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Abstract Book of Best Project's

2017

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CIVIL

CIRCULAR RUNWAY

M. Mechona , S. SaiAnudeep
Internal Guide: k. Nandinichandravathi Associate Professor

ABSTRACT

This model presents an innovative concept for airport operations in the long-term future, based on a radically new airport design encompassing a circular circumventing runway. This aims at evaluating the benefits and identifying the constraints associated with kind of airport. One of the positive concern is, the aircraft's lateral and directional stability is more feasible on circular runway than on a flat runway. A foreseen application could be a small airport dedicated to unmanned aircraft operations or a large hub airport with limited traffic mix and high reliability of operations.

EFFECTS OF WASTE WATER ON CONCRETE

Pabba VinodKumar Goud
Internal Guide: D. Lakshmi Lavanya Assistant Professor

Keywords: Waste water, concrete, pH, Sulphates

ABSTRACT

Water, universally 0the most abundant and naturally available solvent can contain a large number of impurities ranging from less to very high concentration of them.

In practice, very often, great control on properties of cement and aggregate is exercised, but the control on the quantity of water is neglected. The effluent water generated from various purposes are treated and this treated effluent is currently being wasted through directed discharge into waterways.

With proper water quality control, this treated effluent can also be considered as a potential water resource for specific applications like water for making concrete.

The sample will be collected from various treatment plants and tested for various parameters like dissolved solids, sulphates, Ph, conductivity etc.

Concrete cubes and cylinders are tested are prepared using polluted water, treated water. The results were compared against the control specimens, which is prepared with normal water.

Also the above samples can be tested by using the admixtures like strength and water reducing agent. The samples were prepared for grades M25 and M30 and tested for 3,7,28 and 90 days for compressive strength and split strength and workability, setting time etc. will be studied and observed.

LOW COST HOUSING TECHNIQUES FOR DOUBLE BED ROOM HOUSE FOR TELANGANA GOVERNMENT

Y.Vijay Simha Reddy, P.Srikanth Reddy, B.Ramya Krishna, B.Yugendhar

Internal Guide: U.Rama Krishna Assistant Professor

ABSTRACT

Adequate shelter for all people is one of the pressing challenges faced by the developing nations. India is currently facing a shortage of about 17.6 million houses. The dream of owning a house particularly for low-income and middle-income families is becoming a difficult reality. Hence, it has become a necessity to adopt cost effective, innovative and environment-friendly housing technologies for the construction of houses and buildings for enabling the common people to construct houses at affordable cost.

Low cost housing is a new concept which deals with effective budgeting and following of techniques which help in reducing the cost construction through the use of locally available materials along with improved skills and technology without sacrificing the strength, performance and life of the structure. There is a huge misconception that low cost housing is suitable for only sub-standard works and they are constructed by utilizing cheap building materials of low quality. The fact is that low cost housing is done by proper management of resources. Economy is also achieved by postponing finishing works or implementing them in phases.

SAFETY MEASURES ON HIGHWAY

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Keywords: Steel Railing, Bridge, Curves

ABSTRACT

Run-off-road crashes into roadside hazards that include impacting rigid objects and roll-over constitute approximately 40% of road fatalities and cross over two car frontal collisions account for around 7% of fatalities in India. Considerable onus to protect vehicle occupants during such crashes sits with vehicle manufactures. It is clear from research to date, however, that side impacts into narrow objects beyond impact speeds of 40 km/hr, head-on and large engagement offset crashes at closing speeds of 120 km/hr, and roll-over crashes are presently at the limits of survivability. One way of protecting occupants in such crashes is to use a roadside or median barrier to safely redirect the vehicle. Road crash barriers can in themselves be hazardous unless designed properly. Errant vehicle redirection should occur so that air bag and seat belt pretensioning systems do not fire and rollover does not occur. Over the past decade, has revealed some key crashworthiness characteristics that both vehicle and barrier manufacturers alike need to consider. This attempt presents results of crash tests that provide some insight into vehicle-barrier crash pulses, occupant and vehicle kinematics and desirable occupant protection systems related to existing barrier profiles and properties and what are the most suitable vehicle and barrier crashworthiness features essential for safe vehicle redirection. This also argues, using some real-world examples, in favor of bringing together road designers and car manufacturers with associated regulatory bodies to emphasis a holistic perspective to enhance occupant protection in road crashes.

USING RECYCLED ASPHALT MATERIALS AS AN ALTERNATIVE MATERIAL SOURCEIN ASPHALT PAVEMENTS

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Internal Guide: Katla Bhanu Prasad (Ph.D.) Assistant Professor

ABSTRACT

Use of reclaimed asphalt pavements in hot mix asphalt mixtures has evolved into a regular practice in many countries around the world. Use of these materials in the past has proved to be economical and environmentally sound. Recycling of existing asphalt pavement materials to produce new pavement materials results in saving of material, money and energy. The specific benefits of recycling can be summarized as follows: (a) substantial savings over the use of new materials (b) conservation of natural resources (c) performance better than new materials (d) better pavement geometry and (e) Energy savings compared to conventional construction techniques. The last benefit is very important asit is needed for reducing greenhouse gases i.e., reducing carbon footprint to earn carbon credits for India.Over the years, recycling has become one of the most attractive pavement rehabilitation alternatives in developed countries. Unfortunately, asphalt pavement recycling is yet to take off in India despite the current ambitious road building programs underway.

The purpose of this study is to perform analysis between varied proportions of Virgin and RAP mixtures (i.e., 0,20 & 50)and varied binder percentages (3.5, 4, 4.5, 5&5.5) from standardized laboratory tests. In this study, samples of Reclaimed asphalt pavement (RAP) materials were collected and analyzed for suitability of their usage in flexible pavements.From this study we can know how RAP materials can be effectively used in the flexible pavements using hot-mix technology resulting in reduction of the construction cost.Finally an environmental effect and cost calculation is performed demonstrating reduction of emission by 35% and reducing the costs of materials.

COMPARATIVE AND EXPERIMENTAL STUDY ON MECHANICAL PROPERTIES OF STEEL AND GLASS FIBER REINFORCED CONCRETE

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Internal Guide: Sai Theja, Assistant Professor

ABSTRACT

Cement concrete is the most extensively used construction material in the world. It has been found that different type of fibers added in specific percentage to concrete Improves the mechanical properties, durability and serviceability of the structure. It is now established that one of the important properties of hooked steel, crimped steel, glass fiber reinforced concrete is its superior resistance to cracking and crack Propagation. Fiber reinforced concrete (FRC) is a concrete in which small and Discontinuous fibers are dispersed uniformly. The fibers used in FRC may be of Different materials like steel, G.I., carbon, glass, aramid, asbestos, polypropylene, jute etc. The addition of these fibers into concrete mass can dramatically increase the compressive strength, tensile strength, flexural strength and impact strength of Concrete. FRC has found many applications in civil engineering field. Based on the Laboratory experiment on fiber reinforced concrete (FRC), cube and cylinders Specimens have been designed with steel fiber reinforced concrete (SFRC) and glass fiber reinforced concrete (GFRC) containing fibers of 0.5% and 1% by weight of cement were used without admixture. In this paper effect of fibers on the different mechanical properties of grade M-25 will be studied.

NATURAL HAZARD RESISTANT STRUCTURES IN COASTAL AREAS

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Internal Guide: V.Ramakrishna

ABSTRACT

The structures located on the coastal region are commonly affected by the natural disasters and salinity in the sea breezes. Every year 60000 people lose their lives due to the sehazards.The occurrence of natural hazards like Tsunami, Cyclones, Earthquake can be predicted but are inevitable in nature. The only remade is to reduce the impact of the hazard on the structures located near coast alregion.The win dshi the structures perpendicularly also the tides.Thedirection of the winds varies with season with varying intensities. The structures need necessary modifications in the design phase, as well in the construction phase. These structures have to resist the Tsunamis too. Steel and ferrous metal along the coastline are susceptible to corrosion also the reinforced steel, which is one of the main cause of deterioration of the concrete structures in coastal environment. The havoc caused by these natural hazards can be reduced on a high scale by making several changes in the design phase of the structure. This project involves a design of the multi storey building that can with stand the natural hazards along the coastline with minimum losses compared to abnormal RCCstructure.This will eventually decrease the life and property losses during the coastal hazards.

SHEAR WALL

P. Aishwarya , N. Lavanya

Internal Guide: C. Mounika Assistant Professor

ABSTRACT

Besides, food and clothing, shelter is a basic human need. India has been successful in meeting the food and clothing requirements of its vast population; however the problem of providing shelter of all is defying solutions. Hence in order to accommodate huge population in a given area. So we have chosen this topic of "CONSTRUCTION OF SHEAR WALLS". This type of shear wall construction helps to build tall structure of about 20 floors within no time.

Hence the construction process will become much quicker and efficient. Constructions made off shear walls are high in strength , they majorly resist the seismic force, wind forces and even can be build on soils of weak bases by adopting various ground improvement techniques. Not only the quickness in construction process but the strength parameters and effectiveness to bare horizontal loads are very high. Shear walls generally used in high earth quake prone areas, as they are highly efficient in taking the loads. Not only the earth quake loads but also wind loads which are quite high in some zones can be taken by there shear walls efficiently and effectively. Though these types of constructions have their origin in western nations   in early 90's, this ideology is changed rapidly and spread all over the world with in no time. The formwork used in this type of construction is of a new kind in Indian construction scenario. Certain patented systems based on imported technologies such as "Mascon system"(Canada),"Mivan system"(Malaysia)have come on the Indian scene in recent years. In these systems traditional column and beam construction is eliminated and instead walls and slabs are cast in one operation at site by use of specially designed, easy to handle(with minimum labor and without use of any equipment) light weight pre-engineered aluminum forms.. Though this type of constructions are cost effective, still in order to build a better society and for satisfying present need of shelter, shear wall construction are going to be a solution to this problem of shelter in our nation..

EXPERIMENTAL STUDY ON SELF HEALING CONCRETE

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Internal Guide : M. Mounika Asst. Prof

Keyword: Bacillus Subtilis, Calcium lactate and Nitrogen

ABSTRACT

The project under taken is an experimental study of self-healing concrete. Edvardsen 1999 started the research on self-healing of concrete which is focused on reservoirs. A micro-biologist named Dr. Henk Jonkers in 2006 started study of bacteria embedded in concrete which helps in self-healing of cracks in structures. Research is being carried out at Delft University of technology, the Netherlands.

Cracks in concrete are inevitable and are one of the inherent weaknesses of concrete. Water and other salts seep through these cracks, corrosion initiates and thus reduces the life of concrete. So there was a need to develop an inherent biomaterial, a self-repairing material which can remediate the cracks and fissures in concrete.

Self -healing concrete is products that biologically produce limestone to heal cracks that appear on surface of concrete structure specially selected types bacteria bacillus subtilis, calcium lactate, nitrogen are added to the ingredients of the concrete when it is being mixed. When concrete structured is damaged and water starts to seep through the cracks that appear in the concrete, the spores of the bacteria germinate on contact with water and nutrients. As bacteria feeds oxygen is converted to insoluble limestone. It takes 3 to 4 weeks for complete healing.

