of a micro controller push button used to receive these commands and then operate the wheelchair motors in order to achieve desired movement. This allows the disabled person the operate the wheelchair easily as well as another person can operate the wheelchair. Also the system consists of emergency help features for the disabled. If the person is in trouble or needs help the person just needs to press a button and his gps coordinates are sent to his/her loved ones through blynk message. Also if the person falls from wheelchair or is unable to press the button, the system automatically sends the GPS coordinates through blynk message to persons loved ones.

PROJECT TITLE	**ZIGBEE BASED VEHICLE TO VEHICLE MONITORING**
PROJECT ID	SHES089
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	This paper proposes an Intelligent Transport System (ITS) that provides an effective Vehicle to Vehicle (V2V) communication mechanism using Zigbee. Especially in V2V communication Zigbee proves vital and it is the

	key protocol for wireless sensor network applications. In this paper suggestions are proposed for periodic monitoring of vehicular movements, enhancing road safety ,handling traffic congestion and simulation was carried out to perform vehicle priority .

PROJECT TITLE	**DENSITY BASED TRAFFIC LIGHT CONTROLLER USING SENSOR NETWORK AND EMBEDDED SYSTEM**
PROJECT ID	SHES090
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	In the present scenario vehicular travel is increasing all over the world, especially in large urban areas. Therefore for simulating and optimizing traffic control to better accommodate this increasing demand is arises. In this paper we studied the optimization of traffic light controller in a City using wireless sensor. We have proposed a traffic light controller and simulator that allow us to study different situation of traffic density in City. Using wireless sensor we can easily senses the density of traffic because the general architecture of wireless sensor network is an infrastructure less communication network. Traffic research has the goal to optimize traffic flow of people and goods. As the number of road users constantly increases, and resources provided by current infrastructures are limited, intelligent control of traffic will become a very important issue in the future. However, some limitations to the usage of intelligent traffic control exist. Avoiding traffic jams for example is thought to be beneficial to both environment and economy, but improved traffic-flow may also lead to an increase in demand. There are several models for traffic simulation. In our research we focus on optimization of traffic light controller in a city using wireless sensor and embedded system

PROJECT TITLE	**LI-FI BASED DATA AND AUDIO COMMUNICATION**
PROJECT ID	SHES091
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Li-Fi is one of the wireless technologies which uses visible light for communication. Li-Fi has achieved remarkable success in every field of

	communication as it uses visible light which has high speed, more security and less interference due to which large capacity wireless data transmission is possible. The objective of this paper is to transmit text (Hexadecimal characters) and Audio information using light as carrier. The high flickering LED and LASER is used as a source to transmit text data and audio respectively. It is possible to achieve text data transmission of up to 2m by using LDR as the detector. In case of audio transmission, solar panel is used to receive the audio signals and around 15feet.

PROJECT TITLE	**DESIGN &DEVELOPMENT OF CAR PARKING AND AUTOMATION BILLING SYSTEM'S**
PROJECT ID	SHES092
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	In that the input like vehicle number should be give by the customer when they press enter the details will be stored in database,when they press exit button it will recognize the vehicle number and produce bill along with the amount based on the usage . In order to overcome existing system problems new system is developed using this system any system can be easily searched with better security features. Car Parking is a response to this situation and is the deployment of strategic plans and strategies to plan the *car parking system* efficiently. There are several benefits endowed by *automated billing system*. The *benefits* lies in the *parking* of more *cars* in save

	time due to proper planning and reduce traffic, economical aspect as it is *cost-efficient*, ensured safety of *vehicle* and the convenience of *car parking*. The entire process of *vehicle parking* becomes hassle-free and affordable with *automated billing system* giving the *vehicle* owner a respite from the constant tension of *car parking*. More features are provided in the project document.

