



VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY

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EEE

TECHMANIA'19

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PRESENTED BY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

# VCET

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## VISION AND MISSION

### **VISION:**

To emerge and sustain as a center of excellence for technical and managerial education upholding social values.

### **MISSION:**

- Imparted with comprehensive, innovative and value-based education.
- Exposed to technical, managerial and soft skill resources with emphasis on research and professionalism.
- Inculcated with the need for a disciplined, happy, married and peaceful life.

# EEE DEPARTMENT

## VISION AND MISSION

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### **VISION:**

To produce quality Electrical Engineers for industry and good citizens for society through excellence in technical education and research.

### **MISSION:**

- To empower graduates with sophisticated knowledge and technical skills.
- To explore, create and develop innovations in Electrical Engineering and Technology.
- To provide beneficial service to the rural, state, national and international communities.

### **PROGRAM EDUCATIONAL OBJECTIVES:**

1. Graduates will professionally be competent, excel in academics and solve wide range of problems in Electrical and Electronics Engineering field to serve the needs of Employers.
2. Graduates will engage in continuous professional development activities through Lifelong Learning to enhance technical knowledge and communication skills.
3. Graduates will excel in leadership quality and managerial capability which leads to Entrepreneur that bridge the gap between the advanced technology and the end users.

# MESSAGE FROM HEAD OF THE DEPARTMENT



I'm delighted to see the creative work that students have contributed to the TECHMANIA'19-May issue. College life is a period of life during which students start turning out into professionals by exploring and developing their innate talents and skills. I am very glad that the department has always been unstoppable in its progress, because of the active participation of students and the huge efforts of the professors towards the progressive development of students. Our department has also been actively involved in various activities that has thrown light upon the hidden talents of our students. They stand as a witness to the monumental efforts, taken by the management to make the college a center of excellence in education and research. It is great to find a considerable number of articles, poems and art works, which stand as testimonials not only for students talents but also for their dedication and commitment in their works. I am sure that this magazine would definitely inspire and encourage all students to contribute even more to the forthcoming issues. And, I am looking forward for the upcoming issues of the magazine with a hope and a wish that it would set bench marks for student magazines.

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# TABLE OF CONTENTS



**GREAT MINDS - HENRY FORD**

**1**

## **PAPERS**

- **BLUE EYES TECHNOLOGY**
- **SOCCER WITH SMART BALL**
- **SOLAR TREE**
- **PAPER BATTERIES**
- **WOMAN SAFETY SMART WRIST  
BAND**

**5**

**10**

**16**

**21**

**28**

**BOOK REVIEW -  
THE FAULT IN OUR STARS**

**33**

**IDIOMS AND PHRASES**

**36**

**POEM**

**42**



**TECHIE'S INGENUITY - ART**



**44**

# **The Great Minds : Henry Ford**



**WHILE WORKING AS AN ENGINEER FOR THE EDISON ILLUMINATING COMPANY IN DETROIT, HENRY FORD (1863-1947) BUILT HIS FIRST GASOLINE-POWERED HORSELESS CARRIAGE, THE QUADRICYCLE, IN THE SHED BEHIND HIS HOME. IN 1903, HE ESTABLISHED THE FORD MOTOR COMPANY, AND FIVE YEARS LATER THE COMPANY ROLLED OUT THE FIRST MODEL T. IN ORDER TO MEET OVERWHELMING DEMAND FOR THE REVOLUTIONARY VEHICLE, FORD INTRODUCED REVOLUTIONARY NEW MASS-PRODUCTION METHODS, INCLUDING LARGE PRODUCTION PLANTS, THE USE OF STANDARDIZED,**

**INTERCHANGEABLE PARTS AND, IN 1913, THE WORLD'S FIRST MOVING ASSEMBLYLINE FOR CARS.ENORMOUSLY INFLUENTIAL IN THE INDUSTRIAL WORLD, FORD WAS ALSO OUTSPOKENIN THE POLITICAL REALM. FORD DREW CONTROVERSY FOR HIS PACIFIST STANCE DURING THE EARLY YEARS OF WORLD WAR I AND EARNED WIDESPREAD CRITICISM FOR HIS ANTI- SEMITICVIEWS AND WRITINGS.**

## **HENRY FORD: EARLY LIFE & ENGINEERING CAREER -**

**BORN IN 1863, HENRY FORD WAS THE FIRST SURVIVINGSON OF WILLIAM AND MARY FORD, WHO OWNED A PROSPEROUS FARM IN DEARBORN,MICHIGAN. AT 16, HE LEFT HOME FOR THE NEARBY CITY OF DETROIT, WHERE HE FOUND APPRENTICE WORK AS A MACHINIST. HE RETURNED TO DEARBORN AND WORK ON THE FAMILY FARM AFTER THREE YEARS, BUT CONTINUEDTO OPERATE AND SERVICE STEAMENGINES AND WORK OCCASIONAL STINTS IN DETROITFACTORIES. IN 1888, HE MARRIEDCLARA BRYANT, WHO HAD GROWN UP ON A NEARBY FARM.**

