



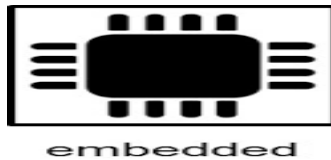
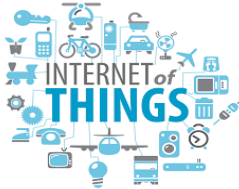
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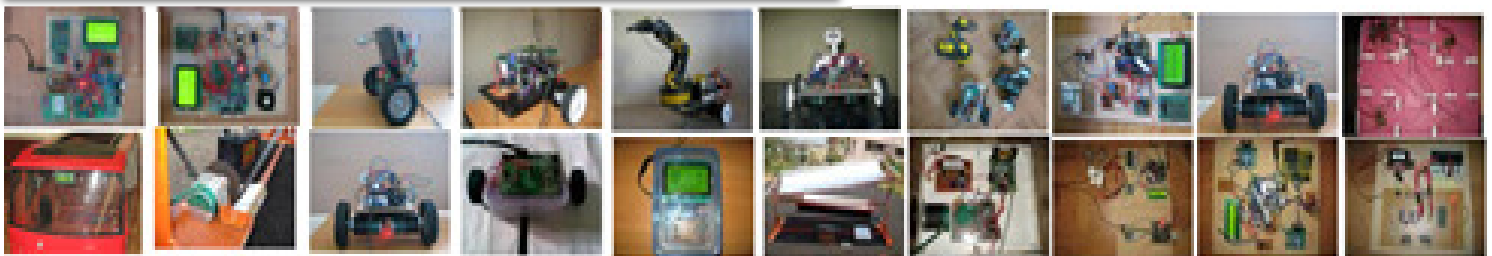
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BE MECHANICAL FABRICATION BASED PROJECT TITLES & ABSTRACTS FOR 2019 - 2020

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	2019-20 BE/DIPLOMA LATEST MECHANICAL PROJECT ABSTRACTS
IGTM01	<p>TITLE: FABRICATION OF 3 IN 1 MULTIPURPOSE MECHANICAL MACHINE USING WHITWORTH MECHANISM</p> <p>Abstract-This machine is designed for the purpose of multi operations ie,, Drilling , Hacksaw Cutting and shaping operations. This machine performs multipurpose operations at the same time with required speed and this machine is automatic which is controlled or operated by motor which is run with help of current. This machine is based on the mechanism of whitworths return. This model of the multi operational machine may be used in industries and domestic operations, which can perform mechanical operations like Drilling, cutting and shaping of a thin metallic as well as wooden model Or body.</p>

IGTM02	<p>TITLE: Design & Fabrication of Automatic Drainage Cleaning System using Solar Panel</p> <p>Abstract-Water is the basic need for the existence of life on earth. In spite of 70% water on earth majority of water is not suitable for drinking purpose. There is a huge demand of clean water as it is used for a variety of purpose such as drinking, bathing, cleaning, cooking etc. Impurities present in water can cause serious health issues that can damage the life of human beings. The chief function of the automatic drainage system is to collect, transport, as well as dispose the solid waste in the waste bucket by the help of claws... Solid waste in drainage water includes empty bottles, polythene bags, papers etc. Impurities in drainage water can lead to blockage of the drainage system. In order to avoid such situation these impurities are needed to be taken out time to time for the continuous flow of drainage water. Drain can be cleaned continuously by the help of model using the drive system to remove the solid waste and threw it into waste bucket. This project is designed with the objective to initiate the efficient working of system. This project automatically cleans the water in the drainage system each time any impurity appears, and claws which are driven by chain sprocket grasp the solid waste and threw it into the</p>
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	waste bucket to avoid blockage. It even reduces the cost of manual labor as well as reduces the threat to human life.
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IGTM03	<p>TITLE: FABRICATION OF RAGI BALL MAKING MACHINE</p> <p>ABSTRACT - Ragi is used most commonly as south Indian food. The ragi ball is most important part of the food for most of the people. Ragi is potentially the best source of calcium and a good source of protein as well. The ragi dough can be made effectively by eliminating the dough matter. In this project, the ragi ball is made by combining beaters/agitator and screw extruder. The beaters helps in continuous mixing of the ragi dough at proportionate quantity. The extruder is used to fill the die with ragi dough so as to get the shape of the die (spherical). Continuous heating is done so as to maintain the desired.</p>
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IGTM04	<p>TITLE - FABRICATION OF BOARD CLEANING MECHANISM WITH RACK AND PINION MECHANISM.</p> <p>ABSTRACT - This project consists of nut and screw mechanism. Square thread screw is coupled to motor. When motor shaft rotating, screw also rotating and nut slides linearly on screw. Duster is attached to nut. When nut slides, duster also slides and we will get desire rubbing effect. To design an automatic board eraser using basic scrap parts like power screw, bearing, nut, eraser, guide ways, power supply.</p>
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IGTM05	<p>TITLE - DEVELOPMENT OF TANK CLEANING MACHINE.</p> <p>ABSTRACT - Aim of this project is to develop a mechanical system for cleaning domestic cylindrical water tank. The mechanical system includes motor, shaft, battery and Arms with brushes. The arms are adjusted according to the dimensions of the tank, once adjusted the machine is switched ON , the motor draws power from the battery and rotates the shaft with low RPM and high torque ,the brushes mounted on the arms starts scrubbing the inner walls of the tank.</p>
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IGTM06	<p>TITLE: FABRICATION OF CHAINLESS BICYCLE (SHAFT DRIVEN BICYCLE)</p> <p>Abstract- This project is developed for the users to rotate the back wheel of a two wheeler using propeller shaft. Usually in two wheelers, chain and sprocket method is used</p>
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	<p>to drive the back wheel. But in this project, the Engine is connected at the front part of the vehicle. The shaft of the engine is connected with a long rod. The other side of the long rod is connected with a set of bevel gears. The bevel gears are used to rotate the shaft in 90 o angle. The back wheel of the vehicle is connected with the bevel gear (driven). Thus the back wheel is rotated in perpendicular to the engine shaft. Thus the two wheeler will move forward. According to the direction of motion of the engine, the wheel will be moved forward or reverse. This avoids the usage of chain and sprocket method.</p>
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IGTM07	<p>TITLE: MULTIPURPOSE POWER TOOL DRILLING, GRINDING, CUTTING AND SHAPING WITH ONE MOTOR AT A TIME</p> <p>Abstract-The automatic multipurpose power tool drilling, cutting and shaping machine is used for drilling and cutting and shaping works. This machine will do the drilling work automatically. The rollers are connected to the motor which is used to feed the bar or metal sheet. The rollers are fixed in the metal base. The movable motor is used to drill the sheet or bar. The feeding length of the bar is programmable. The drilling motor is moved horizontally by means of a moving motor. The drilling and tapping bits can be changed whenever we require. The rollers move the sheet gradually. The stand holds the drilling motor. The control circuit controls the movement of the sheet and the motion of the drilling motor. The power supply is used to provide power to the mechanical unit and electronic unit.</p>
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IGTM08	<p>TITLE: Design and Fabrication of two wheeler Reverse Gear Mechanism for Handicapped People.</p> <p>Abstract: In the present scenario, there were no mopped vehicles equipped with reverse gear facility. So it is very difficult for a handicapped person while the vehicles front wheel gets into a trench as well as in the case of parking. The main objective of this paper is to facilitate ‘comfort ability and safety’ to the physically challenged people where it requires a motor vehicle, lever, reverse gear box, v-belt, sprocket and other necessary parts. When there is a need to reverse the vehicles they can engage the hand lever for reverse gear, the vehicle moves backwards. This reverse gear mechanism provides a simple, low cost revers transmission system which will be helpful for handicapped people.</p>
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IGTM09	<p>TITLE: ROAD POWER GENERATION (RPG) BY SLIDING MECHANISM</p> <p>Abstract-Man in his lifetime, uses energy in one form or the other. In fact whatever happens in nature, results, out of the conversion of energy in one form or the other? The blowing of the wind, the formation of the clouds and the flow of water are a few examples that stand testimony to this fact. The extensive usage of energy has resulted in an energy crisis, and there is a need to develop methods of optimal utilization, which will not only ease the crisis but also preserve the environment. In this paper the electricity is generated through the sliding mechanism. For obtaining the electricity through the sliding mechanism a prototype model is developed and studied. Findings from this research work are discussed in this project. This research work used a permanent magnet D.C. generator thereby generating 12 Volt D.C. This D.C. voltage is stored to the lead 12-volt battery. Electricity stored in battery is used to activate the light, fan etc. By increasing the capacity of the battery power rating is increased.</p>
IGTM10	<p>TITLE: AUTOMATIC WASTE SEGREGATOR</p> <p>Abstract- trend of significant increase in municipal solid waste generation has been recorded worldwide. This has been found due to over population growth rate, industrialization, urbanization and economic growth which have ultimately resulted in increased solid waste generation. Final Destination of solid waste in India is disposal. Most urban solid waste in Indian cities and towns is landfilled and dumped. Our Project deals with the most blistering topic i.e. Waste segregation. An efficacious management needs to be materialized for better planet to live in. Hence, with our cost effective project proposal, we try to bring in the change. It deals with the minimization of blue-collar method utilization for exclusion of waste into an automated panache. An automation of this style not only saves the manual segregators of the numerous health issues, but also proves to be economical to the nation. Besides, this system utilizes low cost components for the successful segregation of most types of waste. When installed in apartments or small colonies, it proves to be beneficial in sorting the waste at the site of disposal itself. This is the objective of our project</p>