PROJECT TITLE	**AN INTELLIGENT FREIGHT CORRIDOR OVERLOAD CONTROL SYSTEM**
PROJECT ID	SHES093
DOMAIN	EMBEDDED SYSTEM
ABSTRACT	The main aim of this project is to make the system on the vehicle by which it will stop the overloading on vehicles automatically so that overloaded vehicle damaging the roads is reduced or avoided, and accidents avoided. Trucks exceeding the legal mass limits increase the risk of traffic accidents and damage to the infrastructure. They also result in unfair competition between transport modes and companies. It is therefore important to ensure truck compliance to weight regulation. New technologies are being developed for more efficient overload screening and enforcement. Weigh-in-Motion is the new technologies which allow trucks to be weighed in the traffic flow, without any disruption to operations. Much progress has been made recently to improve and implement intelligent overloading detection system which can contribute to safer and more efficient operation of trucks.

PROJECT TITLE	**SOLAR POWERED ELECTRIC VEHICLE**
PROJECT ID	SHES094
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	The idea of this project is to design a solar car that aims to tackle the problems related to pollution and shortage of fuel. A Smart vehicle is the one that takes all our burdens on maintenance of the vehicle while ensuring safety and comfort for the driver and the passengers. Various parameters have to be taken into account while designing such a vehicle. In our design we have divided the whole system into two major divisions namely, • Vehicle monitoring system • Safety system Vehicle monitoring system includes various sensors that sense the various vital parameters such as Engine temperature, Fuel level and as we have developed it for a vehicle battery chamber temperature is also included. In addition to this accelerometers and speed sensors sense abnormal vibrations in vulnerable parts and over speeding. These data after being sensed is stored in the cloud. This enables monitoring of vehicle's performance and drivers actions remotely.

PROJECT TITLE	**THREE LEVEL SECURITY USING EMBEDDED SYSTEM**
PROJECT ID	SHES095
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	The goal of this effort is to develop new algorithms for a robust pose-invariant face recognition thatovercome many of the limitations found in existing facial recognition systems. Specifically, we areinterested in addressing the problem of detecting faces in color images in the presence of various lightingconditions and complex backgrounds as well as recognizing faces under variations in pose, lighting, andexpression. This work is separated into two major components (i) Face detection and (ii) Face recognition.Specific tasks include developing modules for face

	detection, pose estimation, face modeling, facematching, and a user interface.We have developed a robust, near real-time face detection system from color images using a skin-tonecolor model and facial features. Major facial features are located automatically and color bias is correctedby a lighting compensation technique that automatically estimates the reference white pixels. Thistechnique overcomes the difficulty of detecting the low-luma and high-luma skin tones by applying anonlinear transform to the color space. We have also developed a robust face detection module to extractfaces from cluttered backgrounds in still images The system is easily extended towork with video image sequences. The proposed system not only detects the face, but alsolocates important facial features. These features are crucial to the performance ofthe face recognition and also with it we have added an biometric scanner as an second security level, after this we were using OTP generation as a third level security.

PROJECT TITLE	**ADVANCE AUTOMATIC TOLL COLLECTION & VEHICLE DETECTION DURING COLLISION USING RFID**
PROJECT ID	SHES096
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	In this project we address the problems faced at toll plaza & also introduce identification system for vehicles against which stolen and accident cases are registered using RFID. The owner has to create an account through mobile application & register his RFID tag. When vehicle passes through Toll Collection Unit (TCU) it is classified as passenger or goods carrying vehicle based on its Unique Identification Number (UIN). A goods vehicle is weighed at TCU & if it is overloaded then charged with extra tax. UIN is passed to Central Server Unit (CSU) where the balance gets deducted from account. Once the balance is deducted at CSU it will indicate TCS to open the barricade and vehicle is allowed to pass. If vehicle is detected to be stolen at CSU it will indicate TSC not to open the barricade. Also to overcome the problem of hit & run cases collision detection mechanism is

	implemented using

	piezoelectric sensor in vehicle to identify RFID of collided vehicles. These details can be used for further action. Keywords