**IN THE FIRST SEVERALYEARS OF THEIR MARRIAGE, FORD SUPPORTED HIMSELFAND HIS NEW WIFE BY RUNNING A SAWMILL.**



## **HENRY FORD: LATER CAREER & CONTROVERSIAL VIEWS –**

**THE MODEL A PROVED TO BE A RELATIVE DISAPPOINTMENT, AND WAS OUTSOLD BY BOTH CHEVROLET (MADE BY GENERAL MOTORS) AND PLYMOUTH (MADE BY CHRYSLER); IT WAS DISCONTINUED IN 1931. IN 1932, FORD INTRODUCED THE FIRST V-8 ENGINE, BUT BY 1936 THE COMPANY HAD DROPPED TO NUMBER THREE IN SALES IN THE AUTOMOTIVE INDUSTRY. DESPITE HIS PROGRESSIVE POLICIES REGARDING THE MINIMUM WAGE, FORD WAGED A LONG BATTLE AGAINST UNIONIZATION OF LABOR, REFUSING TO COME TO TERMS WITH THE UNITED AUTOMOBILE WORKERS (UAW) EVEN AFTER HIS COMPETITORS DID SO.**



**FORD NAMED HIS SON ESEL AS PRESIDENT OF FORD MOTOR COMPANY, BUT HE RETAINED FULL CONTROL OF THE COMPANY'S OPERATIONS.**

**EDSEL FORD DIED IN 1943, AND HENRY FORD RETURNED TO THE PRESIDENCY OF FORD MOTOR COMPANY BRIEFLY BEFORE HANDING IT OVER TO HIS GRANDSON, HENRY FORD II, IN 1945. HE DIED TWO YEARS LATER AT HIS DEARBORN HOME, AT THE AGE OF 83.**

#### **HENRY FORD: DEATH**

**HENRY FORD DIED AT HIS RESIDENCE, FAIR LANE ESTATE IN DEARBORN, AT 11:40PM ON MONDAY, APRIL 7, 1947, FOLLOWING A CEREBRAL HEMORRHAGE. HE WAS 83 YEARS OLD. AT HIS BEDSIDE WERE CLARA FORD AND MEMBERS OF THEIR HOUSEHOLD STAFF. AT THE TIME OF HIS DEATH, FLOODING ON THE ROUGE RIVER, WHICH FLOWS THROUGH THE GROUNDS OF FAIR LANE, HAD CUT OFF ELECTRICAL POWER.**

**FUNERAL SERVICES WERE HELD AT ST. PAUL'S EPISCOPAL CATHEDRAL IN DETROIT, MICHIGAN, AND HENRY FORD WAS LAID TO REST IN THE FAMILY CEMETERY AT ST. MARTHA'S EPISCOPAL CHURCH, IN DETROIT.**

**- T.J. JEYAPRIYA  
III YEAR EEE-B**



## BLUE EYES TECHNOLOGY:

*Imagine yourself in a world where humans interact with computers. You are sitting in front of your personal computer that can listen, talk, or even scream aloud.*

*It has the ability to gather information about you and interact with you through special techniques like facial recognition, speech recognition, etc.*

*It can even understand your emotions at the touch of the mouse. It verifies your identity, feels your presents, and starts interacting with you .*

*You asks the computer to dial to your friend at his office. It realizes the urgency of the situation through the mouse, dials your friend at his office, and establishes a connection.*

*Human cognition depends primarily on the ability to perceive, interpret, and integrate audio-visuals and sensory information.*

*Adding extraordinary perceptual abilities to computers would enable computers to work together with human beings as good partners.*

*The BLUE EYES technology aims at creating computational machines that have perceptual and sensory ability like those of human beings*



*It uses non-obtrusive sensing method, employing most modern video cameras and microphones to identify the user's actions through the use of imparted sensory abilities.*

- •
- •
- •

*The machine can understand what a user wants, where he is looking at, and even realize his physical or emotional states.*

*It has the ability to gather information about you and interact with you through special techniques like facial recognition, speech recognition, etc.*

*It can even understand your emotions at the touch of the mouse. It verifies your identity, feels your presence, and starts interacting with you .*

*You ask the computer to dial to your home urgently. It realizes the urgency of the situation through the mouse, dials your mother at home, and establishes a connection.*

*Human cognition depends on highly developed abilities to perceive, integrate, and interpret visual, auditory, and touch information.*

*Without any doubt, computers would be much more powerful if they had even a small fraction of the perceptual ability of animals or humans.*



*These are to be brought in a computer through the help of small systems built for each function.*

*Researchers are attempting to add more capabilities to computers that will allow them to interact like humans, recognize human presents, talk, listen, or even guess their feelings.*

*In the name of BLUE EYES,*

*—Blue|| in this term stands for Blue tooth (which enables*

*wireless communication) and*

*—eyes|| because eye movement enables us to obtain a lot of interesting and information.*

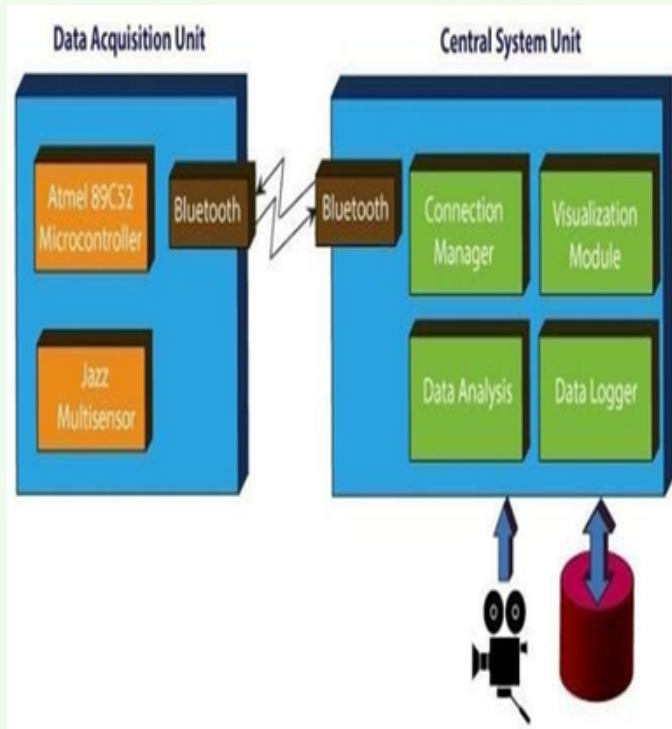
## **HISTORY:**

*Blue eyes is a technology conducted by the research team of IBM at its Almaden Research centre at San Jose, California since 1997.*