Bio-materials used in concrete can be within the concrete for 200 years. This method increases life span of structure. In future structures will be constructed by replacing a part of the conventional concrete by self-healing concrete. This structures Reduction in corrosion of reinforced concrete and is Eco friendly.

Our project has been started from 01-jan-2017. It takes 1 week for literature review study, 1 week for collecting of different materials, 4 or 5 weeks for experimental analysis and 2 weeks for review and documentation.

Research on bio concrete is still in progress. As of now there is no structure constructed using self-healing concrete across the world. This project was succeeded in laboratory and it is being applied on a larger scale for structures.

A PROJECT ON AUTODESK

G Arun Raj , S Amar

Internal Guide : U Rama Krishna Asst professor

Keywords: Autodesk Revit and AutoCAD

ABSTRACT

The project is about a brief explanation of how to model an construction in detail using the designing and drafting software's such as AutoCAD and Revit in this project I have used the AutoCAD for the plans of all the blocks in vignana bharathi campus and using the Revit their 3d models from the reference of mappings made through the surveying those are made as the back set for the plans in the AutoCAD and the AutoCAD plan is used as the charcoal paper for the Revit 3d plan this is use full to make a correct clarification for the execution of construction
Work

EEE

A MODEL OF POWER GENERATION BY USING AUTOMOBILE EXHAUST

E Chandra Reddy, S Harshavardhan Reddy, G Prashanth, K Praveen
Internal Guide: T. Maniratnam, Assistant Professor

ABSTRACT

Here we are modifying an automobile for producing power using turbines. Nowadays in automobile field many new innovating concepts are being developed. We are using the power from vehicle exhaust to generate the electricity which can be stored in battery for the later consumption. In this project, we are demonstrating a concept of generating power in a moving vehicle by the usage of turbines. Here we are placing a turbine in the path of exhaust in the silencer. An engine is also placed in the chassis of the vehicle. The turbine is connected to a dynamo, which is used to generate power. Depending upon the airflow the turbine will start rotating, and then the dynamo will also starts to rotate. It can be stored in the battery after rectification. The rectified voltage can be inverted and can be used in various forms of utilities and can be consumed for the users comfort.

VOICE AND GESTURE BASED HOME AUTOMATION SYSTEM FOR PHYSICALLY CHALLENGED PEOPLE

B.Sowjanya, M.Sai Teja, P. Ravi Kumar, P. Ravi Kumar, J.Renuka
Internal Guide: Mr.S.Rakesh Reddy Assistant Professor

ABSTRACT

The project aims in an intelligent secure access system. The operation is provided through simple hand gestures and also by voice control. Through this the electrical appliances can be controlled wirelessly. The proposed system makes use of MEMS (Micro Electro Mechanical System) accelerometer and speech recognition application in android phone by using Bluetooth feature present in it.

Accelerometer is an electro mechanical device that measures acceleration forces. These forces may be static, like the constant force of gravity pulling at our feet, or they could be dynamic- caused by moving or vibrating the accelerometer.

Speech technologies are commercially available for an unlimited but interesting range of tasks. These technologies enable machines to respond correctly and reliably to human voices, and provide useful and valuable services. Recent research concentrates on developing systems that would be much more robust against variability in environment, speaker and language.

The controlling device of the whole system is micro controller. MEMS accelerometer is interfaced to micro controller along with which Bluetooth module, relays board and lcd displays are also interfaced to micro controller. Here micro controller receives input from accelerometer and also from Bluetooth module from android smart phone through speech recognition software and as per the program installed in the micro controller it wirelessly operate the electrical loads a t home like fan, light etc.

SPEED CHECKER TO DETECT RASH DRIVING ON HIGHWAYS

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Internal Guide: Mr.N.Srinivasa Rao Assitant Professor, Mrs.M.Sharanya Associate Professor

ABSTRACT

The aim of this project is to develop a device to detect rash driving on highways and to alert the traffic authorities in case of any speed violation. Accidents due to rash driving on highways are on the rise and people are losing their lives because of others mistakes. In the present system, to detect rash driving the police has to use a handheld radar gun and aim at the vehicle to record its speed. If the speed of the vehicle exceeds the speed limit, nearest police station is informed to stop the speeding vehicle. This is an ineffective process as after detecting one has to inform the same and a lot of time is wasted.

The proposed system will check on rash driving by calculating the speed of a vehicle using the time taken to travel between the two set points at a fixed distance. A set point consists of a pair of sensors comprising of an IR transmitter and an IR receiver, each of which are installed on either side of the road. The speed limit is set by the police who use the system depending upon the traffic at the very location. The time taken by the vehicle to travel from one set point to the other is calculated by control circuit. Based on that time it calculates the speed and displays that on LCD display. Moreover, if the vehicle crosses the speed limit, a buzzer sounds alerting the police and take a picture of vehicle for an action takes against to that person.

ALCOHOL DETECTION WITH IGNITION CONTROL SYSTEM

S.Ramya, U. Shiva Sai, M. Sai Prasad, B. Vamshi Krishna
Internal Guide: Mrs. M. Sharanya Associate Professor

ABSTRACT

We usually come across drink and driving cases where drunk drivers crash their cars under the influence of alcohol causing damage to property and life. So here we propose an innovative system to eliminate such cases. Our proposed system would be constantly monitoring the driver breath by placing it on the driver wheel or somewhere the driver's breath can be constantly monitored by it. So if a driver is drunk and tries to drive the system detects alcohol presence in his/her breathe and locks the engine so that the vehicle fails to start. In another case if the driver is not drunk while he starts the vehicle and engine is started but he/she drinks while driving the sensor still detects alcohol in his breath and stops the engine so that the car would not accelerate any further and driver can steer it to roadside. In this system we use an AT89S52 microcontroller interfaced with an alcohol sensor along with an LCD screen and a dc motor to demonstrate the concept. So here the alcohol sensor is used to monitor user's breath and constantly sends signals to the microcontroller. The microcontroller on encountering high alcohol signal from the alcohol sensor displays alcohol detection note on LCD screen and also stops the dc motor to demonstrate as engine locking. We can also use GSM module to send a message alert to that person's relative or anyone else. The system needs a push button to start the engine. If alcohol is detected at the time of starting the engine the engine does not start at all. If alcohol is detected after engine starting, the system locks the engine at that time.

IMPLEMENTATION IN ARM MICROCONTROLLER FOR MAXIMUM POWER OUTPUT OF A SOLAR PANEL USING HILL CLIMBING ALGORITHM

K.Shwetha, B.Venkatesh, E.Vijay Kumar, J.Vasanthi
Internal Guide Mr.V.Sainath Chary, Assistant Professor

ABSTRACT

As we can see now, the earth becomes hot effect of the global warming. We can use solar energy as an electrical energy to operate an electrical appliance. The problem that we can see now is most of the solar panel that had been use by a user just only in a static direction.So, the project that wants to develop here is called "Solar Tracking System using hill climbing algorithm". Hill climbing MPPT technique is commonly used in photovoltaic systems in order to achieve maximum power from it. Due to the massive numbers of the MPPT techniques in this field, it becomes essential to find and verify the most effective, simplest and reliable technique to be used. The main objective of this project is to increase efficiency of conversion of solar power to electrical energy by providing rotation to solar panel as per intensity of light that is incident on the solar panel. The rotation is provided by servo motor which tracks the motion of the sun ensuring that maximum amount of sunlight strikes the panels all over the day. Here we use LDR (light dependant resistor) which acts as a sensor to check the intensity of light at 45 degree each or 180 degree total and sent the data to the microcontroller By doing this we can increase the efficiency upto 5 to 10 % of any solar panel without increasing the surface area of panel. Here we use ARM Microcontroller to control the system as a brain to control the whole system. This microcontroller will compare the data and rotate a servo motor to the right direction. The servo motor will rotate the solar panel based on the highest intensity of light. Therefore, it's suitable for rural area usage. Moreover, the effectiveness of output power which collected by sunlight are increased.

IMPLEMENTATION OF P&O METHOD TO TRACK THE MPPT USING BUCK BOOST CONVERTER

K.Ajayreddy, K.Anil, K.Rajkiran, J.Bharath

Internal Guide : M.Sai Prasad Reddy Associate Professor

Keywords: Maximum Power Point Tracking (MPPT), Photovoltaic Array,Buck Boost Converter and Perturb and Observe Algorithm

ABSTRACT

This project new kind of Maximum Power Point Tracking algorithm based on perturbs and observe algorithm. A generalized photovoltaic array simulation model in Mat lab/Simulink . The model includes PV module and array for easy use on simulation platform. Considering the effect of solar irradiance and temperature changes, the output current and voltage of PV modules are simulated and optimized using this model. A perturb and observe algorithm based maximum power point tracker is also developed using the presented model in Matlab/Simulink. It can successfully track the maximum power point more accurately and quicker than other conventional method based controller in these situations. The general model was implemented on Matlab, and accepts irradiance and temperature as variable parameters and outputs the I-V characteristic. A particular typical 800W solar panel was used for model evaluation and results.

DESIGN OF AUTOMATIC WATER LEVEL CONTROLLER USING ARDUINO WITH LAB VIEW

K.Uday Kiran, K.Yugender, I.Sai Teja, S.Shiva Prakash

Internal Guide: Mr.K.Vamsee Krishna (Associate Professor)

Key Words: Lab view, Arduino Uno, Ultra Sonic Sensor.

ABSTRACT

This project presents the water level monitoring and control system design using Arudino UNO with LabVIEW 2016 software. Ultrasonic sensor (HCSR-04) is used to measure the level difference between the water and the sensor, and calculates the height of the water from the bottom of the tank. This controller switches ON the pump when the water level in the tank goes blow the set minimum value and switches OFF as the water level goes just beyond the set maximum value. The sensor analog output signal is fed to the Arduino UNO controller board as an input signal. The Arduino then reads and reports the height of the water in the tank to the LabVIEW software.

The Hardware is interfaced with LabVIEW software version 2016 using Universal Serial Bus. The total phenomenon is observed and controlled through the front panel of LabVIEW. The total control flow can be observed in the Block diagram of LabVIEW.

AUTOMATIC POWER FACTOR CORRECTION USING CAPACITOR BANK

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Internal Guide: G.Poornachanrdarao Associate Professor

Keywords: Capacitor Bank, Transformer

ABSTRACT

This project provides continuous power factor correction without manual capacitive bank loading. A PFC controller provides power factor correction and peak current limiting for a switch-mode power converter of any topology (buck, boost or buck-boost), without having to directly sense inductor current. The PFC control technique involves using a piecewise-polynomial analog computer (AC) to compute power transistor on-times in accordance with separate polynomial transfer functions for power-factor control and peak-current-linking using as inputs current representations of line input voltage (VLN), load output voltage (VLD), and long-term current demand (VCD). A conduction cycle is initiated by sensing when the rate of change in the inductor current reaches zero using an auxiliary winding on the current storage inductor, and terminated after the computed on-time to implement either power-factor control or peak-current-limiting.