PROJECT TITLE	**SMART WATCH FOR MINING USING IOT**
PROJECT ID	SHES097
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Smart watch is basically a wearable minicomputer or a mini smartphone in the form of a wristwatch. Smart watch provides touch screen interface, this smartwatch has many potential capabilities, like message notifications,

PROJECT TITLE	**DEVELOPMENT OF SMART HELMET BASED ON IOT TECHNOLOGY FOR SAFETY AND ACCIDENT DETECTION**
PROJECT ID	SHES098
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	IOT has enabled us to connect our day to day devices in a network for a sole purpose to exchange data. Today a number of countries has made it mandatory to wear helmet while riding. In this paper, I describe a helmet which is made smart using latest IOT technologies. This helmet for the comfort of riders provide various functions such as Listening to the music on the go, sending SOS messages in case of emergency, use navigation services.

PROJECT TITLE	**COVID19 DETECTION, MONITORING AND CONTROL BASED ON IOT**
PROJECT ID	SHES099
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	The recent surge of COVID-19 pandemic has affected all spheres of our

	daily life. While virologists are desperately seeking solutions for an early vaccine, a cross-disciplinary approach has become of paramount importance to develop adequate monitoring, to explore the state-of-the-art and out-of-the-box IoT solutions to combat the COVID-19 pandemic by incorporating IoT-based smart solutions. Such solutions can range from IoT-based industrial production of ventilation units, masks and other medical equipment to monitoring patient conditions at hospitals or self-isolation at home in a secure manner, developing new techniques for passive An automatic hand sanitizer dispensing machine is automated, non contact, alcohol based hand sanitizer dispenser, which finds it's use in hospitals, work places, offices, schools and much more. Alcohol is basically a solvent, and also a very good disinfectant when compared to liquid soap or solid soap, also it does not need water to wash off since it is volatile and vaporizes instantly after application to hands. It is also proven that a concentration of >70% alcohol can kill Coronavirus in hands. Here, an IR sensor senses the hand placed near it, it is used as a microcontroller, which senses the distance and the result is the pump running to pump out the hand sanitizer.

PROJECT TITLE	**CHILD SAFETY WEARABLE DEVICE**
PROJECT ID	SHES100
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	This paper discusses the concept of a smart App for little children. The major advantage of this wearable over other wearable is that it can be used in any cell phone and doesn't necessarily require an expensive smart phone and not a very tech savvy individual to operate. The purpose of this device is to help parents locate their children with ease. At the moment there are many wearable's in the market which help track the daily activity of children and also help find the child using Wi-Fi and Bluetooth services present on the device But Wi-Fi and Bluetooth appear to be an unreliable medium of communication between the parent and child. Therefore, the focus of this paper is to have an SMS text enabled communication medium between the child's wearable and the parent as the environment for GSM mobile communication is almost present everywhere. The parent can send a text with specific keywords such as "LOCATION" "TEMPERA TURE" "BUZZ", etc., the wearable device

	will reply back with a text containing the real time accurate location of the child which upon tapping will provide directions to the child's location on Google maps app and will also provide the surrounding temperature. The secondary measure used in this project is the people present in the surrounding of the child who could instantly react for the Child's safety till the parents arrives or they could contact the parents and help locate them.

PROJECT TITLE	**AGRICULTURAL CROP MONITORING USING IOT**
PROJECT ID	SHES101
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	This robotic vehicle is an agricultural machine of a considerable power and great soil clearing capacity. This multipurpose system gives an advance method to sow, plow, water and cut the crops with minimum man power and labor making it an efficient vehicle. The machine will cultivate the farm by considering particular rows and specific column at fixed distance depending on crop. Moreover the vehicle can be controlled through Bluetooth medium using a Android smart phone. The whole process calculation, processing, monitoring are designed with motors & components interfaced with microcontroller .Wireless sensor networks are used for monitoring the farm conditions and micro controllers are used to control and automate the farm processes. A smart phone empowers farmer to keep updated with the ongoing conditions of his agricultural land using IOT at any time and any part of the world.