## **SYSTEM OVERVIEW:**

*Blue Eyes system consists of a mobile measuring device called Data Acquisition Unit (DAU) and a central analytical system called Central System Unit (CSU) interconnected by bluetooth.*





## **TECHNOLOGY USED:**

*Most of the time people use their computers by touching it. From this the physiological data can be obtained hence an emotion mouse is used .*

*Another technology that is used in blue eyes technology is magic pointing. This is a technique of tracking the eye movement of the user to perform the desired operation. For this purpose the web cams are used.*



## **BENEFITS:**

*Visual attention monitoring (eye motility analysis) and Physiological condition*

*monitoring, operator's position detection.*

*Physiological data, operators voice and overall view of the control room recording recorded data, playback.*

## **CONCLUSION:**

*The nineties witnessed quantum leaps interface designing for improved man machine interactions.*

*The BLUE EYES technology ensures a convenient way of simplifying the life by providing more delicate and user friendly facilities in computing devices. Now that we have proven the method, the next step is to improve the hardware.*

**-M. RAJADURAI  
III YEAR EEE-A**

# SOCCER WITH SMARTBALL:

*Soccer is the world's most popular game with over 4 million registered players in the U.S.A. alone, according to FIFA, and countless more unregistered players all over the world.*

*The deliberate use of the head to control the ball is a necessary skill for a successful player regardless of the position: defender, midfielder, or striker. Proper heading technique requires body coordination and proper timing.*

*The player hyper extends the neck, trunk, and hips with the arms out to provide balance. Forward flexion of the trunk generates power, and the neck flexes forward and contracts so that the forehead strikes the ball.*

*Based on measurements at soccer practice with a radar gun, rough estimate of ball speed for punts is 45 MPH, and drop kicks and goal kicks is 55 MPH.*



***There are many advantages with such a smart soccer ball.***

*1) Instead of 22 players in a game wearing head mounted devices (without forgetting), a single smartball can help monitor impacts on all of them.*

*2) Once the technology is proven to be accurate, it will likely be deployed rapidly in professional leagues, as there will be less resistance to adoption from players.*

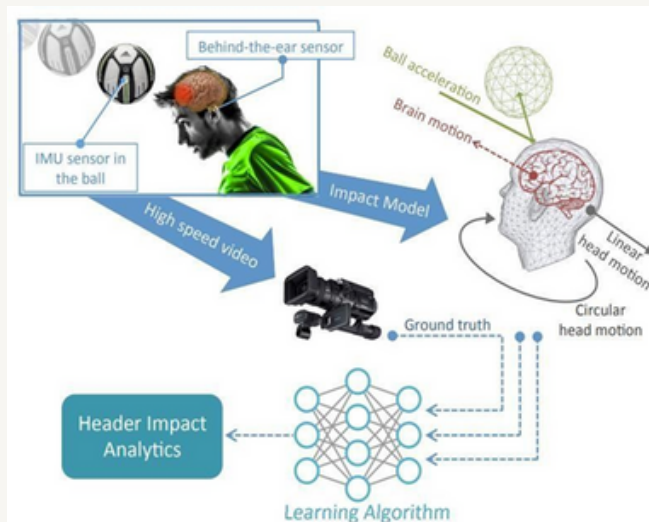
*3) Rapid adoption of the smartball leads to mass production, bringing down its cost significantly.*

*4) Affordable price brings the technology within the reach of millions of amateur players too, extending safety features to a wider population of soccer players.*

*On developing a method to assess the impact of headers using the micoach ball and compare its performance with*

*that of the xPatch. It has been found that, while micoach ball is somewhat limited in its sensing capabilities, results show great promise that a similar ball with a better accelerometer can be an affordable and convenient alternative for monitoring and preventing concussions in millions of soccer players.*

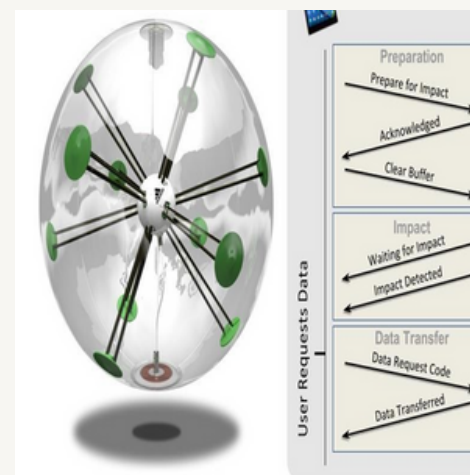




## ADIDAS MICOACH SOCCER BALL

While there is no smart soccer ball that fits our vision perfectly, Adidas recently released the micoach soccer ball.

