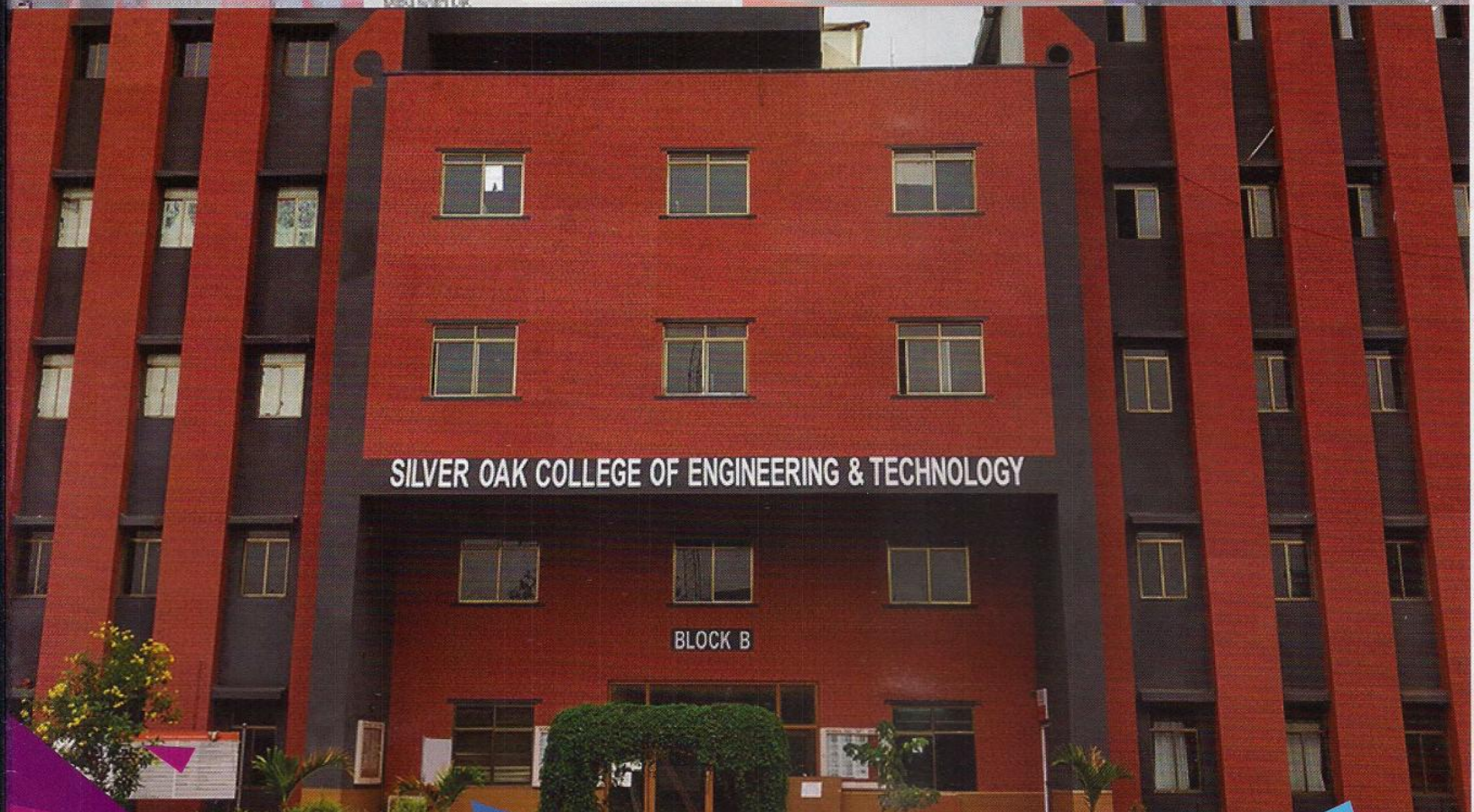


Aditya Silver Oak Institute of Technology (Silver Oak Group of Institutions)