IGTM11	<p>TITLE: Design and Fabrication of WALKING BIKE Treadmill Bicycle</p> <p>ABSTRACT: This paper deals with conversion of a conventional bicycle into treadmill bicycle. In this bicycle the frame of the bicycle is completely modified and the treadmill is placed in between the two wheels, on which user will walk. As the user walks or runs on the treadmill the belt moves to the rear. At the rear roller RPM Sensor is attached to the roller from where Sensor will sense the speed of the roller and accordingly it will send signal to motor. The motion of motor is transmitted to the front wheel by which we can get the motion of wheel and bicycle runs.</p>
IGTM12	<p>TITLE: SOLAR WATER PURIFICATION SYSTEM THERMAL METHOD(SODIS AND DISTILLATION METHOD)</p> <p>Abstract-Solar water purification system is a water purification system at household level based on solar radiation treatment and water distillation with additional use of solar heating. It is a combination of two water purification processes, the Solar Water Disinfection System (SODIS) and the solar distillation process. Since SODIS, is only ideal to disinfect small quantities of low turbidity, micro-biologically contaminated water, a solar heated still is added to the system to address the issue of heavily contaminated water(such as sea water, water with high turbidity and water contaminated by heavy metal or pathogenic microorganisms).</p>
IGTM13	<p>TITLE: STAIR CLIMBING WHEEL CHAIR</p> <p>A Manual Stair Climbing Wheelchair is important that the physically challenged people are included in the mainstream and this design serves this need. Wheelchair is one of the most commonly used assistive devices for enhancing personal mobility and assists people with disabilities to become more productive members of their communities. But extant wheelchairs have limitations against architectural barriers. In most of the schools and institutes in India the lack of accessibility for wheelchair bound students restricts their basic education. Designing wheelchair for stairs climbing can be a solution for autonomy in mobility for wheelchair users. By negotiating stairs with a stairs climbing wheelchair, a huge number of</p>

	<p>buildings in India would be accessible to wheelchair users just like any other user. These will open doors for many opportunities like better education, job and better quality of life. It is an safe, user friendly and efficient stair climbing manual wheelchair.</p>
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IGTM14	<p>TITLE: THERMO ELECTRIC REFRIGERATION SYSTEM USING THERMO ELECTRIC COOLER TEG (PELTIER)</p> <p>Thermoelectric couples are solid-state devices capable of generating electrical power from a temperature gradient, known as the Seebeck effect, or converting electrical energy into a temperature gradient, known as the Peltier effect. A typical thermoelectric module is composed of two ceramic substrates that serve as a housing and electrical insulation for P-type and N-type (typically Bismuth Telluride) elements between the substrates. Heat is absorbed at the cold junction by electrons as they pass from a low energy level in the p-type element, to a higher energy level in the n-type element. At the hot junction, energy is expelled to a thermal sink as electrons move from a high energy element to a lower energy element. A module contains several P-N couples that are connected electrically in series and thermally in parallel.</p>
IGTM15	<p>TITLE: DESIGN AND FABRICATION OF VERTICAL AXIS DOMASTIC WIND TURDINE</p> <p>We know that there is enough wind globally to satisfy much, or even most, of humanity's energy requirements – if it could be harvested effectively and on a large enough scale. Vertical axis wind turbines (VAWTs), which may be as efficient as current horizontal axis systems, might be practical, simpler and significantly cheaper to build and maintain than horizontal axis wind turbines (HAWTs). They also have other inherent advantages, such as they are always facing the wind, which might make them a significant player in our quest for cheaper, cleaner renewable sources of electricity. VAWTs might even be critical in mitigating grid interconnect stability and reliability issues currently facing electricity producers and suppliers. Additionally, cheap VAWT's may provide an alternative to the rain forest destruction for the growing of bio-fuel crops. This paper describes some research findings of a particular original VAWT design and argues for increased research and development of this technology. Vertical axis windmills, such as the Durries (built in 1930)</p>

	<p>use drag instead of lift. Drag is resistance to the wind, like a brick wall. The blades on vertical axis windmills are designed to give resistance to the wind and are as a result pushed by the wind. Windmills, both vertical and horizontal axis, have many uses. Some of them are: hydraulic pump, motor, air pump, oil pump, churning, creating friction, heat director, electric generator, Freon pump, and can also be used as a centrifugal pump.</p>
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IGTM16	<p>TITLE: FABRICATION OF WHITEBOARD CLEANING MECHANISM</p> <p>Abstract-In our project, we design an Automatic Board Eraser (Blackboard or Whiteboard). The objective of this project is to minimize lecturer "effort. Our idea is come out for lighten a burden of lecturers. For Automatic Board Eraser, it is not just only save lecturers time but also use that time to do other thing while the machine is working. It is also healthful for lecturers because when cleaning of board by hand, it may cause hygiene problem. As a team, we designed the automatic board eraser. This eraser runs on dc power supply and will make it easier for teachers everywhere to clean their chalk/white board. This project consists of nut and screw mechanism. Square thread screw is coupled to motor. When motor shaft rotating, screw also rotating and nut slides linearly on screw. Duster is attached to nut. When nut slides, duster also slides and we will get desire rubbing effect. We began the project by first attempting to come up with an original idea to fit the problem. After coming up with an idea, we followed the usual design process to finalize our project.</p>
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IGTM17	<p>TITLE: FABRICATION OF UNIVERSAL POWER GENERATOR: MULTI SEASONAL</p> <p>In this project I would like to create a Universal power Generator which runs essentially on all the non-conventional energy sources. I would like to create a model which can help us store energy and generate electricity by using solar energy, wind energy, Hydel energy (rainwater), and as well as gravity. By combining all these energies is it possible to make a model which will not only store energy but also by which we can generate electricity. If so what are the materials that we would require, how much will the total cost estimate be? Is it a good idea? And can we do it?</p>
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IGTM18	<p>TITLE: MULTI PURPOSE ROBOTIC AGRICULTURAL VEHICLE</p> <p>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 RF medium using a Controller. The whole process calculation, processing, monitoring are designed with motors & sensor interfaced with microcontroller.</p>
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IGTM19	<p>TITLE: WASTE SAPERATION USING SMART DUSTBIN</p> <p>Abstract-In recent times, garbage disposal has become a huge cause for concern in the world. A voluminous amount of waste that is generated is disposed by means which have an adverse effect on the environment. The common method of disposal of the waste is by unplanned and uncontrolled open dumping at the landfill sites. This method is injurious to human health, plant and animal life .This harmful method of waste disposal can generate liquid leachate which contaminate surface and ground waters can harbor disease vectors which spread harmful diseases and can degrade aesthetic value of the natural environment and it is an unavailing use of land resources. In India, rag pickers play an important role in the recycling of urban solid waste. Rag pickers and conservancy staff have higher morbidity due to infections of skin, respiratory, gastrointestinal tract and multisystem allergic disorders, in addition to a high prevalence of bites of rodents, dogs and other vermin. Dependency on the rag-pickers can be diminished if segregation takes place at the source of municipal waste generation. The economic value of the waste generated is not realized 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. 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</p>
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	<p>metallic waste could be reused or recycled. Even though there are large scale industrial waste segregators present, it is always much better to segregate the waste at the source itself. The benefits of doing so are that a higher quality of the material is retained for recycling which means that more value could be recovered from the waste. The occupational hazard for waste workers is reduced. Also, the segregated waste could be directly sent to the recycling and processing plant instead of sending it to the segregation plant then to the recycling plant.</p>