It is a size 5 regulation weight soccer ball marketed for dead- ball kick training. Upon a kick, the companion app displays the speed, spin, and flight pattern of the ball. But, this information is inadequate for our purpose of studying header impacts. Therefore, we need to develop a new app to estimate the force of a header impact.



## **Hardware:**

*The smartball contains LSM3032 chip with tri-axial digital linear acceleration sensor, MSP430F5328 micro controller, and nRF8001 Bluetooth chip.*

## **Communication Protocol:**

*The smartball communicates with the companion app (say RealApp)*

*via Bluetooth Low Energy (BLE). To decipher the protocol between them, we develop two Android apps using standard BLE libraries: EmuApp to emulate the companion app and EmuBall to emulate a smart ball itself.*

## **Recording Headers:**

*Given the current operation sequence of the smartball, that records kicks when the ball is stationary, an improvisation is needed to measure the impacts of headers. Once the app issues a prepare-to-kick command, the ball notifies the app the moment it has been kicked.*



## **Accelerometer Readings:**

*We find that the acceleration samples given by the ball are represented as signed (2's complement) 16 bit integers, with maximum and minimum values of 2040, and - 2039, respectively*

We also observe that after each impact, we receive 1000 samples of accelerometer data per second.

## **Problem of Saturation due to Accelerometer Range:**

*A key challenge in estimating the header impacts from the accelerometer data from the smartball is that the range is only*

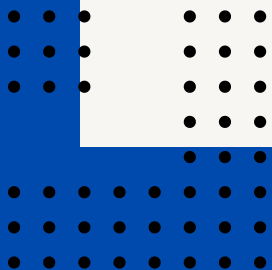
*$\pm 4g$  , while the acceleration for even a small impact is much higher. To illustrate this, we contrast the acceleration measured by the smartball and that by an external sensor, with a range of  $\pm 200g$  , stuck on the surface of the ball, when the ball is dropped from a height of less than one feet. Even for such a small impact, the truncation of the peaks, particularly those immediately after the impact, is evident from the accelerometer data of the smartball.*

## **CONCLUSION:**

*The increased awareness of the harmful effects on the brain*

*incurred from heading the ball in soccer make impact monitoring devices essential. Existing intra-oral and head-mounted sensors inconvenience players and may not be affordable for millions of amateur players. By illustrating the promise in using a smart soccer ball to measure the quantities from a head/ball impact, we have taken a step towards eliminating the need for such devices and helping make impact monitoring available to all.*

**-M. MUNISHA GOKILA**  
**IV YEAR**



## **SOLAR TREE:**

*In the world the utilization of energy is increasing day by day and therefore we required the renewable energy sources which are pollution free and easily available like sun light. Sun light is utilized by solar panels but when we required an array of panels the land requirement also increases which arises as a problem. For solution of this problem and for getting more energy we use solar trees.*

*In these trees basically there are solar panels which are arranged in Fibonacci series for getting more energy and the requirement of the land is less. Because of less requirement these are easily installed and these can be used in*

*straight lighting, home supplies and in industries etc. The sun light easily available so these are very beneficial there is no worry of availability of sun light in future because till the end of the world this is also available.*

*Meaning of the TREE in Solar Trees*

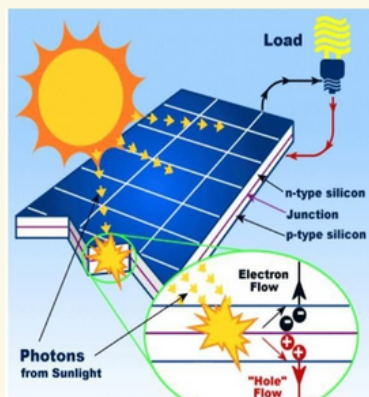
*T= Tree generating R= Renewable*

*E= Energy and E= Electricity*

## **History of Solar Trees:**

*In 1998 these are introduced first time as solar artwork on roads and public places. Then this technology is adopted as solar trees. In Europe these are used from many years.*

*In 2006 in Europe the energy consumption is 10%. 2000 billion kWh is used from solar trees and 2900 million ton carbon is eliminated. In October 2016 solar trees are used in Vienna, Austria. These are also used in Graz, Austria. Solar power: According the calculations made by scientists the sun gives  $3.7 \times 10^{26}$  watts of energy into the space and on the earth total amount of this energy is  $5 \times 10^{-10}$ th parts is reached.*



*The solar energy is also converted by using nanowire solar cells. These cells are made of semiconductor material Indium phosphide – generally used as substrate of epitaxial InGaAs*

## **Working of Solar Tree:**

Fluctuations which are comes in output are eliminated by the day night cycle and the weather shifts. The solar panels charged during the day. The LED's of solar tree in the panels are automatically on in the night and gets off in the morning. This automated process is done by the sensors which are used in the solar panels. The storage of energy is a basic problem in these trees.

## **Why better than traditional system:**

Solar trees are better than the traditional system because they requires less land about 1% of the land while the simple solar arrays required more land. For example if we produce 2MW energy from array of solar panels the 10-12 area of the land is required but by using the solar tree we require only 1% means only 0.10-0.12 area of the land that's why these are better option for future. In flat solar panels the produced energy is 100% and in the Fibonacci series trees it is about 120% which is more and the time required is 50% less than the flat solar panels.