# TECCOS

Reflection of SOCET



INSIDES : GLIMPSE 6 | CLAY MODELLING 10 | RESEARCH CONTRIBUTION 11



## **FROM THE TPO'S DESK**

As you all know T & P Cell works as a bridge between Industries and Academia. At the front end it contacts industries to offer job opportunities to the students and at the back end it improves employability of the students. Now the question is how to improve employability and what skills and competencies companies consider while recruiting students? I have seen in my career of decade old in this field that even rankers who have scored handsome marks in academics fail to secure job which they deserve. The reason for this is that preparation required to get good score in academics and to get selected in interview process is altogether different. To elaborate let me brief about interview process to you people.

Interview process has different stages to clear. It starts with the Pre placement Talk in which companies brief about their offerings, company culture, their expectations from the students, package details and service agreement etc. Next stage is Technical and/or Aptitude written test. In the test paper major emphasis is given to FUNDAMENTAL knowledge of the respective branch. Many students who don't practice enough usually fail in the written test. Most of the problems in the question paper are easy but due to time constraint and due to lack of practice students could not solve the problem even though they know the answer. Second phase is Group Discussion in which companies check group behavior of the students followed by Technical and HR Round of Interviews. In personal interviews also maximum emphasis is given on fundamental subject knowledge of the students and industry readiness. Students must have flair in English communication with pleasant personality and must possess awareness of the latest happenings in the Engineering field.

It is to be noted here that Campus Placement is the easiest way to enter corporate world and students should avail maximum advantage of this facility. To prepare students for campus interviews we have deployed full time well experienced corporate trainers and run Campus Recruitment Training (CRT) program and trainers help students become industry ready. Regular sessions on Aptitude building, Resume writing, Business corporate communications, Personal interviews etc are conducted as an integral part of the curriculum.

Every year more than 150 companies visit our campus for campus placements. Some of the premier companies which offered job to our students are: TCS, Coca Cola, Asia Motor Works, L & T Infotech, Infosys, KPIT Cummins, Nirma Cement etc. In the last academic year we had organized highest number of pool campus drives and placed more than 500 students. Every batch observes 70% of the effective placements at the end of placement season. Apart from this more than 200 companies offer our students internship every year as well.

With aggressive and affirmative approach, rigorous follow up and very effective Campus Recruitment Training (CRT) program our Training and Placement Cell climbs new heights each passing year

Yours Sincerely,  
Nipen Shukla



## KOTLIN

In recent years Development industry has witnessed a lot of programming languages and/or programming scripts. So whats KOTLIN then? Another tech buzzword maybe?

Kotlin is way more than what it seems like:-

- Kotlin compiles to JVM bytecode or JavaScript
  - Kotlin comes from industry, not academia. It solves problems faced by working programmers today
  - Kotlin costs nothing to adopt!
  - It enforces no particular philosophy of programming, such as overly functional or OOP styling.
  - It imposes no runtime overhead. The standard library is small and tight
  - Kotlin allows you to keep using your productivity enhancing tools. If you use IntelliJ, IDE interop is entirely seamless: code can be refactored, searched, navigated and auto completed as if the Kotlin code was Java and vice-versa.
- These were the extreme brief points why Kotlin is a future ready script
- Because Kotlin focuses on readable syntax, code reviews are not a problem
  - We already mentioned null safety (optionality), that lets the compiler systematically flag potential null pointer dereferences.
  - Exceptions are unchecked.
  - Adding the data annotation to a class triggers auto generation of boilerplate like equals, hash Code, toString, a copy method and variable spreading support (destructuring).
  - Markdown instead of HTML for your API docs. This makes writing JavaDocs much more pleasant.

And there are many thing to showcase, for more :<https://kotlinlang.org/>



Article by:  
Shreyan Mehta  
6th Semester  
Computer Department

## MOBILE MARKET IN INDIA

India is expected to overtake the US as the second-largest smartphone market next year with robust annual growth. According to the report on global technology and telecom, the country's smartphone market will grow at a compounded annual growth rate (CAGR) of 23 percent till 2018 and would account of 30 percent of the global growth during this period.