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IGTM20	<p>TITLE: Automated Guided Vehicle (AGV) or mobile robot</p> <p>Abstract-Automatic motion planning and navigation is the primary task of an Automated Guided Vehicle (AGV) or mobile robot. All such navigation systems consist of a data collection system, a decision making system and a hardware control system. Artificial Intelligence based decision making systems have become increasingly more successful as they are capable of handling large complex calculations and have a good performance under unpredictable and imprecise environments. The hardware control for an AGV should be robust and precise. For practical implementation a prototype, that functions via DC servo motors and a gear systems, was constructed and installed on a commercial vehicle.</p>
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IGTM21	<p>TITLE: Bluetooth embedded robotic with agriculture plowing seeding and grass cutting powered by solar energy</p> <p>In India, near about 70% people are dependent upon agriculture. So the agriculture system in India should be advanced to reduce the efforts of farmers. Various number of operations are performed in the agriculture field like seeding, weeding, waste planet cutting, plowing etc. Very basic and significant operation is seeding plowing, plant cutting. But the present methods of seeding, plowing and plant cutting are problematic. The equipments used for seed sowing are very difficult and inconvenient to handle. So there is a need to develop equipment which will reduce the efforts of farmers. This system introduces a control mechanism which aims to drop seeds at particular position with specified distance between two seeds and lines while sowing. The drawbacks of the existing system will be removed successfully in this automatic machine.</p>
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IGTM22	<p>TITLE: Two Axis Based Solar Tracking for Power Conservation in Irrigation System</p> <p>Most of the countries in the world receive high solar isolation, providing an ideal combination for solar power. Moreover, in tropical countries with more than 300 sunny days; people can abundantly use solar energy for generating power. In this project we demonstrate the use of solar tracking irrigation system for maximum efficiency. In order to obtain maximum efficiency we will tilt the position of the solar panel, according to the sun using stepper motor. The light intensity is used to track the solar panel. As time increases the panel automatically tracks and resets to original position even after sunset. It again starts to track after 12 hours. At the irrigation end we are demonstrating an automatic turn ON and OFF method for a water pump.</p>
IGTM23	<p>TITLE: FABRICATION OF REGENERATIVE BREAKING SYSTEM – ELECTRIC</p> <p>Abstract-Energy is always lost as friction in the event of application of a brake. If a part of that energy can be recovered, it helps in improving fuel economy of a vehicle or any machine that consumes petroleum products, ranging from airplanes to drill rigs. This is a concept of regenerative braking. Kinetic Energy Recovery System (K.E.R.S) is one such method used for regenerative braking. It employs the use of motor generator set, coupled to a battery for energy recovery. The motor-generator set acts as a generator in the event of braking and as a motor in the event of acceleration. Thus energy is stored in battery through the generator and the motor runs on this energy generated. Hence energy can be saved during braking and released during acceleration, saving fuel consumption.</p>
IGTM24	<p>TITLE: FABRICATION OF FOOT STEP POWER GENERATOR MECHANISM</p> <p>This project attempts to show how energy can be tapped and used at a commonly used system, the generation of electricity through the Foot Step mechanism. Generation of electricity through the Foot Step power generator mechanism is one of the most recent power generation concepts. This device converts the kinetic energy of the human foot steps into electric energy by installing foot step power generators at footpaths, it takes the stroke motion of the foot and converts it to the rotary motion by rack and</p>

	<p>pinion mechanism and it generates the electricity. This project also explains clearly, the working principle of the designed system, its practical implementation, and its advantages. The components have been fabricated and assembled. Practical testing of the system has been done with different loads at different speeds. The utilization of energy is an indication of the growth of a nation. One might conclude that to be materially rich and prosperous, a human being needs to consume more and more energy. And this project is best source of energy that we get in day to day life.</p>
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IGTM25	<p>TITLE: FABRICATION OF INTELLIGENT REVERSE BRAKING SYSTEM USING PNEUMATICS AND SENSORS</p> <p>Now-a-days safety is become important aspects of automobile industries. And automation is the key which keep the safety at our fingers. In other words, an unskilled or less exampled can handle the automobile vehicle with greater with safety. Various accidents happen with the automobile vehicles which cause serious injury, and inefficient braking is most probable reason. It is incontestable, statistically proved fact, that year on year incidents involving a reversing vehicle account for between 20-30% of all reported work related serious injuries or fatalities.[1] While parking or taking reverse turn, driver unable to see what is behind the vehicle and obviously up to what distance, eventually vehicle strike with the obstacle behind. Presently, cars have the alarm system where when the car gets too close to an object an alarm is triggered which warns the driver about an object close by. But this feature has produced lot of problems and is prone to human error. We have enhanced the facility by using the same system but we have altered it so that the car brakes automatically when an obstacle is close by. This seminar introduces a control systems based on electronically controlled automotive braking system is called "Intelligent Reverse Braking System". A Sensor Operated Pneumatic Brake consists of IR transmitter and Receiver circuit, Control Unit, Pneumatic breaking system. The IR sensor is used to detect the obstacle. There is any obstacle in the path, the IR sensor senses the obstacle and giving the control signal to the breaking system. The pneumatic breaking system is used to brake the system. So basically here the car brakes on its own by determining the distance from the object.</p>
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IGTM26	<p>TITLE: REAL TIME ADVANCED 5 IN 1 MULTI PURPOSE AGRICULTURAL VEHICLE – AGRI VEHICLE</p> <p>This Agricultural 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 manually by driving the vehicle using seating arrangement. This agricultural vehicle will be running with batteries. Batteries will be charged using Solar Energy. So ultimate aim is to develop a agricultural vehicle which uses renewable sources for operation.</p>
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IGTM27	<p>TITLE: FABRICATION OF IOT BASED SEED SOWING MACHINE</p> <p>Agriculture is the major sector in the world that plays a vital role which helps in developing the future. Farmers are our present and future life savior. Agro technology is the process of including the recent technologies which we use in daily life and using the technology in agriculture sector that retains and develops the crops that are been produced. The agro technology not only helps in improving the efficiency of the crop that are being produced but also helps in developing devices that are suitable for mechanical works that are been used in fields. As days passes by our technologies are also improving simultaneously. In order to help in developing nation and improve the quality of farming new innovations are under process. By implementing Agro technology techniques and various other strategies we will be able to minimize the cost, time and effort which finally results in retaining the best crop or the product. Keeping all the above subject in mind we are developing a mechanical device that helps our farmers in harvesting the best crop in minimum amount of time and effort and yes the price wont effect our farmers as well. In this project we are going to develop a mechanical model that helps in harvesting, plough and seed sowing operation that are controlled using IOT (internet of things).For an agriculture sector to be successful one needs to add the booming technologies as input and take care of the processes and at the same time knowing the behavior of the technology and the major role that is going to play in the sector of one's interest.</p>
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	The right technology doesn't yield bad results. In the present growing aspect we need to take care of the utilizing the present and available technologies and machine in order to gain the best result.