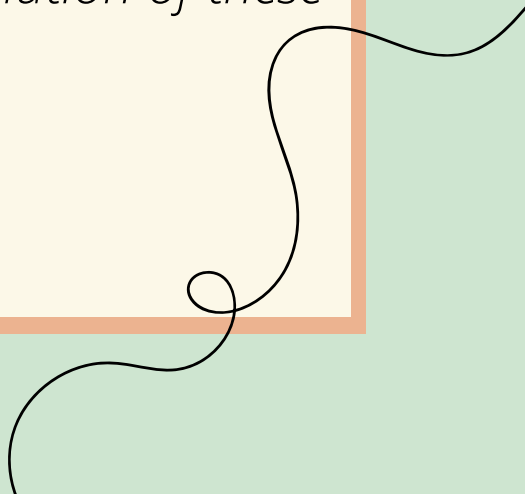
## **Comparison with Real Tree:**

*From the figures we can see that the solar trees works like the trees or more than trees.*

*These also are pollution free and eliminate the gases like CO<sub>2</sub> and other pollutants which are responsible for pollution.*

## **Future of Solar Tree in world and in India:**

*According all above facts we can conclude that the solar trees are need of the future because these are renewable sources of energy and in coming time these are became very popular because the requirement of land is less and sun light available till the future. In India the scientists of Central Mechanical Engineering Institute of Research (CSIR-CMERI) made a solar tree which can enlighten 5 houses at a time by using only 4 square feet of the land. In India there is too much population and the land is less and the requirement of energy is high so the solar trees are as an alternative solution of these problems.*



## ***Need of Solar Trees:***

*These are required because*

- 1. These uses less land.*
- 2. The energy is more than the flat solar panels.*
- 3. It can utilize wind energy by using biomimicry technology.*

## ***Advantages of Solar Trees:***

- 1. Pollution free*
- 2. Solution of future related energy problems*
- 3. People can save money*
- 4. Less land required*
- 5. Future energy source*

## ***Applications of Solar Trees:***

- 1. In house supplies*
- 2. In industrial supplies*
- 3. Decorative sculptures*
- 4. In deserts*

***-H. RAGADEEPA  
II YEAAR EEE-B***

# PAPER BATERIES:

*In a today's digital life, the portable electronic devices, such as mobile phones, portable camera, notebook computers, PDA etc. are becoming a popular because of their lightweight and small size.*

*Batteries used as a portable power source have also become the focus of public concern and have been an essential element of the various portable electronic devices.*

*Although actual basic problem with traditional batteries such as carbon-zinc batteries, alkaline batteries and secondary batteries, are allegedly environment benign, they in fact largely contain substantial amount of mercury and other heavy metals and also the price of the manufacturing process increasing daily.*

*The paper batteries may meet the energy demands of this next digital generation gadgets. A paper battery may be a versatile, ultra-thin energy storage and production device formed by combining carbon nanotubes with a standard sheet of cellulose-based paper.*

## **NEED:**

The ordinary Electro-Chemical batteries problems are:

### **1. Limited Life Time:**

The primary batteries irreversibly (within limits of practically) transform energy to electrical energy. Secondary batteries will be recharged; that's they can have their chemical reactions reversed by supplying electricity to the cell, restoring their original composition. But, reversible batteries square measure still costlier than primary batteries within the markets of developing countries like Asian country.

### **2. Leakage:**

If leakage happens accidentally the chemicals discharged is also dangerous. For example, disposable batteries typically use zinc —can|| as each a chemical and because the instrumentality to carry the other reagents. If this sort of battery is run all the way down, or if it's recharged when running down too far, the reagents will emerge through the cardboard and plastic that forms the rest of the container. The active chemical outflow will then damage the instrumentation the batteries were inserted into.

### **3. Environmental Concerns:**

*The widespread use of batteries has created several environmental concerns, like cyanogenic metal pollution. Metals such as Cadmium, Mercury, Lead, Lithium and zinc have been known as extremely dangerous metals. Also, batteries may be harmful or fatal if handled by young children. Whereas within the digestive tract the battery's electrical discharge can burn the tissues and can be serious enough to lead to death.*

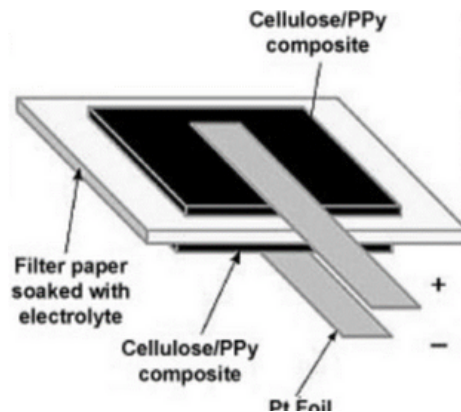
### **Paper Battery:**

*In August 2007 at Rensselaer Polytechnic Institute, a research team conducted by Dr. Robert*

*Linhardt, Dr. Omkaram Nalamasu and Dr. Pulickel Ajayan, developed the Paper battery.*

*In December 2009 at Stanford University, Lolo cui and his analysis team with success unreal the first operating example that gives one. 5V as its terminal voltage.*

## **Construction of a Paper Battery:**



*A paper battery construction involves the following components:*

- *Cathode: Carbon Nanotube(CNT)*
- *Anode: Lithium Metal (Li<sup>+</sup>)*
- *Electrolyte: All electrolytes (including bio Electrolytes like sweat, blood and urine).*
- *Separator: Paper (Cellulose)*

## **Working of a Paper Battery:**

*A conventional battery or Rechargeable contains variety of separate parts that produce electrons through a reaction between the metal and also the electrolyte of the battery.*

## **Advantages of Paper battery over Existing Batteries:**

*Biodegradable and Non Toxic: Since its major ingredients are of organic origin, it is a biodegradable and Non Toxic product.*