PROJECT TITLE	**DRAINAGE OVERFLOW MONITORING SYSTEM USING IOT (DOMS)**
PROJECT ID	SHES102
DOMAIN	IOT
ABSTRACT	In India the sewage system is one of the major issues, due to the poor maintenance of the sewage system the sewage water is overflowed on the streets and sometimes mixes in the drinking water which damages the health conditions of the people, to overcome this issue we are proposing the model called Drainage Overflow Monitoring System (DOMS). This proposed system will monitor the water level and gas level in the sewage system and the measured values will be stored in the cloud storage then analyzed and the sewage system condition will be sent to near the corporation office through the Blynk server.

PROJECT TITLE	**INTELLIGENT GRAIN STORAGE MANAGEMENT SYSTEM BASED ON IOT**
PROJECT ID	SHES103
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	India is an Agriculture country where 70% of the population depends on farming, the storage of grains plays a crucial role in national economy. During the grain storage, temperature, humidity and carbon dioxide concentration are important atmospheric factors that can affect the quality of the stored grain inside the go-downs and warehouses. The traditional methods are limited to simply testing the temperature and humidity conditions which are relatively backward as the other factors have to be checked and monitored independently for contributing to their effective storage and maintenance. The approach of monitoring grain storage system at real-time is designed by using DHT11, MQ2, MQ135 and PIR sensors based on IoT. Also the Blynk application will regularly update the system through notifications in continuous time stamps. The experimental results shows that the intelligent grain storage management system proposed in this paper involves multiple features such as online detection, regular updation and easy system maintenance. This improves the quality factor of stored grain and reduces the grain wastage during storage interval, man power and manual attention.

PROJECT TITLE	**IOT INTELLIGENT GAS LEAKAGE DETECTION SYSTEM**
PROJECT ID	SHES104
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	Recent trend is the development of Smart homes all around the world. Home automation has become very affordable and many people, industries has started to automate daily routines like light, fans, setting the temperature, etc,. The main objective of our project is to build a Gas leakage detector using LPG gas sensor and also connect it with IoT using ESP module for safety and security. ESP8266 is used as the main controller. The final output of the project is used to detect leakage if gas from cylinders and also notify the user by connecting via IoT software and automatically exhaust fan should on. Along with the leakage detection the weight of the gas cylinder can be detected using load cell if the gas cylinder weight get depleted automatically should send the notification to the user.

PROJECT TITLE	**BLIND STICK FOR VISUALLY IMPAIRED PEOPLES USING IOT**
PROJECT ID	SHES105
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	There are many issues over which humans have no control blindness is one of such issues. It snatches the vivid visual beauty of the world from an individual's life. But missing the beauty of nature becomes one of the last worries of such people as they have to face numerous difficulties in order to perform even the most basics of tasks in their day to day life. One of their most dominant problems is of transport, such as crossing roads, traveling in trains, or other public places. They always require human assistance to do so. But sometimes they are rendered helpless

	when no such assistance is offered. Their dependencies deteriorate their confidence. Traditionally they have been using the conventional cane stick to guide themselves by touching/poking obstacles in their way. This causes a lot of accidents and hence is dangerous for them and others. As this is a technologically driven era we decided to aid these differently abled people by coming up with a technology utilizing solution. We call it the "Smart Stick". It is a device which guides the user by sensing obstacles in the range of stick. It will identify all obstacles in the path with the help of various sensors installed in it. The microcontroller will retrieve data and pass it on as vibrations which will notify the user about hurdles on the way. It is an efficient device and will prove to be a big boon for blind people.