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IGTM28	<p>TITLE: Bird - Solar powered Irrigation with auto control of pump & SMS alert</p> <p>In the field of agriculture it is very important to maintain the level of water or moisture in the soil where crops are planted. Excess or deficiency in water may harm the growth of plants which results in loss of farmers as well it is difficult to control water pumps manually since in many countries where electricity is main issues, villagers usually don't have facility of electricity. To solve above problem this project have been proposed. The system keeps information about moisture level in land and keeps moisture to permissible limit. Sensors continuously sense the water content and give the message to the farmer. Without visiting the fields, farmers can get the information about the Moisture content and farmer can control the pump set by sending a message from his cellular phone even from a remote place where network is available. However, if the Moisture level reaches to the low level the motor will automatically start without intimation to farmer and to ensure the proper water level in the site.</p>
IGTM29	<p>TITLE: AUTOMATIC MEDICAL SHOP-TABLET AND SYRUP VENDOR</p> <p>The objective of this concept is to design the automatic medical shop- tablet and syrup vendor system is using with help of control unit. Here the medicine is highlighted by the pressing of button which is coupled on the control unit. The tablets are separated and arranged in different trays. The required tablet and syrup is deduced from the lot by pressing the buttons. So the specified button codes are already feed in to the control unit. This system is mainly used to save the time also avoiding the mistakes done by the human.</p>
IGTM30	<p>TITLE: FLOOR CLEANING MACHINE</p> <p>This project deals with the designing and fabrication of Floor cleaning Machine. The aim of this project work is to develop and modernized process for cleaning the floor with wet and dry. It is very useful for cleaning the floors. It can be used wet and dry; hence it is widely used in houses, hospitals, auditorium, shops, computer centers, etc. In modern days interior decorations are becoming an important role in our life. Cleaning of floor is a very important one for our health</p>

	and reduces the man power requirement. Hence our project is very useful in our day to day life.
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IGTM31	<p>TITLE: PEDDLING WASHING MACHINE</p> <p>In the developing world, washing laundry is a difficult, time-consuming task that falls solely on women. Typically spend 8 hours each week scrubbing each piece of their family's clothing and wringing out the harsh washing solution by hand.</p> <p>Powered washing machines exist, but they are impractical in rural regions because running water and electric are expensive or unavailable. Several groups already tried to build machines for these regions but they have been unsuccessful. Their machines were either expensive to build and repair because they require imported parts or they do not wash effectively. Our invention is that, a low cost, pedal-powered washing machine that is designed around readily available parts. Its innovation is its simple design and its use of inexpensive plastic barrels and bicycle components. It is reliable, easy to operate and uses no electricity. The parts are available locally, so it can be manufactured and repaired in the community without depending on imported goods.</p>
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IGTM32	<p>TITLE: DEVELOPMENT OF RESCUE DEVICE FOR LIFTING INFANTS STRUCK IN PITS</p> <p>The proposed system is to save life from the bore wells. Small children without noticing the hole dug for the bore well slip in and get trapped. Since the holes are dug too deep it is quite impossible to save life. The fire force and medical team find it difficult to rescue children due to unknown levels of humidity, temperature and oxygen in the depths of the bore well. Rescue work can be a long drawn affair lasting close to thirty hours. The time taken is long enough to kill a precious life. Even if rescued the child may die due to injuries sustained. This has created an open challenge to the field of medicine, rescue and the whole human society. To aid in such rescue we have proposed a system that will easily rescue within two hours of time without any major injury. By that a precious life can be saved, hardly nineteen incidents happened from 2013 till date.</p>
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IGTM33	<p>TITLE: MULTI AGRI CUTTER</p> <p>This is the new innovative and effective concept mainly used for agricultural field. It is simple in construction and the working process is also very easy. It is mostly used in the agricultural field for the cutting of crops, sugarcane, wooden pieces and etc., the model consists of a pedal arrangement, cutter, supporting frame, seat arrangement.</p>
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IGTM34	<p>TITLE: HARNESSING WIND ENERGY USING TRAIN</p> <p>Wind Energy is a renewable source of energy. Today, the output power from wind turbines can be utilized in two ways, either by direct use of the mechanical shaft power (through a gearing ratio) or by letting the wind turbine power an electrical generator, and utilizing the generated power as electrical power. Recent advances in the wind energy harnessing techniques have revealed many modern applications Battery charging at remote telecommunication stations, domestic heating and lighting, hybrid systems, where a generator is run by diesel are few common examples in the present scenario. It is widely accepted fact that we need to switch on to the non-conventional energy sources. This paper brings a new possibility for the utilization of the wind generated power, for various electrical components inside a typical railway train through the batteries charged by the wind energy harnessed by a series of wind turbines mounted at the top of the train coaches. This paper deals with the design and development of a wind turbine system with a concept of generation of electricity as an auxiliary source in the train.</p>
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IGTM35	<p>TITLE: Vehicle safety using power window mechanism</p> <p>We have seen how severe is bus disasters on fire, accident etc, to avoid casualties and human lives here we are proposing power window mechanism. On sensing any danger in the form of fire and smoke the window automatically will slide down making way for passenger way out from the vehicle.</p>
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IGTM36	<p>TITLE: SOLAR AGRICULTURAL WATER PUMPING SYSTEM</p> <p>Energy plays an important role in the material, social and cultural life of mankind. The energy needs are increasing day by day. This is the result of population growth and increase</p>
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	<p>in the standard of living which is directly proportional to energy consumption. As we know that man kind will be never lacking in energy. Today, it is liquid fluid, tomorrow it may be uranium with an element of risk. Risk exists where ever there is human activity and production of energy. Just as the supply of fossil fuel is finite thus there will be the supply of uranium. Perhaps, uranium would be exhausted quickly if it is used on a large scale. It is therefore, harnessing the gigantic inexhaustible solar energy source reduces the dependence on fossil fuels.</p>
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IGTM37	<p>TITLE: AUTOMATIC PNEUMATIC RAMMING MACHINE</p> <p>Moulding is one of the important metals forming process in manufacturing components for various applications in industry. Casting of any size and shape can be made accurately. Automation in this field helps to improve the foundry environment and accuracy of the cast parts. Efficiency of moulding is affected by various parameters like permeability, collapsibility, adhesiveness etc. So it is a must to avoid defects in casting. The defects occur in sand castings post a great problem in foundry. On account of defects more than 10% castings are rejected. Even though skilled labor is employed for ramming operation, the packing of molding sand will not be even throughout the molding box. So we have selected the idea of fabricating “PNEUMATIC RAMMER”. This rammer is operated pneumatically. By using this rammer moulding sand will be packed evenly throughout the box.</p>
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IGTM38	<p>TITLE: FABRICATION OF PNEUMATIC JACK FOR CAR</p> <p>The main target of project is to improve version of a mini pneumatic jack. This will be more efficient for the user. This machine is pneumatic powered which has low co-efficient of friction. A pneumatic cylinder erected provides power to lift up the Jacky. This is a pneumatic powered machine and requires no other means of power to operate. The required components are Compressor, Pneumatic cylinder, Solenoid, Control circuit and Jack. There are many types of work holding devices like machine vices swivel vices, universal vice, pipe vice, T-Bolt's 'U' clamps, Goose neck clamp, angle plate, Jigs and fixtures etc. These are all mechanical type work holding devices. In this project we are dealing about the pneumatic plain vice used in drilling machine. Here the</p>
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	loading and unloading is quick. The job can be held more rigidly.