The Reactive Power charge on your electricity bill is directly targeted against those companies who do not demonstrate clear energy efficiency use. You will find this charge itemized on electricity bill. Reactive power charges can be made significantly smaller by the introduction of Power Factor Correction Capacitors which is a widely recognized method of reducing an electrical load and minimizing wasted energy, improving the efficiency of a plant and reducing the electricity bill. It is not always necessary to reach a power factor of 1. A cost effective solution can be achieved by increasing your power factor to greater than 0.95.

MICROCONTROLLER BASED SOLAR CHARGE CONTROLLER USING MPPT

V.Pavankumar, D.Prathap, G.Jagadish, A.Manaskumar

Internal Guide: Dr.D.Devendranath Professor

Keywords: Photovoltaic Panel, Microcontroller, DC-DC Converter

ABSTRACT

Photovoltaic is one of the renewable energy resources that recently have become broader in nowadays technology. The electricity generations of photovoltaic (PV) panels are strongly related with insolation and temperature. The insolation and temperature are not stable, since the electricity generations of the PV panels are not stable. In PV systems, insolation and temperature continuous vary. Therefore, the maximum power point tracking (MPPT) techniques are used to give the highest power to the loads/batteries. The MPPT process is performed with a power electronic circuit and it overcomes the problem of voltage mismatch between the PV panels and the batteries/loads. In this system, a microcontroller is employed to develop battery charge control system for PV panels. The system is composed of a microcontrollerLPC1343, boost type DC-DC converter, a resistive load, and lead acid battery. In the system, MPPT, charge control, and discharge algorithms are executed by a program embedded within the microcontroller. This system deals with the design of an intelligent charge controller using Arm Cortex M3 microcontroller to control and coordinate the activity in charge controller. The proposed charge controller is equipped with LCD to display the temperature, battery voltage and current flow through the battery. Output of these 3 inputs are used to obtain the accurate and efficient disconnecting/reconnecting action which is capable of protecting the battery and the load whereas LED indicator is featured to show the status of the systems.

GSM BASED HOME AUTOMATION SYSTEM

R.Manoj, D. Bharat, D. Avinash, B. Mahesh

Internal Guide:M.Pavani Assistant Professor

Keywords: Microcontroller, GSM Modem, Sensors, Appliances Control And Phone.

ABSTRACT

The aim of the project is to control the electrical appliance through android mobile using embedded system technology.GUI is designed on android mobile. A user logs into the smart phone interface and clicks the buttons gently to send message commands from the GUI which will be transmitted to home information center through the GSM network. Then the AVR at mega processor recognizes the specified command and controls the home appliance switches in the wireless radio frequency manner to achieve remote control of appliances ultimately.We focus on the design of android terminal, the communication between ARM cortex and GSM module, for the home security system we are using anti-theft reporting system which will report the owner by ringing an alarm or by sending an SMS. Also for safety system in case of fire and gas leakage it will report the owner. The user can manipulate appliances anytime, anywhere, letting our houses become more and more automated, intelligent and safety. There are some problems in the PC monitor terminal, such as its great bulk, inconvenience to carry, high cost, limited monitoring range and so on. Therefore, it's a good choice to design a terminal based

on phone.

ARDUINO BASED CIRCUIT BREAKER

S. Manoj, D. Brahmendra Kumar, G. Amruth, V. Gopi Krishna

Internal Guide: K, Pradeep Kumar Assistant Professor

ABSTRACT

In Home Appliances the cost of the equipments likes Refrigerator, Cooling System, Heating System is high. When electrical faults occurs like over currents, over voltages, under voltages and over loads if these faults are severe the equipment gets damages. So to protect the equipments from the above faults here is one possibility, which is circuit breaking. So we are using Arduino based circuit breaker. The ATmega 168/328- microcontroller is used into which program is dumped directly from PC for the operation. The unit is extremely fast and over comes the drawback of thermal type circuit breaker like MCB and fuse which are slow.

Unlike MCB and FUSE the Arduino protects against three faults which are over current, over voltages and under voltages.

MECH

FABRICATION OF HYBRID MOTORCYCLE

A. Shiva Kumar, P. Rohith, N. Sunny, E. Saikiran

Internal Guide: Prof. G. Amarender Rao & Asst Prof. Sainathchary(EEE)

ABSTRACT

This paper introduces to fabrication of a hybrid motorcycle.As the fuel prices are rocketing sky high and the pollution in the environment increasing day by day, to overcome this hybrid vehicles are introduced in to the market. A hybrid motorcycle is a combination of a gasoline engine and an electrical wheel hub motor. In this system the front wheel of the motorcycle is replaced with an electrical wheel hub motor. This electric wheel hub is connected to a battery which can be charged.

A majority of the population uses a two wheeler as a basic and cheap mode of transport for daily commute. So an electric hybrid motorcycle could be an ideal option for the people who use a two wheeler for daily commute as these vehicles will bring down the running costs by a considerable amount and ecofriendly too.

THEORY OF SIX STROKE ENGINE WITH TWO EXTERNAL ELECTRIC STROKES

A.Dheeraj Mudiraj, P.Arrun Kumaar, V.Naveen, S.Manoj Kumar

Internal Guide: Dr.G Amarendar Rao,Principal,Professor

ABSTRACT

The six-stroke engine is an advance version of internal combustion engine based on the four-stroke engine, but with additional two electric stroke intended to make it more efficient and reduce emissions. It uses fresh air for the second suction (clean air from atmosphere) the fifth stroke. It has a wide range of uses in Automobiles, heavy goods, construction-site and farm vehicles, Motor boats, motor-pumps, generator sets, stationary engines, etc. intended for agriculture and industry applications. Here we are introducing a new and simplest method which is capable for mass producing these engines. This is done by altering an ordinary 4 valve 4 stroke petrol engine. The working of our engine is as follows: - 1st: suction stroke, 2nd: compression stroke, 3rd: power stroke, 4th: exhaust stroke, 5th: 2nd suction stroke where fresh air is sucked, 6th: exhaust stroke. The main changes are in design of camshaft, sprocket, and rocker arm additional electric motor. Six stroke engines have a very high relevance now a days. It helps Reduction in fuel consumption, Reduction in pollution, better performance and more extraction of work/cycle higher overall efficiency and eco-friendly.

Evaluation of mechanical properties of Polyvinyl pyrolidone-10(PVP-10) surfactant assisted glass fiber reinforced multi-walled carbon nanotube-epoxy composite laminates

K.Vishal, D.Venkateswra Rao, E.Sunil, K.Srikanth

Internal Guide: P. Kishore kumar Assist Prof.

ABSTRACT

The present study focuses on fabrication and evaluation of mechanical properties of surfactant (PVP-10) assisted glass fiber reinforced polymers (GFRPs) packed with low specific multi-walled carbon nanotube (MWCNT) contents. The MWCNTs reinforced GFRP laminates finds more potential applications in the fields of radar absorbing structures (RAS) and sports instruments. In generally, the matrix system (epoxy) in the polymer composite laminates are modified with nano-fillers; namely, CNTs and CNFs(carbon nano fibers) to increase of strength of composite. In this study, the GFRP laminates are modified with 0.1%, 0.3%, 0.5% and 0.7% MWCNTs by weight to escalate the mechanical properties; such as tensile, flexural, fatigueand also add considerable amount of surfactant (PVP-10) for better homogeneous dispersion of MWCNTs in the epoxy system. The fabrication and testing methods are followed as per ASTM standards. The tensile, flexural and hardness tests were conducted for both with or without surfactant assistedGFRP/MWCNT composite laminates.

An analytical investigation on thrust bearing tilting pads with PTFE lined pads

H V Divya Sree, K.Naresh, T.Balakrishna, G.Rajesh

Internal Guide: Dr. T.G Raja Swamy, HOD, Professor

Key words: PTFF, FEM, Thrust Bearing.

ABSTRACT

The principal objective of the project work is to design polytetrafluoroethylene (PTFE) lined tilting pad thrust bearings and compare the performance characteristics lime pressure distribution, temperature distribution, load carrying capacity, oil flow requirements and power loss with those of white metal bearings. Generally in India, bearings are lined with babbits. But, in countries like Russia and the People's Republic of China, bearings lined with PTFE are being used extensively. The project work aims to bring out the relative merits and demerits of PTFE over white metal. Pressure and temperature distribution are found using Reynold's and Energy equations respectively. However, it is tedious to solve these equations manually as they involve many differential terms of second and third order. Hence, computer oriented numerical methods like FDM, FEM, etc. are usually used. The above specified equations are first converted into non-dimensional form. These non-dimensional equations are then written in the Finite Difference form. A computer program is then developed to obtain the solutions. The Performance characteristics of PTFE lined bearings are studied under various operating conditions. The same is dealt with white metal bearings as well. Graphs are plotted and comparisons are made between the two bearings.

EVOLUTION OF MECHANICAL & MICRO STRUCTURAL STUDIES ON DISSIMILAR AL-ALLOYS BY USING FRICTION STIR WELDING.

V Ajay, N.Pranaya reddy, P.Praveen, B. Madhu

Internal Guide: R. Venkateswararao, Assistant Professor.

Key words: Solid State Joining, Friction Stir Welding, Dissimilar Materials.

ABSTRACT

Friction Stir Welding (FSW) is a novel green manufacturing technology used to joining the light weight materials in solid state which is not possible by using other conventional joining techniques, from the last two decades the FSW process was used to join various metals, non-metals, ceramics, plastics etc. due to its energy efficient, eco-friendly nature. The operating principle of FSW that uses a non consumable rotating tool to generate frictional heat and plastic deformation at the weld location. FSW has gained a significant interest in the industries because of its huge advantages than conventional techniques because of no formation of defects while operation. The applications of FSW process is found in several industrial applications such as Aerospace, Rail, Automotive, Ship, Marine, Defence and Transportation industries.

The completed welded joints were required to offer by various Heat Treatment processes to get the better microstructures and improve the mechanical properties to meet the industrial requirements. From the various literatures it was proven that the process parameters can influence a lot on the weld quality and its efficiency.

In this proposed work an attempt has to be made to join the heat treatable Aluminum Alloys like AA2XXX, AA6XXX and AA7XXX are considered under dissimilar combinations based on their Physical, Mechanical and Thermal properties.

PROJECT ON DESIGN AND ANALYSIS OF PRESSURE VESSELS

S.Rami Reddy, D.Vishunuvardhan Reddy, V.Srikant, B.SandeepKumar

Internal Guide: S.S. Murthy,Assistant Professor.

Key words: Pressure Vessels, Head, Shell, Nozzles, Reinforcement.