*Biocompatible: They are not easily rejected by our body's immune system if implanted into human body.*

*Easily reusable and Recyclable: Being cellulose based product it is easily recyclable and reusable, even with the existing paper recycling techniques.*

*Durable: It has a shelf life of three years.*

*Rechargeable: It can be recharged up to 300 times using almost all electrolytes, including bio-salts such as sweat, urine and blood.*

*Very Light Weight and Flexible.*

*Easily moldable into Desired Shapes and Sizes.*

## **Applications of Paper Batteries:**

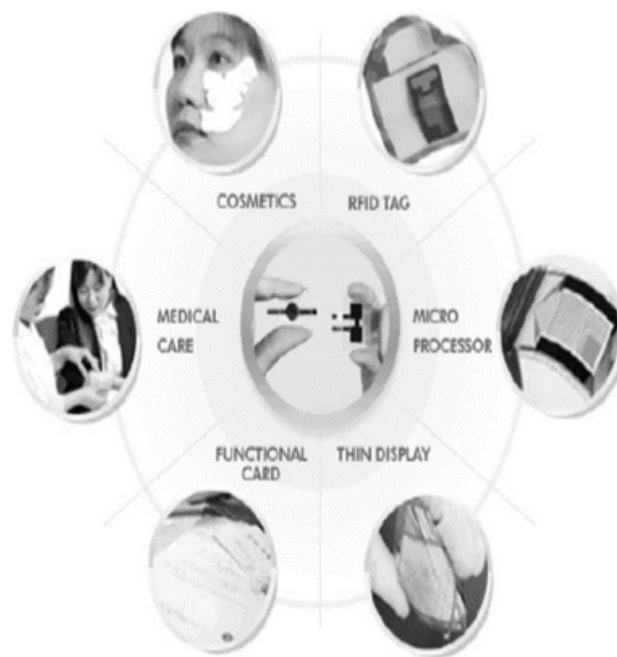
*With the developing technologies and reduction in the cost of cathode nanotubes, these batteries find applications in the following fields:*

### ***In Electronics:***

*In portable computer batteries, mobile phones, handheld digital cameras; the load of those devices can be considerably reduced by replacing the alkaline batteries, while not compromising, the electrical hazards associated with recharging are going to be greatly reduced.*

### ***In a Medical Sciences:***

*This work was supported in part by a grant from the National Science Foundation. Paper batteries are unit utilized in medical field like for creating pacemakers for the heart, artificial tissues, Drug Delivery Systems, Cosmetics and in Bio Sensors.*





## **Conclusion:**

*One of the main issues bugging the planet now could be Energy crisis. Each nation wants energy and everyone wants power. And this problem that disturbs the developed countries perturbs the developing countries like India to a much bigger extent. Standing at a point within the present where there can't be a day without power, paper batteries will provide an altogether path-breaking resolution to the same. Being biodegradable, Light weight and Non-Toxic, Flexible paper batteries have potential adaptability to power consequent generation of electronics, Medical devices and hybrid vehicles, allowing for radical new styles and medical technologies. However, India still has a long thanks to go if it's to be self-dependent for its energy resolution. Literature reflects that Indian researchers have gotten the scientific astuteness required for such revolutionary work.*

**-MANOJ GILBERT. M  
IV YEAR EEE-A**

## **WOMAN SAFETY SMART WRIST BAND:**

Women all over the world are facing and even subjected to unethical physical harassment. Security for women is still a major issue as the number of crimes and harassment over women and girls is increasing day-by-day. In this age of technology, mobile phone is one of the gadgets that almost everyone like and uses to keep in touch with family and friends. All they need is a device that can be carried everywhere easily. This proposed project deals with a quick responding, cost protection system for an individual and especially for women using which a woman in anguish can call for help just with the press of a button on this smart gadget

Self Defense module for women safety is like a Smart Watch for Women safety. It has the ability to help women with technologies that are embedded into a compact device

It has the potential to help women with technologies that are embedded. It is specially designed for women safety and protection. It has a control button that will be used by women to inform nearby police when they are in distress. This watch directly gets connected to the satellite through GPS when activated. Then the location is transferred through the GSM, it also contains a shock mechanism to produce non-lethal electric.

## **OBJECTIVES:**

Self defence and alert system for individuals to avoid crimes in alone or being in badly lit areas:

1. Implementation of a real time monitoring device can solve the problem to an extent.
2. The basic approach is to intimate instant location and a distress message to the cops and registered number like parents, friends, media, and women cell etc. incidents would be averted and to provide real time evidence for swift action against the perpetrators of crime against women.
3. Shock mechanism to produce nonlethal electric shock in emergency situations to deter the attacker.

## **WORKING OF PROPOSED MODEL:**

Aim of the proposed algorithm is to help women by the technologies that are embedded in it. Smart Watch for Women is specially designed for women safety. When the supply is given the device will turn on. GPS and GSM connected to ATMEGA also start working and it displays the current position of device.

Then with the help of GPS the location (latitude and longitude) of the victim is 47 detected and is displayed on the LCD.

When the victim feels danger, he/she presses the first emergency key, the kit displays emergency situation and voice kit is enabled. Now the victim gives voice command and it is recognized by the kit.