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IGTM39	<p>TITLE: FABRICATION OF REGENERATIVE BRAKING SYSTEM USING FLYWHEEL</p> <p>Regenerative brake is an energy recovery mechanism which slows a vehicle by converting its kinetic energy into another form, which can be either used immediately or stored until needed. Thus, the generated electricity during the braking is fed back into the supply system (in case of electric trains), whereas in battery electric and hybrid electric vehicles, the energy is stored in a battery or bank of capacitors for later use. Energy may also be stored by compressing air or in a rotating flywheel. Electric and hybrid electric vehicles typically employ motor-generators that can convert electric current into torque (like a motor) or torque into electric current (like a generator). When the brakes are applied, the motor-generator provides the resistance necessary to slow the vehicle as it supplies current to the battery. In the event that the motor-generator cannot slow the vehicle fast enough, a torque coordinator module will apply traditional friction brakes to the extent necessary. Some regenerative braking systems store the recaptured energy mechanically, typically by pumping hydraulic fluid into an accumulator where the energy is stored in a REGENERATIVE BRAKING SYSTEM FOR BICYCLE USING FLYWHEEL</p>
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IGTM40	<p>TITLE: FABRICATION OF MAGNETIC COOLANT FILTER</p> <p>A coolant is a fluid which flows through a device in order to prevent its overheating, transferring the heat produced by the device to other devices that utilize or dissipate it. An ideal coolant has high thermal capacity, low viscosity, is low-cost, and is chemically inert, neither causing nor promoting corrosion of the cooling system. Some applications also require the coolant to be an electrical insulator. Also the coolant will remove the scraps from the machine tool. Once used coolant can't be reused as it contains small scraps it results in waste of money. To avoid this we are introducing a project to remove the scraps with help of magnet.</p>
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IGTM41	<p>TITLE: DEVELOPMENT OF WHEELCHAIR CUM STRETCHER</p> <p>The number of patients in India is increasing day by day. So in hospitals patients need to be shifted from wheelchair to stretcher, stretcher to beds, bed to wheelchair, or vice versa; which creates unsafe conditions for patients. Also transferring the patients from wheelchair to stretcher, stretcher to beds, bed to wheelchair is always an issue for the attendant or nurse. Sometime during handling, patient and hospital staff suffer from many problem like stresses are produced in the body, some time chances to sleep down the patient. It is required to eliminate all types of possibilities. Understanding the various issues regarding the mobility equipment, the better design will be an asset for the medical field and a helping hand for disabled individuals. There is a need for a wheelchair cum stretcher to facilitate the disabled patient's mobility and to provide novel medical equipment for use in the Indian hospitals. The present research work proposes a development of wheel chair cum stretcher which will follow the standard specification of both wheel chair and stretcher with considering the issues like safety, hygienic, cleaning and functionality.</p>
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IGTM42	<p>TITLE: AUTOMATIC BOTTLE FILLING SYSTEM</p> <p>The objective of this project is to provide easy access to the company for Filling Bottles Automatically. This type of project is mainly used in the soft drinks Manufacturing Company and Medicine Manufacturing Company in which drinks and Syrup are Automatically Filled in the Bottle. This project is designed with the help of micro controller, IR Transmitter and Receiver, Relay Driver, DC Motor and Mechanical arrangements.</p> <p>Here the Microcontroller may be Atmel 89C51 or PIC Microcontroller both are flash type reprogrammable Microcontroller. Infrared Transmitter is the one type of LED generally called IR. When the supply is given to this LED it generate and Transmitting the infrared rays. IR Receiver is used to receive such type of Infrared rays transmitted by the IR Transmitter. Here one important point is note that IR Receiver should be placed straight line with IR Transmitter. In this project Bottles are placed in the Mechanical arrangement this Mechanical arrangement may be a round type tray or Straight line tray in which Bottles are placed with particular distance, the Mechanical arrangement is designed in this manner. When power is ON the IR Transmitter passing</p>
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	<p>ray to the receiver and giving the signal to the Microcontroller through signal conditioning unit. Initially the Micro controller activates the DC Motor through the Driver circuit which is connected to tray. So the Bottles are moving when the Bottles comes in between the IR Transmitter and IR Receiver it block the rays. Now the Microcontroller deactivates the DC motor so movement of tray will be stopped. The bottle position is straight line to filling system. Correspondingly Microcontroller activates the motor for filling system. Now the bottle is filled with the concerned material. After setting time limit for the quantity motor is switched OFF for filling system and motor is switched ON for moving tray system. Like wise the Bottles are filled with materials automatically.</p>
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IGTM43	<p>TITLE: AIR BRAKE SYSTEM USING ENGINE EXHAUST GAS</p> <p>The aim is to design and develop a brake system based on exhaust gas is called “AIR BRAKE SYSTEM USING ENGINE EXHAUST GAS”. The main aim of this project is to reduce the workloads of the engine drive to operate the air compressor. In this project, we used exhaust gas from the engine to rotate the generator turbine. Then the power is loaded to the D.C compressor and it is used to the pneumatic cylinder to apply brake.</p>
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IGTM44	<p>TITLE: FABRICATION OF SOLAR OPERATED PESTICIDE SPRAYER</p> <p>The main nozzle assembly are mounted on horizontal pipe to maintain the nozzle gap further horizontal pipe in mounted on vatical bar so that height can be adjusted, the nozzle are connected with set of pipes and connectors. main water pump is mounted in platform on chasse which is front connected to wheel and rear side is handle supported. Handle is mounted with Solar panel so that Spryer can be run continuously without interrupt. When the switch is turned on the motor starts pumping the water from the tank which is powered by battery further which is charged by solar panels , the water starts sprinkling from the nozzle the Hight of nozzles are adjusted according to height of crops</p>
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IGTM45	<p>TITLE: DESIGN AND FABRICATION OF ELECTROMAGNETIC ENGINE</p>