ABSTRACT

This project presents design, and analysis of pres-sure vessel. High pressure rise is developed in the pressure vessel and pressure vessel has to withstand severe forces. In the design of pressure vessel safety is the primary consideration, due the potential impact of possible accident. There have a few main factors to design the safe pressure vessel. This writing is focusing on analyzing the safety parameter for allowable working pressure. Allowable working pressures are calculated by using Pressure Vessel Design Manual by Dennis Moss, third edition. The corruption of the vessel are probability occur at maximum pressure which is the element that only can sustain that pressure. Efforts are made in this paper to design the pressure vessel using ASME codes & standards to legalize the design.

ECE

WIRELESS FINGERPRINT ATTENDENCE SYSTEM USING ZIGBEE TECHNOLOGY

Konchada Prasanth, K Nithya, A.Naveen
Internal Guide: Mr. G.Bhaskar Assistant Professor

ABSTRACT

An effective information system needs to support a set of activities, which enable human beings to achieve effectively the objectives of the organization, supported by computer-based information(CBI) technology. Traditional styles of attendance management include hand-written signatures, RF card attendance machines, magnetic card etc. Apart from traditional wired attendance systems or paper based attendance system an automated wireless fingerprint attendance system based on ZigBee technology is proposed. The system includes terminal fingerprint acquisition module and attendance management module in computer. This system provides various facilities such as students information and its fingerprint acquisition, wireless transmission, fingerprint matching, attendance management, report generation and data analysis in Microsoft excel format, at any where any time. This system offers effectiveness through its functions in capturing data, minimizing timeconstraint, and saving effort to write/collect/check attendance slips. This system provides efficiency in administering and managing the attendance procedure; hence improving productivity and staff development. This system is Biometrics based technology, supposed to be very efficient personal identifiers as it can keep track of characteristics believed to be unique to each person.

SENSOR ASSISTED STICK FOR BLIND PERSON

K.Pruthvi raj, S.Revathi, N.Sheeba rani
Internal Guide: Dr.B.Brahma reddy Head of the department.

ABSTRACT

The Blindness is frequently used to describe severe visual impairments with or without residual vision. The application of ultrasonic ranging scheme for producing electronic walking stick for the blind is a technological advancement. There is a great dependency for any type of movement or walking within area or out of the particular area, they use only their natural senses such as touch or sound for identification or walking .To overcome all these problems of blind people, need to develop a project by using simple available technologies. This walking stick for blind have one ultrasonic sensor, with the help of sensor it has possible to enhance more features to the walking stick. The features are to detect the obstacle for collision avoidance, it detects the object in four directions with 30° difference and the total angle detecting is 120°. And with the help of stepper motor the sensor has been rotated in four directions and if obstacle collides, then according to that direction the sensor indicates the buzzer with different beep sounds. In this project, sensor plays key role to detect the objects in all directions to make free to walk for the blind people, the software used is Arduino Uno.

AUTOMATIC RAILWAY GATE CONTROLLER

K. Naveen , M. Ravi Kumar , P. Sheshadri

Internal Guide: Mr. M. Praveen Kumar Assistant Professor

ABSTRACT

The objective of this paper is to provide an automatic railway gate control at a level crossing and track switching at a junction. It deals with two things. Firstly, it deals with the reduction of time for which the gate is being kept closed. Secondly, to provide safety to the road users and the train by reducing the accidents.

By the presently existing system once the train leaves the station, the station master informs the gate keeper about the arrival of the train through the telephone. Once the gatekeeper receives the information, he closes the gate depending on the timing at which train arrives. Hence, if the train is late due to certain reasons, then gate remains closed for a long time causing traffic near the gates.By employing automatic railway gate control at the level crossing, the gate is closed automatically whenever the train comes and gate is opened after the train leaves the level crossing. The arrival of the train in either can be identified using sensors placed on either side of the track.

Use of embedded technology makes this closed loop feedback control system efficient and reliable. Microcontroller allows dynamic and faster control. Liquid crystal display (LCD) makes the system user-friendly. In case of track switching, two sensors are placed on either of the junction where the track switches. If there is a train approaching from the other side, then the another sensor placed along that direction gets activated and will send an interrupt to the controller. The interrupt service routine switches the track. As the system is completely automated, it avoids manual errors and thus provides ultimate safety to road users. The mechanism works on a simple principle and there is not much of complexity needed in the circuit.

SMART COMMUNICATION FOR DUMB PEOPLE

P. Usha Shree, Y. Vamshi Sai
Internal Guide: Miss. B. Srija, Assistant Professor,Mr. B. Anil Kumar, Assistant Professor

ABSTRACT

Life can be very hard for those who are dumb. There's the frustration that comes when people simply have trouble communicating with you. Unfortunately, for many of the 370 million deaf and dumb people in the world, their inability to communicate is often perceived as an intellectual handicap which is likely preventing some very brilliant minds in our society from reaching their full potential.

So here we are with a proposal; Smart Communication for Dumb People. The aim of our project is to facilitate the dumb people to communicate easily with the rest. This project consists of a camera used to recognize gestures and displays the respective words by applying a predefined algorithm. This algorithm depends on predefined gestures that are taken as ideal images. Each letter of the alphabet has a unique gesture which defines the letter to be displayed.

The text to speech app can be used to convert the words into voice, i.e., visual to audio in case a person cannot read. Text-to-speech (TTS) is a type of speech synthesis application that is used to create a spoken sound version of the text in a computer document, such as a help file or a Web page. TTS can enable the reading of computer display information for the visually challenged person, or may simply be used to augment the reading of a text message.

MICRO CONTROLLER BASED WIRELESS PATIENT MONITORING SYSTEM

Suvarna, Sushma

Internal Guide: Praveen kumar   Assistant Professor

ABSTRACT

With the proliferation of Internet of Things (IoT) devices such as smart phones, sensors, cameras. It is possible to collect massive amount of data for localization and tracking of Health of the patient.

This project describes the design of a simple, low-cost controller based patient health monitoring system. Heart rate of the subject is measured from the thumb finger using IRD (Infra Red Device sensors and the rate is then averaged and displayed on a 16 X 2 LCD display).

This instrument employs a simple Opto electronic sensor, conveniently strapped on the finger, to give continuous indication of the pulse digits. The Pulse monitor works both on battery or mains supply. It is ideal for continuous monitoring in operation theatres, I.C.units, biomedical/human engineering studies and sports medicine.

This project uses LPC2148 MCU as its controller. By reading all the values of temperature and heart rate will be displayed on PC/Phone. We are using switch array to select the age of human being. It starts from children to elders. Firstly we need to select the age by using switches.

This project uses regulated 3.3V, 750mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer. Temperature, Heartbeat, will be displayed on the LCD display which is connected to the Microcontroller.

IMPLEMENTATION OF HI-TECH AGRICULTURAL SOLAR FENCE SECURITY WITH AUTOMATIC IRRIGATION AND VOICE   ANNOUNCEMENT ALERT ON PIR LIVE HUMAN DETECTION

K.Akhil Kumar Reddy , K.Avinash Reddy , K.Mani Shankar Reddy
Internal Guide: Mr. K. J.Onesim Associate Professor

ABSTRACT

Irrigation system in India has given a high priority in economic development. Many new concepts are being developed to allow agricultural automation to flourish and deliver its full potential. To take full advantage of these technologies, we should not just consider the implication of developing a new single technology but should look at the wider issues for complete development of a system. Implementation of Hi-tech Agricultural Solar Fence Security with soil Humidity Based Automatic irrigation system and voice alert on PIR live Human Detection is been implemented in this project for safe and secure agriculture irrigation.

The project irrigation control using AT89S52 is designed to tackle the problems of agricultural sector regarding irrigation system with available water resources. Prolonged periods of dry climatic conditions due to fluctuation in annual precipitation, may appreciably reduce the yield of the cultivation. The expenses in establishing many of these crops and their relative intolerance to drought make an effective irrigation system a necessity for profitable enterprises. In this project we are using AT89S52, Moisture sensors, AC submersible pump, relay driver. A submersible motor will get switched ON /OFF depending on the soil moisture condition and status of motor can be displayed on 16X2 LCD.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

DESIGN OF BUOY DRIFT ALERT SYSTEM

P.Nandakishore, V.P.Umesh, G.Sandhya Reddy

Internal Guide: Mr.Vidya Sagar Associate Professor

ABSTRACT

A buoy is a floating device that can have many purposes. It can be anchored or allowed to drift with the ocean currents. In Moorings flexible mooring lines themselves are usually composites of chain and wire rope or synthetic polymer lines. The heavy chain provides a gripping point at the upper end and a passive heave compensating effect at the lower end with the intervening section being cable. Synthetics are used to reduce the overall weight of the mooring system which directly impact the variable deck load of the floating unit. Taut leg mooring systems gets its name from mooring lines that are pre-tensioned until they are taut. The mooring line angles between 30 and 45 degrees at the seabed; thus the anchor points are loaded by horizontal and vertical forces. Tout leg systems typically use polyester ropes, which maintains equilibrium via the linear stiffness and the elasticity of the mooring lines. The moorings are heavily equipped with Metrological modules such as Atmospheric pressure, barometric pressure, wind speed and direction, Temperature, Humidity, and sub sub-surface instruments namely CTD, ADCP, Chlorophyll, oxygen and PCO2 sensors. The data could be stored internally or it may be communicated to the base station in real time via satellite communications.

It is vital to keep the mooring in a single point for the time series data measurements but due to cyclones, mechanical failures and vandalism the mooring will drift from its position. It is essential to keep an eye on the mooring position with the use GPS systems with defined watch circle radius. The same may be applicable to tsunami moorings and drifters, drifter is a oceanographic platform which moves it's position based on the surface current and wind.

In this design we interface a GSM module to the microcontroller as an input along with power supply to check whether mooring/drifter is within the specified radius or watch circle. If there is any deviation from the reference point/watch circle immediately a alert warning message will be sent to the users.

TEMPERATURE AND PRESSURE MEASUREMENT USING RASPBERRY

Sudheer, Vishwas, Sujith reddy

Internal Guide: Vijay Narasimha Associate Professor

ABSTRACT

In this design we interface a GPS module to the microprocessor (raspberry pi) along with a memory slot to store the data received. The microprocessor is interfaced to a transmitter device (based on wi-fi) through which the data is transmitted to the operator. It is a hardware equipment which is used to measure the atmospheric temperature and pressure.. A sensing network consists of two sensors i.e, temperature sensor and pressure sensor.

Atmospheric temperature is a measure of temperature at different locations of the Earth's atmosphere. When discussing surface temperature, the annual atmospheric temperature range at any geographical location depends largely upon the type of biome. In the Earth's atmosphere, temperature varies greatly at different locations relative to the Earth's surface .we use units of degrees Centigrade - °C to measure atmospheric temperature.