I personally expect India to overtake the US next year as the second-largest smartphone market by unit. According to my estimation 192 million smartphones will be shipped to India and 11 % of global units. There are only 225 million smartphone subscribers in our country i.e. 18% of the total population. By 2018, according to one report, India's internet penetration will reach 50 % from 26 %. The global consultancy estimates 4G smartphones will account for 75 percent of 170 million shipments by the next year. But China cannot be underestimated, because despite calls for boycott of Chinese goods on Indian social media, the sales of Chinese smartphones are on the rise due to growing acceptance of brands like Vivo, Oppo and Lenovo. The mobile phone market in India is not a blank canvas, and Chinese smartphone makers have to face competition not only from international mobile phone giants like Apple which had a market share of about 12 percent in the Indian market in terms of shipment by the end of June 2016 but also from local Indian mobile phone makers like LAVA, Micropmax and a variety of such brands.

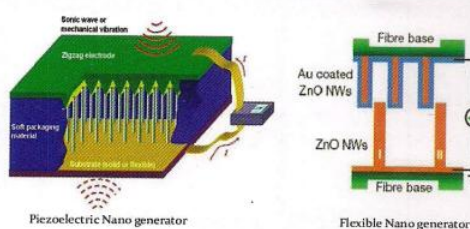


Article by:  
Shubham Chaurasia  
6th Semester  
IT Department

## NANO GENERATORS: POCKET POWERHOUSES

The development of an existing technology is measured in terms of increase in efficiency, self-sustainability and/or portability. Since the invention of the light bulb, we have always strived to find a better way to power it. First there was direct current, then alternating current; then the more portable sources like batteries, rechargeable batteries, fuel cells and technologies involving the use of alternative resources of energy (wind, solar, hydroelectric, etc.) to power electrical and electronic devices. There is energy everywhere around us in our living environment. It is up to us to figure out a way to transform this energy to do some useful work. If we just look at our body for example, it consists of neurons constantly firing electric signals throughout the body to process response and generate stimuli (electrical energy), it also consists of many links and mechanisms which do work like when we walk our footsteps generate about 67 Watts of power or our finger movement produces 0.1 Watts (mechanical energy), chemical reactions take place to release energy from our food to maintain our body temperature and metabolism (chemical and thermal energy). Even though these sort of outputs cannot power big electrical devices, if transformed accurately it can be used to power small electronic circuits. Nano generators aim to do just that. In this article we will look into

Schematic diagram of a Nano generator



the Nano generators from conception to how they work to what they hold in store for our future. A Nano generator is a term used by scientists to describe a small electronic chip which transforms mechanical or thermal energy (produced by minute physical reaction) into electricity. They have an IC (integrated circuit) etched onto an elastic surface, called the substrate, which is basically the type of circuits that we would find in the electronic devices but at a minute scale as the term "Nano" implies. Viewed from the naked eye, it looks like lines and boxes but, underneath all that (when viewed through a microscope) lies a complex system. The goal to be achieved by a Nano generator is provide self-sustainability to the Micro/Nano Systems by harvesting energy from its environment. It was first proposed by Dr. Zhong Lin Wang and his colleagues at Georgia Institute of Technology in 2006 and they had developed the first Nano generator for a self-powered system. To convert the mechanical energy into electricity Nano generators use arrays of "Nanowires" which are made of piezoelectric zinc oxide (ceramic) material. Piezoelectric materials produce a potential difference when they are strained. The strain is provided by the environment which these piezoelectric nanowire arrays convert to electric potential. The straining force results in a transient flow of electrons in the external load because of the "Piezopotential". The advantage of using these nanowires is that they can be triggered by a tiny external force at wide range of excitation frequencies (One Hz to thousands of Hz). By combining the effects of thousands of such piezoelectric nanowires, a gentle strain can produce about 1.2V of electricity which can power an LED and a small LCD unit.