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	<p>The fuel is the basic requirement for internal combustion engine. Now a days, the demand for fuel has increased so need of other energy has become necessary. The main concept of this project is the zero point fuel consumption. The magnetic force principle is the basic requirement to work for electromagnetic engine. The general property of magnet (i.e.) attraction and repulsion forces is converted into mechanical work. The magnetic driven engine derives it power from magnet power and constant magnetic energy is converted into mechanical energy. The useful output is rotating motions and the application is based on electromagnetic engine which varies from different field.</p>
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IGTM46	<p>TITLE: FABRICATION OF AUTOMATIC SEWAGE CLEANING MACHINE</p> <p>In this project the proposal concept is to replace the manual work in drainage cleaning by automated system. Now a day's even through automation plays a vital role in all industrial applications in the proper disposal of sewages from industries and commercials are still a challenging task. Drainage pipes are using for the disposal and unfortunately sometimes there may be loss of human life while cleaning the blockages in the drainage pipes. To overcome this problem and to save the human life we implement design "automatic sewage cleaning system". We designed our project to use this in efficient way to control the disposal of wastages and with regular filtration of wastages, clearance of gaseous substance are treated separately and monitor the disposal of frequent manner.</p>
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IGTM47	<p>TITLE: AUTOMATIC STAIR CLIMBING WHEEL CHAIR</p> <p>In this project an automatic stair climbing wheel chair is fabricated. Where ever it is, to load heavy weight in automatic stair climbing wheel chair is really a difficult thing. That to for aged people and handicapped peoples it is very a difficult thing. To avoid this difficulty we fabricate a automatic stair climbing wheel chair. wheels can be fitted to hand trucks and as the name implies, it is designed to aid the moving the goods up or down stairs, three wheels set as a triangle configuration replacing the standard wheel on either side.</p>
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IGTM48	<p>TITLE: GROUND NUT HARVESTER MACHINE</p> <p>The object of this study was evaluation of a electric ground nut harvester at different conditions of soil moisture content</p>
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	<p>and forward speed and comparing it with manual harvesting. The evaluation factors for groundnut harvester were two levels of soil moisture content and three levels of forward speed. The results revealed that the effect of soil moisture content was only significant on the percent of unexposed pods loss, while the effect of forward speed was not significant for all loss. Comparing of harvester loss at best condition with manual harvesting loss revealed that there was significant difference between two methods of groundnut harvesting. Manual harvesting loss was higher than mechanical harvesting loss in the percent of exposed and unexposed pods loss. The results of this study revealed that the usage mechanical harvesting instead of manual harvesting reduces harvesting loss, harvesting costs and timeliness costs. Therefore, usage of this harvester instead of manual harvesting entirely recommended.</p>
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IGTM49	<p>TITLE: AUTOMATIC VEGETABLE & FRUIT CLEANING MACHINE</p> <p>This project deals with the fabrication of Automatic Vegetable & fruit cleaning machine. The aim of this project work is to develop and modernized process for cleaning the vegetable & fruit dust automatically on/off the machine. It is very useful for cleaning the vegetable & fruit dust. It can be widely used in houses, hotel, shops, etc. In modern days interior decorations are becoming an important role in our life. Cleaning of vegetable & fruit dust is a very important one for our health and reduces the man power requirement. In our project vegetable & fruit dust are cleaned automatically by putting the vegetables in the machine. Hence our project is very useful in our day to day life.</p>
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IGTM50	<p>TITLE: Design And Fabrication Of Tilting and Angle Vice</p> <p>A vice is a mechanical apparatus used to secure an object to allow work to be performed on it. Vices have two parallel jaws, one fixed and the other movable, threaded in and out by a screw and lever. An engineer's vice is bolted onto the top surface of a workbench, with the face of the fixed jaws just forward of its front edge. The vice may include other features such as a small anvil on the back of its body. Most engineer's vices have a swivel base. Some engineer's vices marketed as "Homeowner Grade" are not made of steel or cast iron, but of pot metal. Machine vices are mounted on drill presses,</p>
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	grinding machines and milling machines. Abrasive chop saws have a special type of machine vice built in to the saw. Some hobbyists use a machine vice as a bench vice because of the low cost and small size.
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IGTM51	TITLE: Design and fabrication of coconut dehusking machine The scope of this project was to design and develop a coconut fiber extraction machine for farmers and small scale coir industries in India to provide an effective solution to the difficulties in existing process, reduce time and labour cost and to develop a compact coconut fiber extraction machine which could be used in remote villages so that unutilized husks from such areas could be tapped and fiber could be made available to the Coir Industry directly. This project was taken up to develop a promotional strategy for a new innovation and generate public awareness regarding the availability of a coconut fiber extraction machine in the market at a reasonable cost.
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IGTM52	TITLE: Design and Fabrication Of Areca nut tree Climber Areca nut is an erect, unbranched palm reaching heights of 12-30 m, depending upon the environmental conditions. The stem is marked with scars of fallen leaves in a regular annulated form. Areca nut almost always exist in cultivation; therefore, conditions of its natural habitat are difficult to assess. It however thrives in areas of high rainfall. Being a shade loving species, areca nut always does well when grown as a mixed crop with fruit trees. Raising a banana shade crop is even better as this supplements farmer's income. The majority of areca nut are harvested by climbing the tree and cutting the nuts down by hand. This process may seem simple; however, it is actually quite dangerous. In response, there is a genuine need to develop a device
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IGTM53	TITLE: AUTOMATIC GATE OPENING AND CLOSING SYSTEM Tired of stopping your vehicle and manually opening/closing your gate every time you leave or come home? Simplify the process with an automatic gate opening system which sensing the object and the Automatic Gate Opener will open your gate. Once you exit, the gate will be automatically closed never accidentally open.