### **1. Microcontroller:**

The high performance Atmel 8-bit AVR RISC based microcontroller combines 32KB ISP flash memory with read-while-write capabilities, 1KB EEPROM, 2KB SRAM, 23 general purpose I/O lines, 32 general purpose working registers, three flexible timer/counters with compare modes, internal and external interrupts, serial programmable USART, a byte oriented 2-wire serial interface, SPI serial port, 6-channel 10-bit A/D converter (8-channels in TQFP and QFN/MLF packages), programmable watchdog timer with internal oscillator, and five software selectable power saving modes. The device operates between 1.8-5.5 volts

### **2. SOS Key Press Module and Voice Reorganization Module:-**

Any one action can be activates the system, which sends the message including the user location to the registered contacts.

### **3. Global Positioning System (GPS)**

module: -

It is a navigation and precise positioning tool, tracks the location in the form of longitude and latitude based. The GPS Coder Module used this information to search an exact address of that location as the street name, nearby junction etc.

In case where GPS is disabled then the system will only send the longitude and latitude

#### **4. GSM System Module: -**

##### **Global System for Mobile**

communication (GSM) SIM card is inserted inside the mobile device to send and receive the messages using GPRS. The GSM SIM card number is registered with the system. With increasing usage of GSM, network services are expanded beyond speech communication to incorporate many other custom applications, machine automation and machine to machine communication.

#### **5. Screaming Alarm Siren: module:**

It makes the alarm at —user end whenever user activates the system through the SOS button or through voice command. In case of the intrusion activity the alarm siren generated at the home side

#### **6. Shock Generator:**

It contains a shock mechanism to produce non-lethal electric shock in emergency situations to deter the attacker.



## **RESULTS AND CONCLUSIONS:**

The working of the proposed model can be dealt in steps as shown below:

When the woman is in distress situation, she can press the emergency key which activates the self defense mod

The current location is captured by the GPS module and will be displayed on the LCD DISPLAY. initial location identified.

This diagram shows us the location of the particular person whom we want to track. This is done with the help of GPS.

Through GSM the emergency message is sent to the near by police station, and also to relatives, friends by using the contact numbers which are stored in the GSM.



# BOOK REVIEW

## THE FAULT IN OUR STARS

BY  
JOHN GREEN



## **ABOUT THE BOOK -**

Despite the tumor-shrinking medical miracle that has bought her a few years, Hazel has never been anything but terminal, her final chapter inscribed upon diagnosis. But when a gorgeous plot twist named Augustus Waters suddenly appears at Cancer Kid Support Group, Hazel's story is about to be completely rewritten.

Insightful, bold, irreverent, and raw, *The Fault in Our Stars* is award-winning author John Green's most ambitious and hardworking work yet, brilliantly exploring the funny, thrilling, and tragic business of being alive and in love.

The story is written in a breathtaking way which makes us become a part of the characters and feel the same emotions. Hazel and Augustus appeal to readers through their sense of humor and their courage.

Insightful, bold, irreverent, and raw, *The Fault in Our Stars* is award-winning author John Green's most ambitious and heartbreaking work yet, brilliantly exploring the funny, thrilling, and tragic business of being alive and in love.



# ABOUT THE AUTHOR -

John Green is the #1 New York Times bestselling author of Looking for Alaska, An Abundance of Katherines, Paper Towns, The Fault in Our Stars, and Turtles All the Way Down. He is also the coauthor, with David Levithan, of Will Grayson, Will Grayson. He was the 2006 recipient of the Michael L. Printz Award, a 2009 Edgar Award winner, and has twice been a finalist for the Los Angeles Times Book Prize. Green's books have been published in more than 55 languages and over 24 million copies are in print.

In June 2014, the movie adaptation of The Fault in Our Stars was released, directed by Josh Boone, produced by Fox 2000 and Temple Hill, and starring Shailene Woodley, Ansel Elgort, and Nat Wolff. The screenplay was written by Scott Neustadter and Michael Weber, who went on to adapt Paper Towns for film.

**-PET. T. BAVITHA  
1 YEAR EEE A**



The background features a large, semi-circular gradient shape in shades of purple and pink, resembling a sunset or sunrise. Below this shape, dark silhouettes of mountains are visible against a black background. Scattered throughout the scene are numerous small, white, circular dots of varying sizes, representing stars in a night sky.

# IDIOMS AND PHRASES

# 1. HEAD IN THE CLOUDS

## MEANING:

Used to describe someone who is not being realistic, the expression —head in the clouds|| suggests that the person isn't grounded in reality and is prone to flights of fancy. The opposite expression would be something like —down to earth, meaning someone who is practical and realistic.

## EXAMPLE:

He's not right for this role, he has his head in the clouds.

## ORIGIN:

In use since the mid-1600s, the origins of this expression are unclear beyond the obvious imagery of someone who is a bit of a fantasist (having one's head in the clouds is clearly impossible – or at least it was in the days before aviation!).

## **2.POT CALLING THE KETTLE BLACK ROW**

### **MEANING:**

We use this expression to refer to someone who criticizes someone else, for something they themselves are guilty of.

### **EXAMPLE:**

You're greedy.— Pot calling the kettle black?

### **ORIGIN:**

First used in the literature of the 1600s – notably Don Quixote by Cervantes – this expression has its origins in the Medieval kitchen, when both pots and kettles were made from sturdy cast iron and both would get black with soot from the open fire.

### 3. ONCE IN A BLUE MOON

#### MEANING:

The phrase refers to something that happens very infrequently.

#### EXAMPLE:

I only see him once in a blue moon.