Article by:  
Sanket Solanki  
4th Semester  
Chemical Department

## HOW TO USE YOUR OUTDATED COMPUTER SYSTEM

Many of you might be having an old computer system with you which no one is ready to buy due to very low system configuration and obviously you would not like to give it in scrap so what to do with that system I will tell you what to do with that system in my this article.

Before I tell you what to do let me tell you something about Watt OS and for what the Watt OS is designed for

### WHAT IS WATT OS

WattOS is a lightweight Linux operating system remastered from the core Ubuntu Linux build. It is a free operating system that focuses on a small footprint, low power, and a simple quick interface that you can easily add whatever you want.

WattOS is a really interesting lightweight Linux distribution that is based on Ubuntu 10.04 (as of WattOS R2). As the name might suggest, it is also focused on low power usage and is said to work well with older and less powerful hardware. At the same time, though, it runs familiar software, like Firefox, Empathy for instant messaging, etc.

### HARDWARE REQUIRMENTS

This Watt OS is a Linux based light weight operating system which can run on bellow given system requirements

Minimum Processor: 80386

Minimum RAM: 128MB is recommended (can even work on 66 MB of RAM)

### What can you do with Watt OS

Well – just about anything! It works well for old computers and systems with low power and or memory. If you want to revive that old computer and make run fast and new again, make a low power computer or Kiosk, and more! It can perform many functions that any computer could use. Surf the internet, word process, email, spreadsheets, listen to music, watch movies, chat, whatever you want you could do however it cannot do some high-end work such as playing high-end graphics games or watching ultra HD videos but can do basic work as described above.

### USER INTERFACE

Watt OS has a friendly user interface. It uses Openbox and LXDE to form the desktop environment, and while many Linux users may not have even heard those names, the combination works brilliantly keeping the software lightweight and super speedy, but without behaving oddly or describing things in an unusual way. In short, a non-technical user certainly won't have a problem with the way the desktop works if they have used full-fat Ubuntu before.

### How can you install or try out WattOS?

That part is easy with a little reading and effort.

Simply download the WattOS file from downloads section of the website planetWatt.com. (When in doubt get the newest version). Then burn it to CD or copy to USB, put it in your computer and reboot. If your computer is setup to detect bootable CD's or USB sticks (thumb drives), it will automatically start and you can try WattOS right from the CD/USB stick without changing anything on your computer. When you are happy with what you see, there is an "Install" icon right on the desktop. Click on that and follow the prompts and you will quickly have a shiny new operating system!

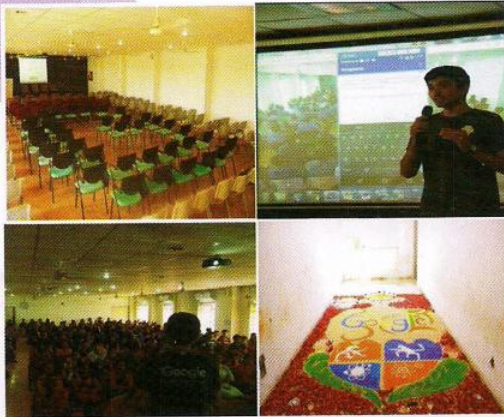
Now there is no need to tell you what to do with your old outdated computer system just install the Watt OS and enjoy with your old computer system like a new computer without any issue.