PROJECT TITLE	**AUTOMATED OPEN BORE-WELL CLOSING SYSTEM TO PREVENT ACCIDENT AGAINST CHILD OR ANY LIVING BEING FALL INTO OPEN BORE-WELL**
PROJECT ID	SHES106
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	This synopsis is based on preventing and securing a child or any living being accidentally fall into open bore-wells. An abundance of child death reports has been reported so far. Due to the scantiness of water level, bore well is dug to more depth. The basis of this project is to prevent and secure not just child even animals like Rabbits, Cats, Squirrels etc., The rescue is done by digging a parallel pit, which takes more than a day and even has not found a genuine result. The high point of this project is that the child or any living being will be secured before it reaches open bore-well, which is based on humans or any living being sensing the PIR sensor. When the PIR sensor placed near the open bore-well it senses any motion detected and alerts them starting buzzer. Still, child or any living being near the open bore-well this proposed

	system automatically closes well and alters the owner if anything attempts forced the opening of closed bore-well. All this system will be powered by solar energy. Accidents are substantially found in agricultural bore-well, this proposed system will eliminate the problem associated with open bore-well.

PROJECT TITLE	**AN INNOVATIVE COMMUNICATION SYSTEM FOR DEAF, DUMB AND BLIND PEOPLE**
PROJECT ID	SHES107
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	One of the most precious gifts to a human being is an ability to see, listen, speak and respond according to the situations. But there are some unfortunate ones who are deprived of this. Making a single compact device for people with Visual, Hearing and Vocal impairment is a tough job. Communication between deaf-dumb and normal person have been always a challenging task. This paper proposes an innovative communication system framework for deaf, dumb and blind people in a single compact device. We provide a technique for a blind person to read a text and it can be achieved by capturing an image through a camera which converts a text to speech (TTS). It provides a way for the deaf people to read a text by speech to text (STT) conversion technology. Also, it provides a technique for dumb people using text to voice conversion. The system is provided with four switches and each switch has a different function. The blind people can be able to read the words using by Tesseract OCR (Online Character Recognition), the dumb people can communicate their message through text which will be read out by espeak, the deaf people can be able to hear others speech from text. All these functions are implemented by the use of Raspberry Pi.

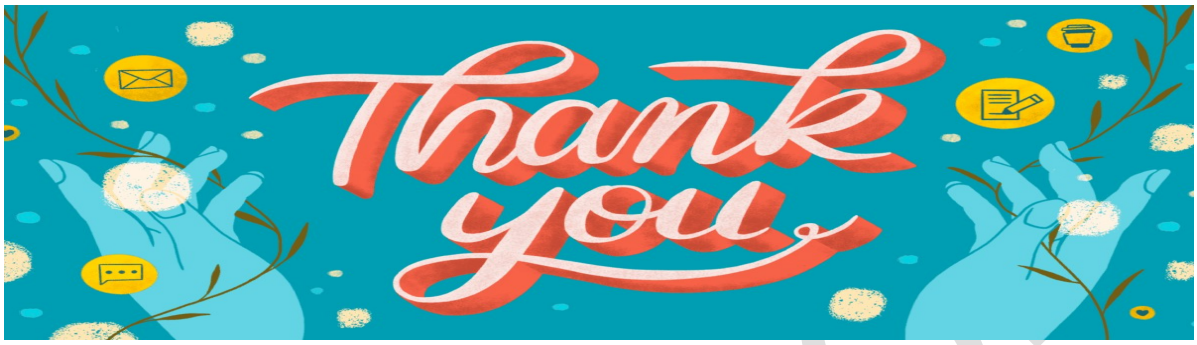
PROJECT TITLE	**INTELLIGENT OIL SPILL DETECTION IN OCEAN USING INTERNET OF UNDERWATER THINGS**
PROJECT ID	SHES108
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	▯ About two-third of the earth is covered with water. Oceanographic research is one of the prominent area of research. ▯ A major area of oceanic research is detection of oil spills. Ocean is a home for several aquatic creatures. Every year many aquatic creatures loose life because of pollution that occurs through the leakage of oil. ▯ Oil leakage occurs due to several reasons like breakage of oil pipes, leakage of oil from ships and through industrial wastes. Oil spill detection is a very important challenge faced by researchers in oceanographic domain. ▯ In this paper we present a new scheme of detection of oil spill using Internet of things. We propose a method of applying Wireless Sensor Networks (WSNs) to detect oceanic oil spills. ▯ In addition we propose inclusion of intelligence at multiple aggregation levels to improve efficiency of deployed network. ▯ As additional intelligence is granted to sensor nodes, instead of being passive detectors, they work as intelligent observers, thereby making the detection process, an inter-network of intelligent nodes.