Atmospheric pressure, sometimes also called barometric pressure, is the pressure exerted by the weight of air in the atmosphere of Earth. In most circumstances atmospheric pressure is closely approximated by the hydrostatic pressure caused by the weight of air above the measurement point. we use units of pascals to measure atmospheric pressure. The equipment is enabled by providing power supply of 5v and then Based upon sensing activity of the sensors, they start functioning and measure the corresponding parameters with respect to the location of equipment and the data is stored in allocated memory slot.

The processor which is used to handle the data collection, storing and retrieving is done by Raspberry pi. The Raspberry Pi is a series of credit card-sized single-board computers developed in the United Kingdom by the Raspberry Pi Foundation. The Raspberry Pi hardware has evolved through several versions that feature variations in memory capacity and peripheral-device support. Using windows 10 as operating system in raspberry the system becomes much easier to handle. Since Python is a widely used high-level, general-purpose, interpreted, dynamic programming language the program is written in this programming language. Its design philosophy emphasizes code readability, and its syntax allows programmers to express concepts in fewer lines of code than would be possible in languages such as C++ or Java. The data stored in memory is transmitted to the operator by enabling the wifi module interfaced to the processor. Hence this module does the data collection, storing and retrieving of the temperature and pressure of atmosphere.

SMART CODE LOCKED UPBOARD

Pallavikotamraju, L.Sai Sudarsan , P.Praveen Kumar
Internal Guide: Mrs. J. Manga Assistant Professor

ABSTRACT

This device can be used to code protect any electrical device (like an electronic door, lock or safe). In this project an electronic cupboard in which ,The user must enter a correct unique password for each draw to gain access. The password is entered using the built in 4×4 keypad matrix.or can be accessed using a RFID card.An RFID system consists of two separate components: a tag and a reader. Tags are analogous to barcode labels, and come in different shapes and sizes. The tag contains an antenna connected to a small microchip containing up to two kilobytes of data. The reader, or scanner, functions similarly to a barcode scanner; however, while a barcode scanner uses a laser beam to scan the barcode, an RFID scanner uses electromagnetic waves.

The main LCD Module is used to display messages to the user. As soon as correct password or the respective RFID card is entered the cupboard is unlocked while the motor is activated. This is indicated by a LED which is placed near the motor or cupboard.   The motor remains "on" as long as the user wishes. You just need to press a key or introduce the same RFID card to deactivate the motor, by just pressing the OK button. The smart code lock has the feature to change the password too.The smart code lock has the feature to change the password too. For this enter a special password which is '0000', as soon as the system receives this special password it switches to change password mode. Here you need to enter the old password to gain permission, hen enter the new password.

AUTO POWER SUPPLY CONTROL FROM FOUR DIFFERENT SOURCES

Vijay Kumar
Internal Guide: Ms. Srilekha Assistant Professor

ABSTRACT

The outline of the project is selection of supply from mains, generator, and inverter and solar automatically by using microcontroller concept. As it is not feasible to provide all 4 different sources of supply, one source with alternate switches are provided to get the same function. In this project we are having 4 switches which we consider as 4 different source of supply. When we press any of the switches it shows the absence of that particular source which is connected to microcontroller as input signals.

Here we are using 8051 family microcontroller. The output of microcontroller is given to the optocoupler, this acts as a relay driver. This can drive relays. The relays which are used hear are 12V relay. The output can be observed using lamp which is getting uninterrupted power supply from other means if main supply is cut off. The power supply consists of a step down transformer 230/12V, which steps down the voltage to 12V AC. This is converted to DC using a Bridge rectifier. The ripples are removed using a capacitive filter and it is then regulated to +5V using a voltage regulator 7805 which is required for the operation of the microcontroller and other components.

VEHICLE THEFT DETECTION AND ENGINE LOCKING

S. Bhargav , G. Avinash , Ch. Harish
Internal Guide: Mrs. Ch. Suneetha   Associate Professor

ABSTRACT

The main purpose of this project is to prevent vehicle theft. This functionality is achieved by detecting vehicle status in theft mode and by sending an SMS which is generated automatically. This SMS is then sent to the owner of the vehicle. The owner can then send back the SMS in order to disable the ignition of the vehicle. Thus in this way crimes can be reduced to great extent as vehicles today are being stolen in large number. Hence, vehicles today require high security which can be achieved with the help of this application. How the system works is when a person tries to steal the vehicle, the microcontroller is interrupted and the command is sent to the GSM modem to send SMS. On the receipt of the message, the owner sends back the SMS to the GSM modem. This is done in order to stop the engine. This GSM modem is interfaced to the microcontroller. This microcontroller on the receipt of the message uses a mechanism that helps to stop the engine. Motor is being used in this project in order to indicate vehicle ON/OFF state.

Further enhancement can be done to this project by using a GPS system that helps to find out the exact position of the vehicle with the help of its latitude and longitude which then can be sent to the owner of the vehicle via SMS. This data can be then entered by the owner on Google map to find out the exact location of the vehicle.

AUTOMATIC MOVABLE RAILWAY PLATFORM WITH TRAIN ARRIVAL DETECTION

K. Manoj. Kumar, D. Sai Kiran
Internal Guide: N. Himabindu Assistant Professor

ABSTRACT

The main aim of this project is to automate the railway track pedestrian crossing without use staircase and announce the status of the arrival for platform users. In this system is also used to avoid accident problems. Because, now a day's train accidents are occurring frequently in India. This project identifies the status of every train using IR transceivers and informs it to microcontroller. This project is used to avoid the train collisions , thus we save the valuable human lives and losses. So this project is useful for railway departments.

The recent surveys proved utilizing of platforms flyovers and metros. The overhead bridges for the physically challenged people and our proposed system deals with the rectification of this disadvantages. Here we are introduce the new concept of artificial railway platform. For the successful approach we are using two IR sensors and for the execution we are using L293D IC which is connected to a dc motor and further the next controlling operation we are use AT89S52 microcontroller. When the train comes near the artificial platform, the proximity sensor senses the train arriving and gives its output to the microcontroller. The L293D IC gives input to the dc motor and is used for the forward and reverse movement of the platform. When the train is far away from the artificial platform a signal is sent to the Microcontroller, then the output signal from the controller is send to aL293D IC and rotates the dc motor in forward and reverse moment. This project uses regulated 5V, joined in the middle of the railway tracks in the side of the intersection platform. At a point when there is no train landing in the station then the versatile platform will be closed and physically challenged people will utilize the moving platform to pass the intersection of the platforms. At the point when the train is arriving, moving platforms will be open and then the train entry sign will be declared by LED signal. Thus our proposed framework gives a superior answer for exchanging of physically challenged people in one platform to another platform without utilizing flyovers and metros.

AUTOMATIC SIGNALLING USING MSDAC

K.Praveen teja, N.Ravi kishore, K.Sandeep
Internal Guide: L.Rajeshwar Reddy   Assistant Professor

ABSTRACT

Now a days, managing the train movement between various stations in a railway division has become a herculean task involving manual labour and data transfer through phone calls and record entries. The train is needed to be constantly signalled at each station the train crosses by, with the flag master waving the green flag and being reciprocated by the respective guard under duty. The signalling will be under the control of respective stations but can be signalled only after proper authentication from the Signals; Telecommunication department in a divisional Railway under various Zones.

The main objective of our project is to develop a system which automatically defines the signalling of the train on a particular track line automatically by establishing optical sensors at particular intervals along the track length and by taking the feedback from the sensors, the signaling will be done by the logic written in the micro controller programming and a the movement of the trains can be monitored in a display at the Route Relay Interlocking department and the Signals & Telecommunications department. To ensure safe operation of the trains the track is divided in to sections and each signal is usually protected by a signal. The signal aspect depends on free/occupied status of the track section a head.

RASH DRIVING DETECTION SYSYTEM

G. Shravan, M. Srikanth , S. Achyuth

Internal Guide: P.Srivani assistant professor

ABSTRACT

Monitoring the way, the vehicle is being driven is one of the ways to prevent the fatal accidents. A large number of serious or fatal accidents occur due to excessive or inappropriate, reckless behavior of driver. The growth of sensor technology and network based information technology has expanded the reach of wireless sensor networks into numerous areas such as remote control, detection of military explosive, intelligent home monitoring. We intend to design a prototype aimed at early detection of dangerous vehicle driving patterns related to rash driving.

We will be using sensors which will be constantly monitoring the driving pattern of the vehicle. Sensors like Accelerometer are used to measure the tilt of the vehicle. An Ultrasonic sensor is used to measure the distance between the vehicles. The data from the accelerometer and ultrasonic sensor is given to the microcontroller. If the vehicle tilts and if there a close proximity to the other vehicle then an alert message is sent to selected member through GSM .By through this system, we can aware guardians about how their children are driving on roads.

AUTO POWER SUPPLY CONTROL FROM FOUR DIFFERENT SOURCES

G Vijay Kumar, G Vijay Kumar, N Upender Reddy
Internal Guide :D.Srilekha Assistant Professor

ABSTRACT

The outline of the project is selection of supply from mains, generator, and inverter and solar automatically by using microcontroller concept. As it is not feasible to provide all 4 different sources of supply, one source with alternate switches are provided to get the same function.

In this project we are having 4 switches which we consider as 4 different source of supply. When we press any of the switches it shows the absence of that particular source which is connected to microcontroller as input signals.

Here we are using 8051 family microcontroller. The output of microcontroller is given to the optocoupler, this acts as a relay driver. This can drive relays. The relays which are used hear are 12V relay. The output can be observed using lamp which is getting uninterrupted power supply from other means if main supply is cut off.

The power supply consists of a step down transformer 230/12V, which steps down the voltage to 12V AC. This is converted to DC using a Bridge rectifier. The ripples are removed using a capacitive filter and it is then regulated to +5V using a voltage regulator 7805 which is required for the operation of the microcontroller and other components.

CSE

FRIENDBOOK: A SEMANTIC-BASED FRIEND RECOMMENDATION SYSTEM FOR SOCIAL NETWORKS

D. Manasa, P.Pranitha, R.Manisha
Internal Guide: P. Praveen Kumar Assistant Professor

ABSTRACT

Existing social networking services recommend friends to users based on their social graphs, which may not be the most appropriate to reflect a user's preferences on friend selection in real life. In this paper, we present Friendbook, a novel semantic-based friend recommendation system for social networks, which recommends friends to users based on their life styles instead of social graphs. Friend book discovers life styles of users from user-centric data, measures the similarity of life styles between users, and recommends friends to users if their life styles have high similarity. Inspired by text mining, we model a user's daily life as life documents, from which his/her life styles are extracted by using the Latent Dirichlet Allocation algorithm.

We further propose a similarity metric to measure the similarity of life styles between users, and calculate users' impact in terms of life styles with a friend-matching graph. Upon receiving a request, Friendbook returnsa list of people with highest recommendation scores to the query user. Finally,Friend book integrates a feedback mechanism to further improve the recommendation accuracy.The results show that the recommendations accurately reflect the preferences of users in choosing friends.