Article by:  
Jay Bhatia  
6th Semester  
Computer Department

## GLIMPSE OF 2016

### Google Applied CS with Android



Our final year student Parth Modi visited Google Gurgaon office on 30-31st May 2016. He was one of the participant of program called Applied CS with Android platform Boot Camp. In that program he took the responsibility to teach the course designed by the Google Inc. to his fellow students and juniors. Total 3 workshops were arranged. In all the session students have to built Android Game using Data Structure , Algorithm , Android basics Largest rangoli of our college having size 17 x 10 ft was made by students for the same which includes name and symbol of Google and silver oak college. Many more Innovative ideas were implemented like seating arrangement was in Android symbol i.e. G letter representing Google Inc

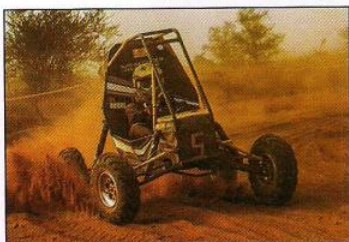
was highlighted, live streaming of activities inside Hall on projector screen. Students were also awarded with "versions of ANDROID:Kitkat & Eclairs !" as token of appreciation. He also spoke about various games that he build during sessions at Google. They were: Anagram, Scanner's Dice, Ghost, Puzzle8. Prof. Satvik Khara shared a few words, wherein he stated facts about the whole program which included more than 100 students who certified from Google. The Head of the IT Department, Assistant Professor, Mr. Jaimin Dave also shared a few words, in which, he pressurized on the importance of dedication. Another student, Mr. Chirayu Desai, 3rd semester, C.E., was called upon the dais, who had been to Johannesburg outlet of Google Inc. He was the only student from all over Gujarat in this event, to have been granted the privileged Google Summer of Code (GSOC). Code Sprint part was very fun and useful part for the students. Many of them could complete their game successfully like Sudoku Solver, Tower of Hanoi, 7-8 (Card Game), Word Antakshari. The session ended with a vote of thanks given by Prof. Umang Thakkar and Prof. Darshil Shah. Lastly event was ended up with "Android Version Snacks" i.e. Sandwich followed by Ice-cream to each participant.

### IIT-B OSTC

In current term, 778 students from 6th & 8th semester (All branches of SOCET) appeared for IIT-Bombay OSTC exam on various courses, whose initiative was taken by CE Department, from which 574 students are qualified and have got the certificate from IIT-B.

### ENDURO STUDENT INDIA

It's a very proud moment for Mechanical Engineering Dept and SOCET at large as our Mechanical students have secured 1st Rank in all over Gujarat (11th Overall - At India Level) out of 79 teams in "ENDURO STUDENT INDIA" competition (National level Car Racing) which was held at COIMBATORE from 3rd - 9th January 2017.



## IMPACT OF DEMONETIZATION

India is a vast nation and being tagged as 'Developing nation', it has many tasks which are to be done and need to work very hard to change its status from developing to developed nation at international level. Major or minor changes in its policies reforms, directly or indirectly has great effect on each and every citizen of the country. 2 months ago, Honourable Prime Minister Narendra Modi announced in his address to nation program regarding demonetization of high value currency that is discontinuation of ₹ 500 and ₹ 1000 notes from economy by immediate effect, to fight and curb corruption and black money present in the domestic as well as international market, 'majority is in high denominations'. Such decision requires intense study and analysis of the situation before and after final verdict is taken.

Before Demonetization was implemented, many countries already tried their faith to bring back their economy on correct path, but majority were failed. But, India didn't hold back its decision to act on "Parallel Economy". People were ready to stand in long queues to either deposit or exchange their own hard earned money into banks. Such response gave government enough confidence to make more strict and hard rules to avoid any loophole for the Biggy head to escape from whole process. Such actions even had negative effect as many persons lost their lives either due to demonetization or any other reasons which highlighted loopholes in management of such huge drive in the vast country like INDIA. Due to demonetization in India, many great things took place and many more results will be reflected in future in the form of statistics. Let's have a look at few of them which shows Impact of demonetization on Indian economy. First of all, from common men to rich person everyone got the live updated status of Black money every now and then which signals every Indian to be aware of Black money. Many big officers of different fields as well as businessmen's, Jewellers, politicians are caught with fake and old notes worth of lakhs and crores by various agencies, which was one of the major target of Government. As it is said 97%, transactions are done with cash in India, this drive guided our nation to be Cash-less society and soon cashless society brought awareness among citizens regarding digital way of transactions.