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IGTM54	<p>TITLE: AQUA SILENCER</p> <p>Diesel power inevitably finds a very important role in the development of the plant's economy and technical growth. In spite of their high thermal efficiency, one cannot ignore the fact about the effect of their exhaust, in the atmosphere. It is a well-known fact that the toxic gases emitted in diesel engines are less than the engines. Due to high cost of petrol, diesel engines are more in use. Anticipating the use of diesel engines, even more in the near future; this system developed can be used to control the toxic gases, coming out of the diesel engines. These toxic gases are harmful not only to the atmosphere, but also to the human & animal race. Objective of this project is to design & fabricate a simple system, where the toxic levels are controlled through chemical reaction to more agreeable level. This system acts itself as a silencer; there is no need to separate the silencer. The whole assembly is fitted in the exhaust pipe; it does not give rise to any complications in assembling it. This system is VERY COST EFFECTIVE AND MORE ECONOMICAL.</p>
IGTM55	<p>TITLE: AUTOMATIC CELL PHONE CHARGEER WITH PAY SYSTEM</p> <p>Our objective is to design and develop a charger system normally "AUTOMATIC CELL PHONE CHARGER WITH PAY SYSTEM". For this project cell phone automatically charged with the help of charger circuit which interfaced with coin box arrangement. The control mechanism contains the microcontroller unit, LCD display, cell phone charger unit and key pad.</p>
IGTM56	<p>TITLE: AUTOMATIC DAM SHUTTER CONTROLLING SYSTEM</p> <p>The main purpose of this project is to control the dam shutter automatically. The main purpose behind adding the level scanning section is to avoid malfunctioning of the receiver section due to power failure (as no battery is added to the receiver to latch the present level of the dam water). In case we add a battery and the power fails, the water level is latched but during this period if the water level goes below any probe, there is no way to transmit the signal from the transmitter. This levels us with no other option but to add level scanning section. When power resumes, the level-scanning section scans and checks all the levels one by one (from empty to full) and transmits the corresponding codes to the receiver to show the water level in the dam.</p>

IGTM57	<p>TITLE: AUTOMATIC ROAD CURVE FINDER</p> <p>This project “AUTOMATIC ROAD CURVE FINDER” is used to find the curve and it will give the alarm intimation to the driver. The main aim of this project is to minimize the accident and safety drive. As for Indian road transport scenario is concerned, accidents are becoming a day to day cause an attempt has been made in this project to reduce such mishaps. In our project a high speed alarm and light indication is given to the driver.</p>
IGTM58	<p>TITLE: AUTOMATIC VEHICLE ACCIDENT PREVENTION SYSTEM</p> <p>The aim is to design and develop a control system based an intelligent electronically controlled automotive braking system is called “AUTOMATIC VEHICLE ACCIDENT PREVENTION SYSTEM”. This Braking system is consists of IR transmitter and Receiver circuit and the vehicle. The IR sensor is used to detect the obstacle. There is any obstacle in the path, the IR sensor senses the obstacle and giving the control signal to the breaking system. The relay is used to disconnect the motor supply voltage.</p>
IGTM59	<p>TITLE: AUTOMATIC SIDE STAND WITH BREAKING LOCKING SYSTEM</p> <p>This project work titled “AUTOMATIC SIDE STAND WITH BREAKING LOCKIG SYSTEM” has been conceived having studied the difficulty in standing the any type of two wheeler vehicle. Our survey in the regard in several automobile garages, revealed the facts that mostly some difficult methods were adopted in standing the vehicles in rest.Now the project has mainly concentrated on this difficulty, and hence a suitable hydraulic unit has been designed. Such that the vehicles can be stand the floor land without application of any impact force. By pressing the button in the dashboard, the solenoid valve activates the hydraulic jack automatically. The fabrication part of it has been considered with almost case for its simplicity and economy, such that this can be accommodated as one of the essential tools on automobile garages.</p>

IGTM60	<p>TITLE: AUTOMATIC HIGHWAY SIGNALLING SYSTEM ALONG WITH SPEED CONTROLLING AND ALCOHOL DETECTION</p> <p>Accidents occur frequently in highways, which will create a heavy loss for the victim's families as well as for the society. Mainly accidents occur due to the unawareness of the driver about the obstacles that may be present on the highway routes. This project is developed in the vision of preventing accidents in the highways. A prior intimation is given to the driver about the obstacles present in the highways such as steep curve, bends, bridges, temporary work on progress etc. It also intimates to the owner if the driver is drunk.</p>
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IGTM61	<p>TITLE: Rash Driving Detection and Collision (Accident) Avoidance System with Steering Controlled Headlight Mechanism Of Vehicles.</p> <p>Rash driving is most dangerous for people. Risky driving primarily includes heavy either rudely or driving under the power of alcohol, is a major grounds of traffic accidents throughout the world. They provide an early detection to alert the dangerous vehicle maneuvers related to rash driving. There are lots of sensors used in various techniques to detect the rash driving. Such techniques and sensors are being discussed a in this survey. Rash driving is a major cause of traffic accidents throughout the world. We intend to design a system aimed at early detection and alert of dangerous vehicle driving patterns related to rash driving. The entire implementation requires only a mobile phone placed in vehicle and with accelerometer. In this paper we intend to design a system aimed at early detection and alert of dangerous vehicle driving patterns related to rash driving. And also we develop a "Steering Controlled Headlight Mechanism" which acts as directional headlights. This is done by connecting headlights and steering. Present day automobiles don't have effective lighting system. Due to this many accidents are taking place during night times especially in ghat sections. The accidents can be avoided by incorporating Steering Control Headlight Mechanism. The rack and pinion steering gear mechanism is used for this project. When the steering wheel is rotated and rotary motion is converted to translatory motion through the rack and pinion mechanism. When the front wheels are steered, the headlights follows the same path and the light is focused on more divergent area. In the present project, it is planned to design "Steering Controlled Headlight Mechanism" and a live model unit is fabricated.</p>
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IGTM62	<p>TITLE: Antismuggling System for Trees in Forest with Solar power generation</p> <p>From many years we are getting news about smuggling of the trees such as sandal, Sagwan etc. These trees are very expensive and less obtainable in the market. To avoid such type of smuggling and to save the forests around the globe some preventive systems need to be developed. We are forming a system which can be used to restrict this smuggling. The suggested system will consist of two modules which are described below, 1) Tree Unit 2) Main Server Unit (base station).]Every tree having one small electronics division which consists of Renesas controller, 3 Sensors and Solar power. There will be one area selected. The data of different tree units can be collected by this units. The each tree unit will give the information to base station using GSM module. At main server GUI using one authorized person whom received the message and he will taking action to provide security. This data can be used by concern forest authorities to take preventive action.</p>
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IGTM63	<p>TITLE: SOLAR POWERED ELECTRIC VEHICLE CHARGING STATION</p> <p>While electric vehicles are generally seen as clean vehicles, they are not completely clean because the production of electricity might generate emissions as well. This paper on a solar powered electric vehicle charging station is a working solution to close the gap in achieving a truly renewable and clean vehicle. The current scenario of today's solar energy ecosystem is that, it is highly unstructured and localized. There are about 50 solar power plants in India but none of them are connected in a manner that there would be a method to perform analytical analysis of the solar energy produced. Today, with the advancements in sensor technology it is a very viable option to connect the solar energy systems to the GSM. Once these systems are connected to the user can receive the message, the analysis of the performance, productivity and efficiency can be calculated very easily. This paper aims at finding a possible and viable method to connect the solar powered electric vehicle charging station and perform analytical operations to increase efficiency of Solar Energy.</p>
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IGTM64	<p>TITLE: Automatic gear changer</p> <p>The Automatic gear changer system is used to change the gear in a tensionless manner. In this system a fuel power is not required to change the gear. So, that the human energy will not be wasted. The system consists of a battery electronics control board, soft gear mechanism through which the signals are given to the control board which with control the motor which will in turn change the hard gear. Thus the soft hand gear system for two wheelers work. This type of system can be implemented in vehicles. Here through the soft gear or switching system we can set the gear we want. The gear changing motor which is a stepper motor will rotate according to the gear required. The electronic control board makes all the controls in the system.</p>