ARTI-RIPE

P Vishnu Vardhan Reddy, B Sahithi Reddy, G Govardhan Reddy

Internal Guide: G Arun Associate Professor

ABSTRACT

Health is of great concern for everyone. Eating ripened fruits is a requirement for the good health. But majority of fruits available in the market are artificially ripened and it is not possible to get naturally ripened fruits. Varieties of chemicals are used to ripen the fruit artificially which on consumption turns to be hazardous to health. Hence, there is an immediate requirement of a robust and precise device to detect artificially ripened fruits.

Our product (ARTI-RIPE) detects if the fruits are artificially ripened or naturally ripened based on the acetylene levels present in the fruit thus enhancing good health which provides healthy environment where we can make a progress in one's health in their day to day life. It is very user friendly device with a single tap on the display screen followed by three various steps, the product is also weightless which makes a user to carry easily and use it anywhere ,where the user want to make use of it.

COACH TRACKING SYSTEM

P Vishnu Vardhan Reddy, D Sai Sameer, B Sai Nadh
Internal Guide: G.Arun Associate Professor

ABSTRACT

The main objective of our project is to lively track the status and location of a railway coach that enters the workshop for repair.

The project mainly focuses on live tracking of railway coach that enters the carrier workshop. The system is in such a way that data of several coaches can be organized and viewed at one place. The system has the functionality of updating the repair status of the coach that is undergoing repairs in the workshop.

This system makes the manual process automated. So by utilizing this system manual power of entering the repair status into the records can be reduced to a huge amount.

A HYBRID CLOUD APPROACH FOR SECURE AUTHORIZED DE-DUPLICATION

C.Ashwitha, A.Avanti, N.Lavanya

Internal Guide: Mrs.G.ArunaJyothi   Assistant Professor.

ABSTRACT

Data De-Duplication is one of important data compression techniques for eliminating duplicate copies of repeating data, and has been widely used in cloud storage to reduce the amount of storage space and save bandwidth. To protect the confidentiality of sensitive data while supporting De-Duplication, the convergent encryption technique has been proposed to encrypt the data before outsourcing. To better protect data security, this paper makes the first attempt to formally address the problem of authorized data De-Duplication.We show that our proposed authorized duplicate check scheme incurs minimal overhead compared to normal operations.

EMAIL AND CALL DIGITAL ASSISTANT

S.AjayKumar, S. Balagangadhar, T. Bharath Chandra

Internal Guide: N. Srinivas HOD Dept. of CSE

Keywords: Android application, voice recognition.

ABSTRACT

This project is a mobile application based on the android. Like we all know there are few digital assistants like GOOGLE NOW, SIRI which are making our daily life repeated tasks so easily. Our project is to enhance a existing feature that is email based on the speech by the user. The drawback of the existing feature is we could only send the short length text messages or emails. We enhanced this to long length text message and we further would like to implement this feature to all the texting applications based on speech completely. Additionally, user can also edit the message as user like. In addition to this project we implemented a hand free call handling in driving mode with the help of GPS activity of the device.

FRODO: FRAUD RESILIENT DEVICE FOR OFF-LINE MICRO PAYMENTS

K.Divya Sree, D.Karthik Reddy, N.Preethi

Internal Guide: Ms.Shirisha.K Associate Professor

ABSTRACT

Credit and debit card data theft is one of the earliest forms of cybercrime. Still, it is one of the most common nowadays. Attackers often aim at stealing such customer data by targeting the Point of Sale (for short, PoS) system, i.e. the point at which a retailer first acquires customer data. In these scenarios, malware that can steal card data as soon as they are read by the device has flourished. As such, in cases where customer and vendor are persistently or intermittently disconnected from the network, no secure on-line payment is possible. This project describes FRoDO, a secure off-line micro-payment solution that is resilient to PoS data breaches. Our solution improves over up to date approaches in terms of flexibility and security. To the best of our knowledge, FRoDO is the first solution that can provide secure fully off-line payments while being resilient to all currently known PoS breaches.

PORTABLE HOME AUTOMATON

P Vishnu Vardhan Reddy , B Sahithi Reddy
Internal Guide: G Arun Associate Professor

ABSTRACT

The main objective of our project is to automate the homes without altering the infrastructure.

This project mainly focuses on the home automation where people want to control their home appliances through a mobile application. This application controls the device that is interfaced between the power supply and the appliance. There is no need for the replacement of existing infrastructure and so it is useful for people who want to automate their existing homes without any renovations. It is portable and so it is advantageous to the people who frequently shift from one place to another (E.g.: Rental people, transfers or interest).

This system makes the process of home automation much simple, user installable and user friendly.

SALES PROCESS

Kasam Sai Theja, D.Lalitha

Internal Guide: D.Kiran Kumar Associate Professor

ABSTRACT

The main object of this project is a commitment from a customer or leads to buy a product or service. The document serves as a foundation for planning production or purchase orders. This project acts as an important role for create, issue and monitor different types of sales orders. A 'sales order' is a contract between customer and a sales organization for supply of specified good/services over a specified time period. All relevant information from customer master record and material master record is copied to the sales order. The sales order may be created with reference to a 'preceding document' such as a quotation. In such case all the initial data from the preceding document is copied to the sales order. And finally we generate the invoice report for the sales order. The modules are customer creation, material creation, sales order creation, delivery creation, delivery report and invoice generation.

REFINE REDUNDANT DISPATCHES FROM ONLINE SOCIAL NETWORK

G.Akhila, P.Akhila, S.Amani

Internal Guide: M.kalpana Associate Professor.

Keywords- Filtering Rule, Machine Learning Technique.

ABSTRACT

One fundamental issue in today On-line Social Networks (OSNs) is to give users the ability to control the messages posted on their own private space to avoid that unwanted content is displayed. Up to now OSNs provide little support to this requirement. To fill the gap, in this paper, we propose a system allowing OSN users to have a direct control on the messages posted on their walls. This is achieved through a flexible rule-based system, that allows users to customize the filtering criteria to be applied to their walls, and a Machine Learning based soft classifier automatically labeling messages in support of content-based filtering.

LOAD BALANCING OF CONTENT ON CLOUD COMPUTING

B.Suneeth, M.Sairohit, K.Samhitha

Internal Guide: P.Naveen Kumar, Assistant Professor.

Keywords- Main controller, Balancer

ABSTRACT

Load balancing in the cloud computing environment has an important impact on the performance. Good load balancing makes cloud computing more efficient and improves user satisfaction. We introduce a better load balance model for the public cloud based on the cloud partitioning concept with a switch mechanism to choose different strategies for different situations. The algorithm applies the game theory to the load balancing strategy to improve the efficiency in the public cloud environment.We use Main controller and Balancer which helps in balancing the incoming requests from different users and store the data among different locations on different servers.

AN ATTRIBUTE ASSISTED RERANKING MODEL FOR WEB IMAGE SEARCH

P.Rathna Margarate, B.Sahithireddy, S.Srujana

Internal Guide : Dr. K. Sreenivas Rao Associate Professor

ABSTRACT

Image search Reranking is an effective approach to refine the text-based image search result. Most existing Reranking approaches are based on low-level visual features.

Exploit semantic attributes for image search Reranking. Based on the classifiers for all the predefined attributes, each image is represented by an attribute feature consisting of the responses from these classifiers. A hypergraph is then used to model the relationship between images by integrating low-level visual features and attribute features.

Hypergraph ranking is then performed to order the images. Its basic principle is that visually similar images should have similar ranking scores. In this work, we propose a visual-attribute joint hypergraph learning approach to simultaneously explore two information sources.

SECURE DATA SHARING IN CLOUD COMPUTING USING REVOCABLE-STORAGE IDENTITY-BASED ENCRYPTION

B.Hari Krishna, Chakri Sai, R.Manoj Kumar
Internal Guide: M.Rakesh Reddy Assistant Professer.

Keywords*:* Cryptographical, Rs-Ibe, I-Be, Data Sharing

ABSTRACT

Cloud computing provides a flexible and convenient way for data sharing, which brings various benefits for both the society and individuals. But there exists a natural resistance for users to directly outsource the shared data to the cloud server since the data often contain valuable information. Thus, it is necessary to place cryptographically enhanced access control on the shared data. Identity-based encryption is a promising crypto graphical primitive to build a practical data sharing system. However, access control is not static. That is, when some user's authorization is expired, there should be a mechanism that can remove him/her from the system. Consequently, the revoked user cannot access both the previously and subsequently shared data. To this end, we propose a notion called revocable-storage identity-based encryption (RS-IBE), which can provide the forward/backward security of cipher text by introducing the functionalities of user revocation and cipher text update simultaneously.

AUTOMATICALLY MINING FACETS FOR QUERIES FROM THEIR SEARCH
RESULTS

M.Rajashekar, D.MeghanaPranathi, K.Nikitha

Internal Guide: Ms.Shirisha.K Associate Professor

Keywords*:* Facets, Jsoup, Hash map, Html Tags

ABSTRACT

We address the problem of finding query facets which are multiple groups of words or phrases that explain and summarize the content covered by a query. We assume that the important aspects of a query are usually presented and repeated in the query's top retrieved documents in the style of lists, and query facets can be mined out by aggregating these significant lists. We propose a systematic solution, to automatically mine query facets by extracting and grouping frequent lists from free text, HTML tags, and repeat regions within top search results.
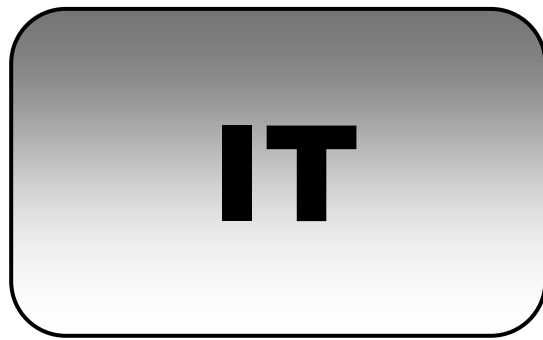
SAP INVENTORY AND PROCUREMENT PROCESS

A. Sai Suraj, S.Apoorvakamal

Internal Guide: D.Kiran Kumar Associate Professor

ABSTRACT

The main objective of this project is to explain how an organization acquires materials or services and manages the warehouse to inventory operations to complete its business needs. This project acts as an important role to manage high volume warehouse operations like material creation, goods issue and receive, material stock listing and updating, requirement and info gathering, supplier contact, background review, negotiation, order fulfillment, consumption, contract renewals. The system integrates complex supply chain logistics with warehouse and distribution process, delivering the ultimate in visibility and control, optimize inventory tracking, cross docking, distribution operations. Basically procurement activities can be determination of requirement, creating vendor, creating purchase requisition, creating purchase order, material price updating and verifications.

IT

INTEGRATED EXAMINATION SYSTEM

Diksha, Avantika

Internal Guide: Mrs.P.Swetha Reddy   Assistant Prof.

ABSTRACT

Online examination can reduce the hectic job of assessing the answers given   by candidates manually. Responses or   the answers by the candidates can be checked automatically and instantly. It will reduce paper work to be an integrated online assessment system. The result can be shown immediately (auto grading) to the students reducing the anxiety.