Many Incentives and discounts are being provided by Government through different schemes and plans to create cashless nation. Different Android applications created by Government itself came into lights and helped people to complete their transactions compare to insecure and costly private application makers. It has many more benefits like, Banks are loaded with liquidity and soon interest rates of loans will come down. FDI will be more to show more transparency to foreign companies which will ultimately attract their investments. Even Builders Lobbies which has great share in black money seems coming down which will in turn decrease the rates of homes for the people. With advanced technology available with government, now they can keep a hawk-eye on all suspicious transactions to avoid hoarding of black money. It helped small merchants to acquire digital interface to create cashless economy. Due to such drive many banks accounts are opened which created digital network in the country which will help Government to crack down on money that has been leaked in the form of corruption. Finally, India was firmly waiting for such type of Injection to eliminate or decrease the amount of virus, in the form of Black money and corruption from last many decades. YES!! Being very serious disease it will have many side effects due to heavy dose of antibiotics in the form of strict rules and regulations for all, but India will enjoy its fruitful results in the coming future very soon.



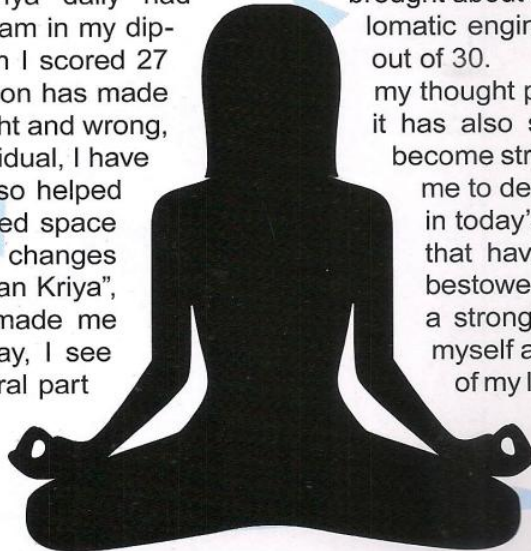
**Article by:**  
Harshit Shah  
6th Semester  
Civil Department

## LET'S GO BACK TO OUR ROOTS

I never knew how beautiful life could be! I always thought that life was all about being straight faced, studying on loop and dealing with mountain sized problems; in my opinion, life is nothing but a test. I was introduced to "The Art of Living" through my mother who is engaged with the institution. She enrolled me for a course called the "Youth Empowerment Seminar" (YES Course) which was specially designed for teenagers. In the beginning, I wasn't regular with my practice of Sudarshan Kriya and Pranayam as I thought it to be boring. When I was in 7th standard, I scored 3 out of 20 in Maths and failed the subject. In the following years, from 7th to 10th standard, my marks were on a downward slope. My Tuition teacher told me that he wasn't sure if I would pass Maths in the 10th Boards. Fortunately, I passed scoring 45 out of 100.

Later, I took admission in diplomatic engineering. During that time I went to International Ashram Of Art Of Living-Banglore, and participated in a course called "Youth Empowerment Seminar (YES +)".

It was after this course that my practice in Sudarshan Kriya and Pranayam became regular. Practicing Sudarshan Kriya daily had brought about a drastic change in my academic performance. In the first internal exam in my diploma, my fear towards Maths had been put to rest when I scored 27 out of 30. Moreover, regular Meditation has made my thought process clear to enable differentiation between right and wrong, it has also saved me from succumbing to peer pressure. As an individual, I have become strong, bold and have learnt how to control my emotions. It also helped me to develop clarity of mind, which, according to me, is an unfilled space in today's youth. As I reflect upon these changes that have come about in me, I realize that the boon of "Sudarshan Kriya", bestowed upon me by my master, Sri Ravishankar ji, has made me a stronger, more focused, efficient and myself at a juncture, where daily meditation has become an integral part of my life. The Art Of Living has brought me back to my roots, changed my mind and guided me to achieve my goals in life. I strongly stand by the teachings of my master and believe that "Nothing is impossible in Life", and this world belongs to me.