PROJECT TITLE	**SMART SHOE WITH GPS TRACKING**
PROJECT ID	SHES109
DOMAIN	IOT AND EMBEDDED SYSTEM
ABSTRACT	In our day today life we come across many problems and also they can be solved with little effort. Example smart shoe where it will be having capacity to sense the location of the gps and also it can sense whether the person is lying or walking i.ehespostion can expect whether the person is safe or not.And all these funtions need power for the inner circuit the problem with this is we cant always put cells it will be costkly.Where as we can search for alternatives like using piezo sensor we can charge the battery. And thst power can be used.Here we are using the the step power in to electrical so we are harvesting electrical energy from the physical energy.

PROJECT TITLE	**INTELLIGENT CONTROL SYSTEM FOR SERICULTURE USING IOT**
PROJECT ID	SHES110
DOMAIN	IOT
ABSTRACT	Sericulture (silk production) is a major occupation of rural community. Producing about 15% share of the world silk produce, India is the 2nd largest silk producer after China whose total produce amounts to a staggering 80%. Analysis of sericulture practices in India shows a clear need of automation especially during pre-cocoon stages. Sericulture denotes to the rearing of silkworm to produce silk. Parameters like Temperature, Humidity and Light intensity are the important factors in the progression of silkworms and suitable encouraging must to be done according to the requisites in every stage. Environmental variations assume as the important part in the growth and development of silkworm. The actuator sub-system achieves the corrective measures using the actuators placed in that zone of the unit.Sericulture is the important occupation in India and the techniques used by the agriculturists are yet outdated. Hereafter there is the need of developing modernization in sericulture cultivate. This endeavour gives a thought of providing automation in sericulture cultivate. The model goals at making use of developing technology that is IOT and smart Sericulture using automation. Observing environmental parameters of the silkworm rearing house is the most important aspect to improve vintage of the silk. The specialty of this model comprises enhancement of a system which can observe temperature, humidity, light power through sensors using NodeMCU and in case of any variations in the parameters send a notification on the user mobile application using internet connection. This system permits for data assessment and scheduling to be programmed through the arduino IDE software.

PROJECT TITLE	**HIGH PROTECTION VOICE IDENTIFICATION BASED BANK LOCKER SECURITY**
PROJECT ID	SHES111
DOMAIN	EMBEDDED SYSTEM
ABSTRACT	In todays scenario safer bank locker is required, As the technology is improved in the field of electronics. They have entered the fields like industry, medicine, telecommunication and also home automation. This paper introduces an intelligent bank locker system which is developed using microcontroller with the ZigBee wireless communication technology, speech recognition techniques and GSM network technology. This system is typically employed to secure bank lock and The function of this voice recognition security system is to have a system that will only unlock upon recognizing a voice password spoken by the administrator or password holder. Thus by using voice passwords for security we can pr event the unauthorized access to the system..

PROJECT TITLE	**IOT BASED SOLAR POWER MONITORING**
PROJECT ID	SHES111
DOMAIN	IOT
ABSTRACT	Solar power plants need to be monitored for optimum power output. This helps retrieve efficient power output from power plants while monitoring for faulty solar panels, connections, dust accumulated on panels lowering output and other such issues affecting solar performance. So here we propose an automated IOT based solar power monitoring system that allows for automated solar power monitoring from anywhere over the internet. We use Node MCU based system to monitor a 10Watt solar panel parameters. Our system constantly monitors the solar panel and transmits the power output to IOT system over the internet. Here we use IOT Blynk to transmit solar power parameters over the internet to IOT Blynk server. It now displays these parameters to the user using an effective GUI (Blynk Android application) and also alerts user when the output falls below specific limits. This makes remotely monitoring of solar plants very easy and ensure best power output.



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