IGTM65	<p>TITLE: AIR COMPRESSOR USING CRANK & SLOTTED LINK MECHANISM</p> <p>The objective of this experiment is to investigate the kinematics motion of a Crank and Slotted Lever Quick Return mechanism. The investigation is to show that it is indeed a quick return mechanism and to evaluate the increase in efficiency that this would offer if applied to a machine tool.</p>
IGTM66	<p>TITLE: Robust Railway Crack Detection Scheme (RRCDS) Using LED-LDR Assembly</p> <p>Most of the commercial transport is being carried out by the railway network and therefore, any problems in the same has the capacity to induce major damage to the economy- notwithstanding the societal impact of loss of life or limb. This project is developed to overcome the problem of railway crack, the cracks is detected through Ldr, the current location is sent through Gps and to receive the information Gsm is utilized, 4 wheel robot is used in the place of train.</p>
IGTM67	<p>TITLE: AUTOMATIC RAILWAY GATE CONTROLLER DEPENDS ON TRAIN SPEED</p> <p>In our country every day we are hearing about the accidents in the level crossing. That may end the human's life. To prevent the accident we plan to go for the automatic railway</p>

	<p>gate controller for the unmanned level crossing. The train, which is coming in either way, will be calculating the train speed in the following method, by sensing the Proximity sensors. But we are going to develop the model by using the toy trains. Proximity sensor is suitable for these types of trains.</p>
IGTM68	<p>TITLE: ROAD POWER GENERATION (RPG) BY SLIDING MECHANISM</p> <p>Man in his lifetime, uses energy in one form or the other. In fact whatever happens in nature, results, out of the conversion of energy in one form or the other? The blowing of the wind, the formation of the clouds and the flow of water are a few examples that stand testimony to this fact. The extensive usage of energy has resulted in an energy crisis, and there is a need to develop methods of optimal utilization, which will not only ease the crisis but also preserve the environment. In this paper the electricity is generated through the sliding mechanism. For obtaining the electricity through the sliding mechanism a prototype model is developed and studied. Findings from this research work are discussed in this project. This research work used a permanent magnet D.C. generator thereby generating 12 Volt D.C. This D.C. voltage is stored to the lead 12-volt battery. Electricity stored in battery is used to activate the light, fan etc. By increasing the capacity of the battery power rating is increased.</p>

IGTM69	<p>TITLE: WATER PUMPING AND POWER GENERATION BY USING SWING ACTION</p> <p>This study explains the effect of creating the free energy in the device made of: a) oscillating swing-lever system, b) system for initiating and maintaining the oscillation of the pendulum, and c) system which uses the energy of the device by damping the oscillation of the lever. Serbian inventor Veljko Milkovic has invented, patented and developed series of such machines based on two-stage oscillator for producing energy. The operation of the machine is based on forced oscillation of the pendulum, since the axis of the pendulum affects one of the arms of the two-armed lever by a force which varies periodically. Part of the total oscillation energy of the pendulum-lever system is changed into work for operating a pump, a press, rotor of an electric generator or some other user system. The creation of free energy was proved by a great number of physical models. The effect of creating the free energy is defined in</p>
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	<p>this study as the difference between the energy which is the machine transfers to the user system by the lever and the energy which is input from the environment in order to maintain the oscillation of the pendulum. Appearance of the free energy is not in accordance with the energy conservation law. The effect of creating the free energy results from the difference between the work of the orbital damping forces of the lever and the work of the radial damping force of the pendulum motion. This effect enables increase of the input energy. The coefficient of efficiency of the machine can be more than one.</p>
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IGTM70	<p>TITLE: AGRICULTURAL ROBOT FOR IRRIGATION SYSTEM AND MONITORING FIELD OF TEMPERATURE AND SOIL MOISTURE SENDING</p> <p>The purpose of the project is to build a multipurpose agricultural robot which can perform various operations on field. One of the important profession in India is farming so it is essential to look out for automation in field work to reduce man power. Here this project focuses on farming work features like automatic irrigation system, monitoring of the field using parameters as temperature , soil moisture , humidity , raining , presence of any animal on field these all parameters are monitored from field and transmitted to mobile unit using GSM module.</p>
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IGTM71	<p>TITLE: AUTOMATIC BREAK CABLE DAMAGE DETECTION AND IGNITION AND FUEL LOCKING SYSTEM</p> <p>The aim is to design and develop a control system based an electronically controlled automatic break failure indicator by using IR Sensor and engine over heating alarm by using heat sensor is called Automatic break cable damage detection and ignition and fuel locking system. Automatic break cable damage detection and ignition and fuel locking system is consists of IR sensor circuit, Heat sensor Circuit, Control Unit and frame. The sensor is used to detect the break wire. There is any disconnection of the break wire or cutting of any few turns of break wire, the control signal to the alarm unit. Similarly the heat sensor is fixed to the engine and this heat is measured and giving the alarm signal when the engine heat exceeds the setted temperature limit.</p>
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IGTM72	<p>TITLE: MOTORIZED MULTISIDE HACK SAW MACHINE</p> <p>The hacksaw is a metal cutting machine tool designed to cut metal by using the motorized power. The machine is exclusively intended for mass production and they represent fasten and more efficient way to cut a metal. Hacksaws are used to cut thin and soft metals. The operation arrangement by the pedal power. In these project we can designed as four directional hacksaw machine with the help of motor .There are numerous types of cutting machines in Engineering field, which are used to fulfill the requirements. We are interested to introduce motorized power system in Hacksaw machine. The main function of multi side motorized power hacksaw machine is to cut thin and soft metals by using pedal power.</p>
IGTM73	<p>TITLE: Design & Fabrication of Automatic Drainage Cleaning System using Solar Panel.</p> <p>Water is the basic need for the existence of life on earth. In spite of 70% water on earth majority of water is not suitable for drinking purpose. There is a huge demand of clean water as it is used for a variety of purpose such as drinking, bathing, cleaning, cooking etc. Impurities present in water can cause serious health issues that can damage the life of human beings. The chief function of the automatic drainage system is to collect, transport, as well as dispose the solid waste in the waste bucket by the help of claws.. Solid waste in drainage water includes empty bottles, polythene bags, papers etc. Impurities in drainage water can lead to blockage of the drainage system. In order to avoid such situation these impurities are needed to be taken out time to time for the continuous flow of drainage water. Drain can be cleaned continuously by the help of model using the drive system to remove the solid waste and threw it into waste bucket. This project is designed with the objective to initiate the efficient working of system. This project automatically cleans the water in the drainage system each time any impurity appears, and claws which are driven by chain sprocket grasp the solid waste and threw it into the waste bucket to avoid blockage. It even reduces the cost of manual labor as well as reduces the threat to human life.</p>

IGTM74	<p data-bbox="540 50 1544 128">TITLE: COMPRESSED AIR POWERED CAR WITH REGENERATIVE AIR FILLING USING MECHANICAL ENERGY</p> <p data-bbox="540 178 1544 844">The energy need of the world is getting more and more consumption of fossil fuels which will become extinct in near future. The environmental matters are also getting the alarming situation and hence there is a greater concern for eco-friendly fuels so that there is a greater demand for newer fuels and technologies to find the answer to these problems. The discoveries essentially are finding known ideas within the nature to an application for the benefit of livings of mankind. Here is an attempt to explore the pneumatics for the source of power train in making the prime movers to operate. In this project, the methodology of developing pneumatic power generating concept is developed. The pneumatic cylinders are used to activate the cranking and to complete the rotation of the cranking with the help of two number of cylinders with requisite torque through solenoid valves.</p>
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