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Article by:  
Hiral Amar Thaker  
3rd Semester  
IT Department

**BODY**

I see the wonderful  
creation of God  
To whom  
one loves a lot;

Myriad numbers of people  
in the world  
But still they're the same,  
the one;

An illusion: lusty and cruel  
But still, kind, beautiful and  
loved;

True wealth for human  
An everything for some people;

Just like the fragrant flower  
Though rise and fall like the sun;

Luminous holy temple,  
we pray you  
Thee O body! May this spirit  
lives  
forever in your room.

**MIND**

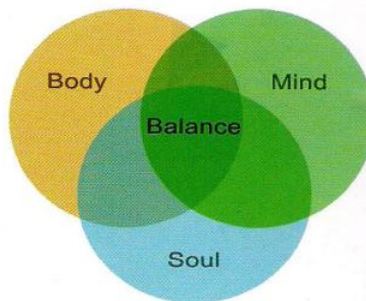
The mind;  
It is a castle full of  
thoughts  
The lonely bag of  
desires;

The power,  
greater than the machines  
A friend, of the books,  
quotes and scripts;

An ambition, higher than  
the mountains  
A breeze, feeling in the dawn  
inside my veins;

The wealth of our  
greatest imaginations  
And health of the  
artistic bodies and souls;

The mind, Tool of an abundant  
energy over control  
From destroying to rule the  
world with love and joy.



**SOUL**

An invisible form, yet invincible, Filled with the lightness, and unbreakable;  
A silent being, no one can hear, Living in the body, no one can see;

The will of thyself is an eternal  
Transcending limits through the doors of the heaven;

Asking a question, to myself everyday, Who are we in this vast milky way?  
And then the light inside of me, Illuminating so bright and tells me;

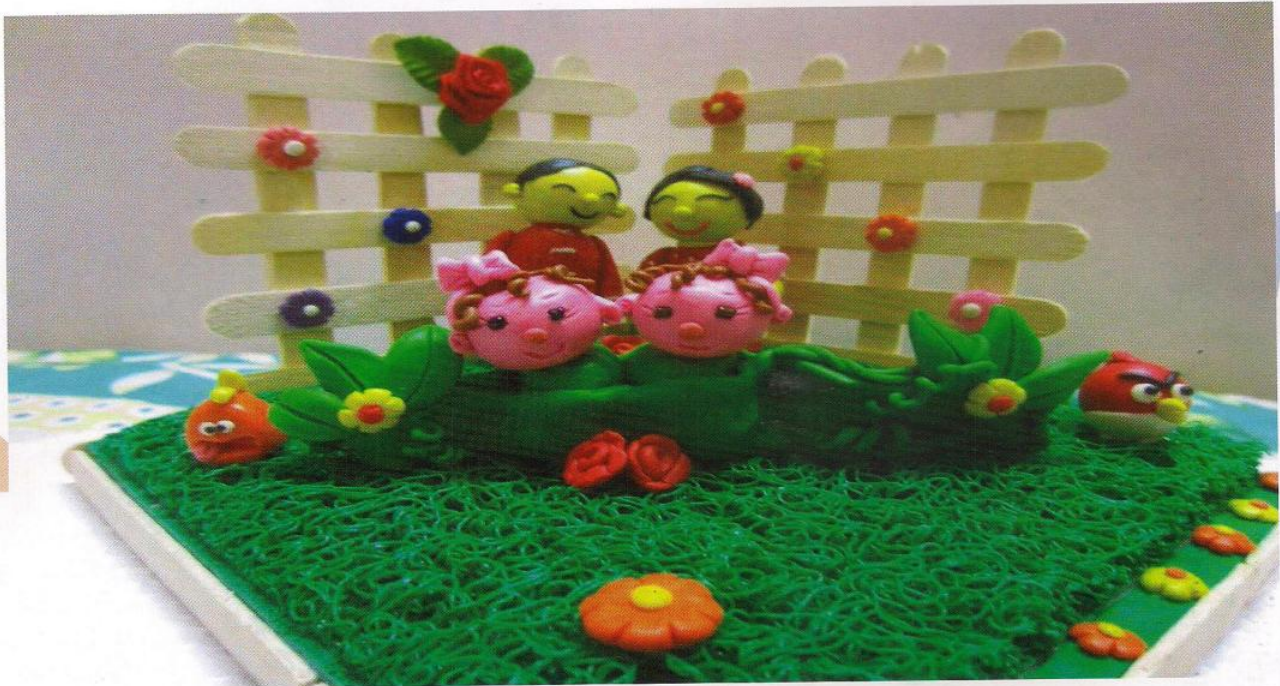
You're the creator and destroyer of your own  
(O friend!) you're everywhere, the ubiquitous soul.