Online assessment project could be a web portal which   is developed or implemented in java domain platform. This project is helpful for students to practice different mock examination from this   site. In current generation lots   of examinations like GRE, CAT, MAT etc is conducted through online   system.   This project will help students to get practiced to online examination method by taking mock tests from this web portal.

Corporate between the data stored in the server of the Institution and our On-line Exam system. To deal with on -line System in an easy way and an efficient mannered. (Connection process) Create strong and secrete data base that allow for any connection in a secret way, to prevent any outside or inside attacks.

Specify a privilege for each person to allow each person use this system to create his own exam. and have a complete control on his exam. Allow each person to create more than one exam with different way to create variant questions.

This project will propose all features and procedures to develop the system. On-line Exam System is very useful   for   Educational Institute to prepare an exam, safe the time that will take to check paper.

COMMUNICARE – COLLEGE INTERNET FORUM

Arantx Michael, G Divya Sai, SahithyaGandikota

Internal Guide: Ms. K. Soumya   Assist Prof.

ABSTRACT

The main objective of this application is to provide an efficient way of communication throughout the college hierarchy. It's basic purpose is to reduce the effort that goes into communication among various sectors of the college administration .It permits passing of circulars and notifications issued by higher authorities.

The existing systems used for communication between all the participants of the college structure is through printed content being circulated, usage of third-party messaging applications and a web portal with limited access.

The developed system allows the participants to connect to the internet through the app and pass circulars and notifications. These are passed by the higher authorities only. Faculty and student modules are also designed in order to view these notifications and also send permission requests to the higher authorities for approval, thus making communication more efficient.

E-LEARNING

P.vishruth, Daram vineeth uma, Sangam sai kiran

Internal Guide: Mr. M. Venkateswara Rao Associate professor& HOD Dept of IT

Keywords – Electronic learning, lecture notes, important questions

ABSTRACT

The main objective of this website is E-learning. This website mainly contains the features like articles, projects, research papers, seminars.Here the articles section is exclusively for posting the articles related to the technical as well as the non technical where as the research papers will be the key feature for this website as it helps the students to know much about the respective topics in dept. Now the important feature is projects, this lets the students to select the project from the listed topics. The abstract of that particular project will be shown. Next coming to the feature of seminars, there will be a list of them. The students will have an opportunity to select their respective topics and view the abstract of it.

EXPENDITURE TRACKER

AishwaryaMalani, Gowrisetty Simhika

Internal Guide:Ms.N.Indira Priyadarshini, Asst. Professor

Keywords: Expenditure management, Expenditure report, Purchase reminder

ABSTRACT

Expenditure tracking system is an attempt to manage our daily expenditures in a more efficient and manageable way. The system attempts to free the user with as much as possible the burden of manual calculation and to keep the track of the expenditure. Instead of keeping a dairy or a log of the Expenditures on the smart phones or laptops, this system enables the user to keep the tab on the expenditures.

Each user will be required to register on the application. At registration time, the user will be provided with a key id, which will be used to maintain the record of each unique user. The system allows adding past or future income and expenditures to a calendar that calculates the impact on your balance, as well as spending by category. As soon as the entry is made about the expenditure, the database is updated and per the nature of the category amount deduction or addition to the total balance in the user's pocket is made.

Add-ons like notifying the user after a certain time about the product again, checking and notifying expiring of products (example: medicines, grocery), notifications on exceeding the expenditures beyond limit for the day, etc. The user finds it easier to understand and incorporate for future planning.

HOSPITAL MANAGEMENT SYSTEM

D. Akhila, G. Srujana, N. Sushansa

Internal Guide: Mr. M. Venkateswara Rao Associate Professor& HOD Dept Of IT

Keywords – Hospital, Doctor, Diagnosis, Sanitarium system.

ABSTRACT

The main objective of this system is to reduce the paper work, i.e., by sending doctors prescription of a particular patient directly to the pharmaceutical store. The Hospital Management System can be accessible by an administrator, receptionist, doctor and pharmaceutical store by authenticating them with proper credentials. This helps in avoidance of manipulation of data which improves security.

The existing system is a paper based work which is difficult to maintain proper records of patient information and schedule of diagnosis details in the hospital. The amount of time and expenditure increases if the patient loses his prescription. Finding out details regarding any patient is very difficult, as the doctor has to go through all the records manually.

In our project, we developed an application which can be accessible by an administrator, receptionist, doctor and pharmaceutical store by authenticating them with proper credentials. Administrator is the only person who is able to register receptionist, doctor and the pharmaceutical store. Only the registered person can perform operations in this system. The Hospital management system deals with the collection of patient's information, diagnosis details, medical reports etc. The system also registers and store required patient details and doctor details and retrieve these details as and when require.

LIQUID COOLING ON PROCESSOR

M.Raviteja, Jeevan kowshik, Bhargav sai

Internal Guide: B.Manjulatha

Keywords: Water Cooling CPU

ABSTRACT

In this project we are going to make processor more cool and maintain temperature as low as we can using a water block and water to cool the processor.here we are comparing the stock fan heatsink and a custom design water cooling which make more cool than stock fan.everything will be done in live demo and a open case cpu

STUDENT PORTAL

Kiran kumar, Ch.Venkat narayana, Yashwanth kumar
Internal Guide: Ms.S Meghana Asst.Professor

ABSTRACT

The main objective of this application is to provide the details of the student where he can look at his attendance, marks. These are major things where student need in his academic career. Where as the faculty has the feature to add the marks of the student and add the attendance of the student.

The existing system is a web application where we can get the details of the students only in the college premises and he cannot access the application without connecting to the college intranet. The website cannot be accessed by the student outside the college.

In our project, we created a profile for every faculty/student/admin to view his/her details. It includes the features of updating the details of the student to the faculty. The admin module has the feature to add/remove the faculty if he/she is out of the college. The faculty will update the attendance after every class and they can send the message of the attendance to the parents.If the student changes his /her number a alert message will be sent to the parents and the student has only access to view the profile, attendance and marks. He cannot change the data of his profile, if they need to provide any changes for the profile they need to contact the admin.

TIME TABLE GENERATION

D.Srinija, S.Srujana

Internal Guide: Mrs.S.Bhagya Rekha Asst.Professor

ABSTRACT

The main objective of this website is generation of Time Table. Time Table generation helps the faculty/department/forum belonging to Vignana Bharathi Institute of Technology for generating and allocating timetable. This helps in avoiding ambiguity between various periods for a particular faculty.

In our project, we create a website for every faculty/department/ forum to generate timetable. It includes the features and functions needed to efficiently allotment of classes to the faculty. It maintains track record of all classes, subjects along with the faculty members in a well maintained database..The report can be downloaded in the PDF format.

H&S

SOLENOID ENGINE

M. Mani Sushanth , N.Kalyan

Internal Guide: V Lakshmi Savithri vatsalya

Keyword: Torque, magnetic energy, shaft and crank, Timing switch, Rotatory

ABSTRACT

The main objective of our project is to gain "torque" by not sacrificing clean energy (electrical energy) our project is based on the principle of Solenoid is a device, consisting of a wire wrapped in the shape of cylinder, which acts like a magnet when electricity goes through it.

When the solenoid is activated, magnet energy is produced which pulls the shaft (iron rod) into it. When the solenoid is activated, it produces magnetic energy, which attracts the rod into it. This rod is connected to crank through connecting rod. Thus, linear motion is converted into rotatory motion.

When the rod is totally into the solenoid, the solenoid is deactivated by a specially designed timing switch.

When the rod is pulled into the solenoid the energy is stored in the fly wheel and used for another rotation

This process continuous till the solenoid engine is switched off . Solenoid engines have many applications in automobile industry
Some of them are as follows
1. We can attain required amount of torque for electrical vehicles to climb inclinations, which is nearly impossible for today's electric vehicles.
2. We can gain desired amount of pick-up for electric vehicles
3. Solenoid engine can be used with the combination of electric motors.

AUTOMATIC IRRIGATION BY SENSING SOIL MOISTURE

Ch.Sai Varun Reddy,M.Tarual Kumar

Internal Guide: Mr. Praveen

Keyword: Watering plants, Timer, soil moistur, gravimetric measurement, Proxy, Calibration, Mineral Loss.

ABSTRACT

Watering plants is a common problem for us in this 21st century, with our busy schedules we may not water our plants and keep them alive. The only alternative available for us in today's market is by using timer based watering devices, which does the hard work for us but the back drop with timer based sprinklers are they just water the plants in a set of time given to them. They do not sense the soil moisture and ambient temperature to know if the soil actually needs the water or not, irregular watering leads to mineral loss in the soil and might end up rotting the plants. So by sensing the moisture content by a moisture sensor which can measure the volumetric content in soil since the direct gravimetric measurement of free soil moisture requires removing, drying and weighing of a sample, the volumetric water content can be measured indirectly by using some other property of the soil, such as electrical resistance, dielectric constant or interaction with neutrons, as a proxy for the moisture content. The relation between the measured and may vary depending on environmental factors such as soil type, temperature, or electric conductivity property and soil moisture must be calibrated and may vary depending on environmental factors such as soil type, temperature, or electric conductivity. Thus we can supply the required amount of water and maintain the plants. Similarly a farmer needs to water the crops daily during the entire season of rabi or kharif season process and the amount of watering varies from time to time during process of entire season. If we can monitor it remotely i.e. the availability of the water and water supply, we can prevent mineral loss from soil and maintain the plants.

BLUETOOTH ROBOT

G.Ravali , Y.Madhuri

Internal Guide: Dr, K Shirish Kumar

ABSTRACT

Many of the wireless control robots use RF modules. But this project makes use of android mobile phone for robotic control. The control commands available are more than RF modules. For this the android mobile user has to install an application his or her mobile. The user needs to turn on the Bluetooth in the mobile. The wireless communicator techniques used to control the robot is Bluetooth technology. User can use various commands like move forward, reverse, move le□, move right using these commands which are send from the android mobile .robot has a Bluetooth receiver unit which receives the commands and give it to the microcontroller circuit to control the motors . The microcontroller then transmits the signal to the motor driver IC'S to operate the motors

AUTOMATIC STREET LIGHT CONTROLLER SYSTEM

K.Chanikya, P.Jaya Sai Pragna

Internal Guide: Mr Vasudev Reddy

Keyword: Transistor as a switch, sensor, Traffic Density, Photo Conductive Device.

ABSTRACT

Automatic street light is a simple and powerful concept. which uses transistor as a switch. By using this manual works are 100% removed. Main reason for using this concept is energy consumption is reduced. Because now a days the manually operated street lights are not switched off even sunlight comes and also switched on earlier before sunset.