#### ORIGIN:

Confusingly, a blue moon doesn't refer to the actual color of the moon; it refers to when we see a full moon twice in one month. This happens every two to three years. It's thought that the word —blue may have come from the now obsolete word —belewe, which meant —to betray; the —betray moon|| was an additional spring full moon that would mean people would have to fast for an extra month during Lent. The saying in its present meaning is first recorded in 1821





## 4. EXTEND THE OLIVE BRANCH

### MEANING:

To extend the olive branch is to take steps towards achieving peace with an enemy (or simply someone with whom you have fallen out).

### EXAMPLE:

I thought it was about time I went over there and extended the olive branch.

### ORIGIN:

This expression has biblical origins, and was seen as an emblem of peace. In Genesis, a dove brings an olive branch to Noah to indicate that God's anger had died down and the flood waters had abated

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## 5. BLOW ONE'S OWN TRUMPET



### MEANING:

Blowing one's own trumpet means to boast about one's own achievements.

### EXAMPLE: :

Without meaning to blow my own trumpet, I came top of the class.

### ORIGIN:

Though phrases meaning the same thing had been in use for centuries, the actual expression is first recorded by Anthony Trollope in his 1873 work *Australia and New Zealand*.



*By,*

**R.KAUSHIKA**

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**POEM**



# POEM:

வாய்க்கை

தாயின் கருவில் ..

மக்து மாகுழம் ..!!

மறக்கா அனுபவங்களில் ..

மீதக் காலமும் ..!!

ரசுக்கச் செய்த ..

சின்னத் சிறு விஷயத்தினாலும் ..!!

சின்திக்க தைத்த ..

மல வித நொடிகளோடும் ..!!

சிரிப்பு சந்திரம் ..

கவலையின் கண்ணிரும் நிறைந்த .....

குமடி குமடி ஆசைகளையும் ..

சின்னத் சின்ன ஏக்கங்களையும் கொண்டு .....

சில வெற்றிகளைச் சந்தித்து ..

மலத் தோல்விகளை உதறிவிட்டு .....

சில மல ஏமாற்றங்களையும் சந்தித்து ..

தொடரும் போராட்டத்தை எதிர்த்து .....

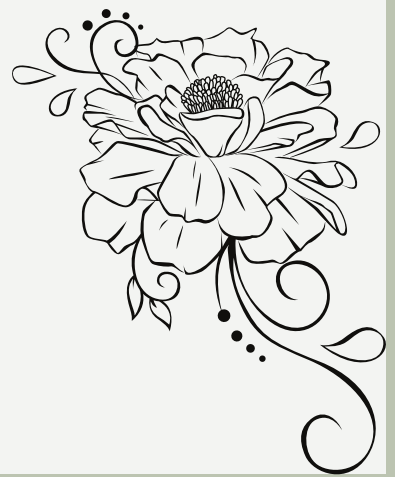
நிறைவாய் சுவாசிப்பீடு .....

வாய்க்கை !

-J. JEYA VINISHA  
II YEAR EEE-A



# Technie's Ingenuity



A.ANGELINE  
ESTHER  
II YEAR EEE B



M.GAYATHRI  
II YEAR EEE B

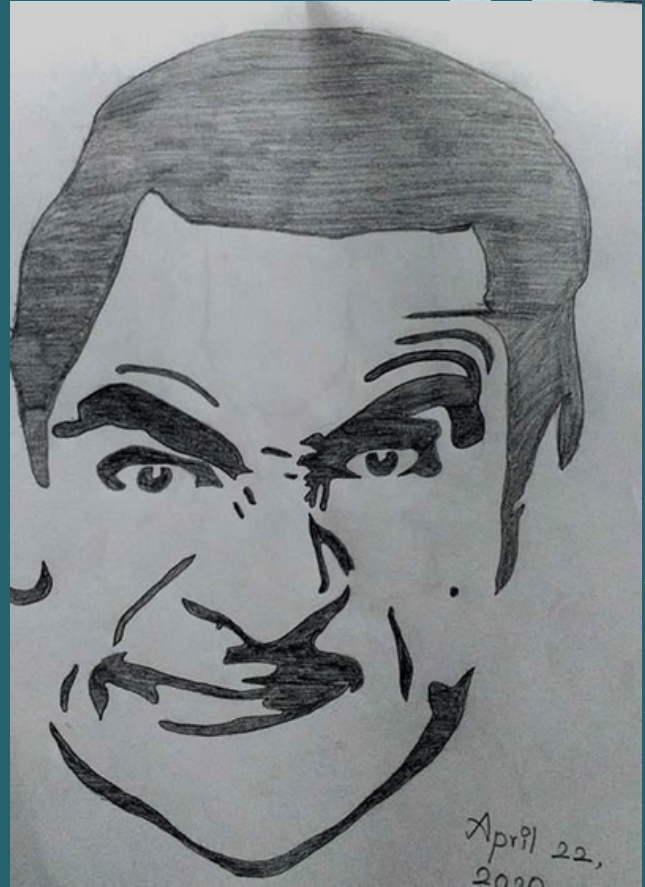


S . NITHUSIGA III  
YEAR EEE-A

S. KIRUTHIKA  
RANI  
I YEAR EEE-A



H.NARENDRAN SIBI  
I YEAR EEE A



R.KAUSHIKA  
I YEAR EEE A



**Inspiration is like a spark. It can light the whole city. One frail lady with strong conviction has motivated thousands of others to have good education and be proud citizens. One Velammal has kindled the spirit of Thousands of Velammalians.**



**VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY  
DEPARTMENT OF EEE**