Article by:  
Vihaan Bhavsar  
8th Semester  
Mechanical Department

## “CLAY” THE HISTORY OF PROFESSION

I never knew that creativity would play such a major contributory role in my career. My love for craft and clay modelling dates back to my interest in the animated cartoon series “Angry Birds”. The first time I tried my hand at clay modelling, it was surprisingly easy for me. Probably, I was natural at



it. Clay modelling helped me to transform my imagination into sculpted pieces of creativity. I have come to realise that finding one's interest in the creative field and converting it into a profession is an experience of complete satisfaction.

My career in clay modelling started as a freelancer. I started making customised models for my customers for occasions like birthdays, anniversaries etc. Along with clay modelling, I also make handmade cards which are sent to customers outside the city with absolutely no courier or shipping charges. My first official clay model was for an arena animation where I had created a Cow Farm .

I started my professional life at the age of 17 and earned my first income of Rs 1800/- for a model which I had designed on the occasion of a couple's anniversary. I also learnt to manage the expenditure of my clay materials through the income I generated by selling the models. Along with the above activities, I also design logo for new firms.

As I reflect upon the changes that have been brought about in me through my hobby of clay modelling, I realise that there is no greater joy than transforming your hobby into a source of income. Once your passion moulds itself into profession, the constant burden associated with a job, disappears. I strongly live by the motto, do what you love and love what you !



Article by:  
Gayatri Sisodia  
3rd semester  
IT department

## RESEARCH CONTRIBUTIONS

DOMAIN NAME: Smart Attendance, Internet of Things  
RESEARCH BY: Rahul Shrimali, HOD- IT Department  
(ASOIT)

CONTACT AT: rahulshrimali.ce@socet.edu.in



DOMAIN NAME: Virtual Reality, GTU Website  
RESEARCH BY: Satvik Khara, HOD- CE Department,  
GTU Coordinator (SOCET)  
CONTACT AT: satvik@socet.edu.in

DOMAIN NAME: Carbon Capture and Storage  
RESEARCH BY: Amit Agrawal, HOD- Chem Department  
(ASOIT)

CONTACT AT: amitagrwal.che@socet.edu.in



DOMAIN NAME: Image Processing, Computational  
Intelligence, Statistics, Information Security  
RESEARCH BY: Devang Pandya, HOD- CE Department  
(SOCET)  
CONTACT AT: devangpandya.ce@socet.edu.in

DOMAIN NAME: High Speed Traction System  
RESEARCH BY: Parthiv Shah, HOD- Elec Department  
(ASOIT)

CONTACT AT: parthivshah.gn@socet.edu.in



DOMAIN NAME: Advanced Manufacturing Techniques  
RESEARCH BY: Mit Shah- HOD- Mech Department  
(SOCET)  
CONTACT AT: mitshah.me@socet.edu.in

DOMAIN NAME: Data Mining  
RESEARCH BY: Sagar Patel, HOD- CE Department  
(ASOIT)

CONTACT AT: sagarpatel.ce@socet.edu.in



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