Working:

The street automatically switches on light when the sunlight goes below the visible region of our eyes. and it automatically switches off lights whenever the sunlight comes visible to our eyes. This is done by a sensor called light dependent resistor (ldr) which senses the light actually like our eyes. It can be used in street lights and it is also used in domestic applications. Street light controller using ldr based light intensity and traffic density, in the todays up growing countries will be more effective. . In case of cost, manpower and security as compare with today's running complicated and complex light controlling system puts up a very uses firmly approach and could increase the power. The automatic street light system operates 12 v dc supply. Light dependent resistor , a photo conductive device has been used as the transducer to convert light energy to electrical energy

IMAGE BASED PASSWORD FOR ILLITERATES

Manchana Preetham, Dussa Lavakrishna
Internal Guide: Dr. K V Dharmendra Kumar

Keyword: Accessing, Images, graphical LCD, touch screen technology, Stepper Motor

ABSTRACT

The main aim of this project is to develop a system which is very helpful for illiterates in secure accessing who cannot remember the password and this helps them in securing their passwords. It can also use few images like bottle, book, fan etc. By keeping these images they can easily remember the password. This system provides user-friendly environment for the users with a kind of image interaction. Here the password need not be a string of characters it can also use few images. This device makes use of a touch screen sensor based graphical LCD which makes the things still easier. This project gives us the exposure about how efficiently we can make use of the touch screen technology to interface with the appliances in our practical life.

Working:-

In this project when we enter a correct sequences of images (password) then the stepper motor starts rotating with the help of driver (stepper) which indicates that the password is correct and door gets locked within five seconds. If we enter invalid password for more than 3 times then we get a beep sound with the help of a buzzer, then we should again use reset button to enter the correct password

POWER GENERATION USING MICROBIAL FUEL CELL

Alekhya Nagulavancha, Jyothi Agarwal

Internal Guide: Mrs. S Shylaja

Keyword: Living Biocatalysts Cellular respiration, Metabolic reactions, , Sewage \ treatments

ABSTRACT

Electricity and water, the most basic needs of Mankind are becoming the biggest nightmares, nowadays. So why not reclaim both the resources using a single source which is just a burden to the society?

This can be executed by using a Microbial Fuel cell that relies on living biocatalysts to facilitate the movement of electrons throughout their systems instead of the traditional chemically catalyzed oxidation of a fuel at the anode and reduction at the cathode. The magic behind MFC's can be distilled down to two words: cellular respiration. Cellular respiration is a collection of metabolic reactions that cells use to convert nutrients into adrenosine triphosphate (ATP) which fuels cellular activity. MFCs work by allowing bacteria to do what they do best, oxidize and reduce organic molecules. Bacterial respiration is basically one big redox reaction in which electrons are being moved around. Whenever you have moving electrons, the potential exists for harnessing an electromotive force to perform useful work. A MFC consists of an anode and a cathode separated by a salt bridge. Microbes at the anode oxidize the organic fuel generating protons which pass to the cathode, and electrons which pass through the anode to an external circuit to generate a current. The water used in it can be purified by using Filtration or sewage treatment.

This Microbial fuel cell has vast applications like producing clean fuel, biodiesel etc.

AGRIBOT-AN AGRICULTURAL BOON

M.Dileepkumar, Chedere Aparna

Internal Guide: Mr. Vasudev Reddy

ABSTRACT

Let's take time to extend gratitude to the farmer's in our way for every grain we eat!!!Agriculture is the basis of the food we eat. Involvement of technology in the agriculture decreases the labor force and improves the quality of food which is the present day's requirement of the developing country like India. Agribot is the step towards the same. This robot with its multitasking agricultural features can be used to reduce the difficulties faced by the farmers. Agribot can be used to perform various agricultural activities such as ploughing, seeding etc. It uses the renewable solar energy source in the form of rechargeable batteries. It's motion can be controlled by the use of RF module (an electronic chip used in embedded systems).There are various advantages of the Agribot which are as follows: It is capable of collecting soil and crop sample, they can be used to protect the farmers from the harmful effects of exposure to various chemicals, it can be used in any season irrespective of the weather conditions. In addition to this, it serves as a major tool to reduce pollution and also protect mother earth from harmful effects of global warming. This is just a basic version. The advanced versions of the Agribot can be used for other horticultural tasks and livestock applications.

GENERATION OF PIEZO ELECTRICITY THROUGH FOOT STEPS

Sai Nath, Achyuth , Jagannath , Shivateja
Internal Guide: Dr. Salauddin Mohemmed

Keyword: Alternative forms of energy , LDR

ABSTRACT

More sustainable forms of electrical power are needed in order to keep costs lower and to insure a healthier environment for future generation. In this paper a way to utilize alternative forms of energy at passenger terminals like at dance floors across the world has been presented. Three piezoelectric material to be used was studied and a graph is presented. The use of piezoelectric devices installed in terminals will enable the capturing of kinetic energy from dance floor. This energy can then be used to offset some of the power coming from the main grid. Such a source of power can then be used to operate lighting systems. In India, maximum public movements is observed in railways stations and holy places, hence, such places can be exploited for use of piezoelectric crystals for generation of electricity. Gathering ranging from thousands to millions are observed in holy places, thus installation of piezoelectric crystals at floorings would generate enough power to light up lights of temples as well as air circulation systems. While studying use of piezoelectric crystals embedded in shoes and roads, idea struck in our mind that piezoelectric crystals can be replaced with small hydraulic pumps in heels of shoes and large pumps in case of bridges & roads. While stepping such hydraulic pumps at heel of our shoes would get compressed and this compressed air can be used to rotate small electricgenerators at heel of shoes. Thus our daily movement can be used to run small electric devices. Though such generators would be able to generate small power but on large scale i.e. if used in bridge construction than massive energy can be generated. Similarly by driving on such road & bridge, due to compression the hydraulic pump can to rotate generators in turn generate electricity.. Idea is to use human body as a hot junction while atmospheric temperature as cold junction. Thus thermocouple in form of jackets can be used with thermal insulation between hot plate in contact with human body (specifically chest and back because human body emit more heat from chest compared to other part of body) and cold   junction   (exposed as external surface).Though small voltage in range of millivolts could be generated with temperature difference of 50° C by use of type.. Though this is just our ideas, One of the applications is controlling the intensity of street lights using LDR i.e..,

AUTOMATIC STREET LIGHT SAVER USING LDR.

Many of the people have a phobia of darkness, so to assist them in such situation, we have explained a simple circuit. It will automatically turn on street light in the way of LEDs or bulb coupled with relay, it is well enough to see the object nearby. This circuit is very much easy to work and also the battery power consumed by the circuit is very low because of the very few components used in the circuit

AIR COOLER

Rakesh , Pranay

Internal Guide: Dr. Salauddin Mohemmed

Keyword: Copper Tube, cable tires , Decreasing temperature

ABSTRACT

We are aiming to turn a normal table fan into an Air Cooler . First fix copper tube to the fan grill using 200mm cable ties. Cut a 1m length of the plastic tubing and fit around one end of the copper coil. Fix the other end so it would return the water to cooler. You can tape the return tube. To the cooler making sure its ends is immersed in water to avoid noise. Insert one end of remaining long plastic tube to the copper coil. Fix the other end to the pump . Secure the tube connections with 200mm cable ties. Place the plastic tube and connected pump inside the cooler. Thus turning of a fan to Air cooler is done

WATER LEVEL INDICATOR

B.Prathyusha Yadav ,B.Deepthi

Internal Guide: Dr. Bapiraju

Keyword: Detection of water level ,alarm, LED, Buzzer.

ABSTRACT

Water tank overflow is a common problem which leads to the wastage of water. Though there are many solutions to it like ball valves which automatically stop the water flow once the tank gets full. But being an electronics enthusiastic wouldn't you like an electronic solution for it? So here is a simple and handy DIY that will guide you to make a circuit which will detect the water level and will raise an alarm upon getting the water tank full or a preset level. This simple transistor based water level indicator is very useful to indicate the water levels in a tank. Whenever tank gets filled, we get alerts on particular levels. Here we have created 4 levels (low, medium, high and full), we can create alarms for more levels.We have added 3 LEDs to indicate initial three levels (A, B, C), and one Buzzer to indicate FULL level (D). When tanks gets filled completely we get beep sound from Buzzer.We can consider this whole circuit as 4 small circuits, each one for indicating, when a particular level (A,B,C,D) of water have been reached.When water level reaches to point A, circuit with RED LED & transistor Q1 gets completed and RED LED glows. Similarly when water level reaches to point B, circuit with YELLOW LED and transistor Q2 gets completed and Yellow LED glows, same goes with point C. And finally when tank gets full (Point D), circuit with buzzer gets completed and buzzer starts beeping.

HOME AUTOMATION USING RADIO FREQUENCY MODULES

T.Vijay Kumar, N.Venkatesh
Internal Guide: Dr. K V Dharmendra Kumar

Keyword: Automation system, Radio Frequency, Transmitter and Receiver, Infrared Commutation , Light Emitting Diodes Encoder

ABSTRACT

The main aim of our experiment is to make a low cost home automation system using RF Transmitter and receiver by which you can Control home appliances from a distance of 100-150 metres.communication over radio Frequency has many advantages as it doesnot Require a line of sight connection between the Transmitter and receiver as in case of infrared Communication.The range of RF communication Is very high when compared to IR communication.In our project a wireless transmitter and receiver System using RF modules is implemented.

In order to show the working of wireless Communication between transmitter and Receiver,2 LED'S and 6 plugs at receiver side controlled by 8 buttons at transmitter Section.The HT12E encoder IC coverts the 4-bit parallel data from the 4 data pins that are conneced to buttons in to serial data.T his serial data is send to RF transmitter to RF receiver.This serial data is send to HT12D decoder IC Which converts in to 4 bit parallel data.According to the buttons pushed the LED'S And plugs can be turned ON or OFF.In this the wireless data transmission is done using 433 MHZ radio frequncy signals.

AGRIBOT-AN AGRICULTURAL BOON

M. Dileep Kumar ,Chedere Aparna
Internal Guide: Dr. K Shirish Kumar

Keyword: Solar energy , Rechargeable battery, embedded system, collecting sample, protection of soil.

ABSTRACT

Let's take time to extend gratitude to the farmer's in our way for every grain we eat!!!Agriculture is the basis of the food we eat. Involvement of technology in the agriculture decreases the labor force and improves the quality of food which is the present day's requirement of the developing country like India. Agribot is the step towards the same. This robot with its multitasking agricultural features can be used to reduce the difficulties faced by the farmers. Agribot can be used to perform various agricultural activities such as ploughing, seeding etc. It uses the renewable solar energy source in the form of rechargeable batteries. It's motion can be controlled by the use of RF module (an electronic chip used in embedded systems).There are various advantages of the Agribot which are as follows: It is capable of collecting soil and crop sample,   they can be used to protect the farmers from the harmful effects of exposure to various chemicals, it can be used in any season irrespective of the weather conditions. In addition to this, it serves as a major tool to reduce pollution and also protect mother earth from harmful effects of global warming. This is just a basic version. The advanced versions of the Agribot can be used for other horticultural tasks and livestock applications.