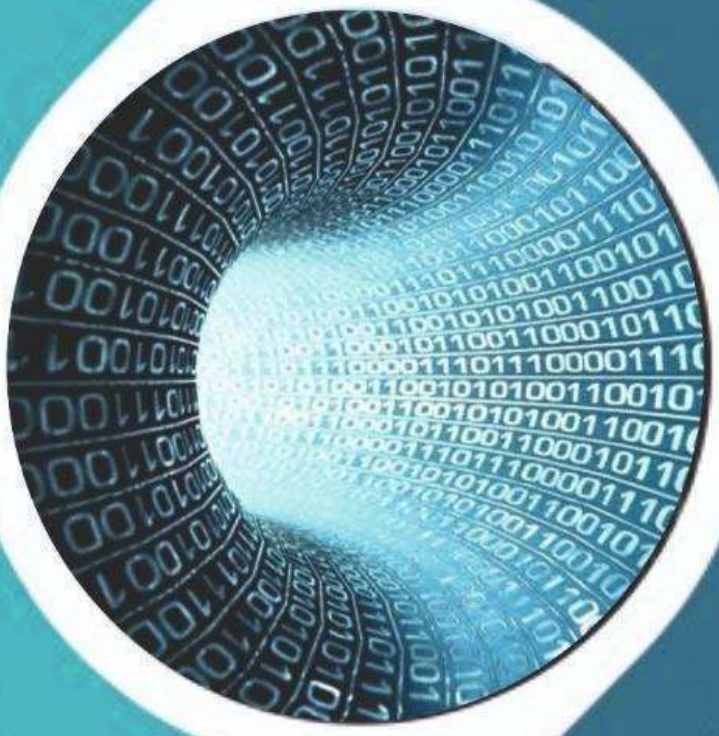
AN ECE DEPARTMENT MAGAZINE

electronica

LEARN INVENT GROW



Second Edition

2019-20

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY
(Approved by AICTE, New Delhi & Affiliated to Kurukshetra University, Kurukshetra)

Department of Electronics & Communication Engineering

Vision:

To excel globally in technical education and research in the field of electronics and communication engineering and thus contribute to the welfare of society.

Missions:

M1: To establish a unique learning environment to enable the students to face the ever-emerging challenges in electronics and communication engineering.

M2: To equip the students with a broad intellectual spectrum and prepare them for diverse and competitive career paths.

M3: To provide practical orientated education and foster tie-up with national/international educational institutes, research bodies, and industry to support students and faculty development pursuits.

M4: To provide ethical and value-based education by promoting activities addressing societal needs.

Program Educational Objectives (PEOs)

PEO1: Be able to successfully practice electronics and communication engineering with acquired skills and knowledge.

PEO2: Be receptive to new technologies and attain professional competence through advanced education, research work, and other professional activities.

PEO3: To prepare graduates who will practice their profession with ethics, integrity, and social responsibility in a global context.

PEO4: To develop leadership qualities with demonstrable attributes and to contribute to societal needs.

FROM HOD'S DESK

I feel privileged in presenting the 2nd issue of our department association magazine "Electronica" which is a blend of the most recent ***trends*** *and activities in the Electronics and Communication Engineering field and also the creative work of young engineers plus some brainstorming sessions. The wide spectrum of articles gives us a sense of pride that our students and faculties possess creative potential and original thinking in ample measures . Each* ***article*** *is entertaining, intersting and absorbing. I applaud the contributors for their stimulated thoughts and varied hues in articles contributed by them.*

Please feel free to drop in your suggestions to :
Swatigupta.ece@piet.co.in

Prof. Swati Gupta
(HOD ECE)

FACULTY EDITORS

ECE

ELECTRONICA

It is a matter of pride as well as pleasure to present before our readers next edition of Department Magazine. We feel honored for the faith reposed in us for performing the role of editors. We have put whole-hearted endeavors to give a complete and kaleidoscopic view of laudable achievements of ECE department. Through further issues of Magazine, we do hope that we will come up to the expectations of our readers.

Dr. MONIKA GAMBHIR
Associate Professor, ECE

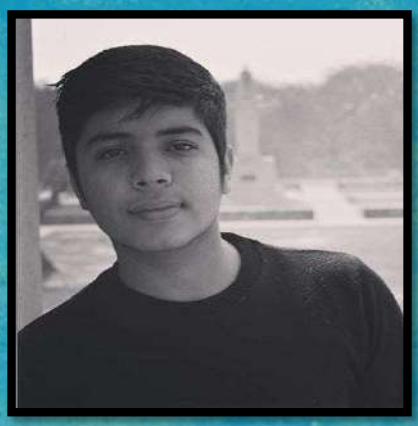
Ms. SAPNA ARORA
Assistant Professor, ECE

STUDENT EDITORS

SANYAM JAIN
(chief editor)

UDIT VERMA

RAGHAV AGGARWAL



YASH BUDHWAR

ANKIT

contents

SESSION 2018-19

ACADEMIC TOPPERS

4TH YR

1ST

HEENA

2ND

NEHA

3RD

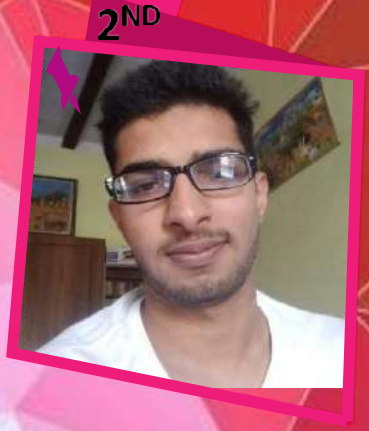
MADHU

3RD YR

1ST

PIYUSH

2ND



SAHIL

3RD

VAISHALI

2ND YR

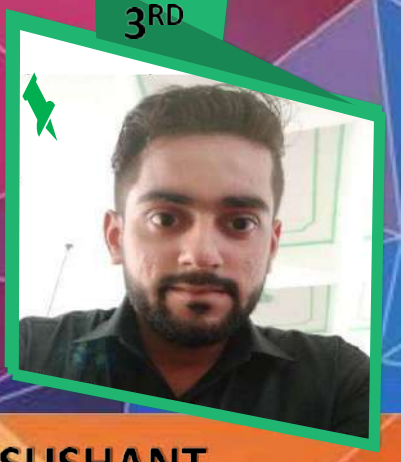
1ST

RAHUL

2ND

MONIKA

3RD



SUSHANT

INDUSTRIAL VISIT

Department of Electronics and Communication Engineering organized an Industrial Visit for the students of ECE-6th and 8th semester to SCL, Mohali on Feb 12, 2020. The visit aimed at sensitizing the students about the various domains of VLSI design in India.

Semi-Conductor Laboratory (SCL), Mohali is a research institute of Department of Space, Government of India. It aims to include research and development in the field of semiconductor technology.

The students visited the various sections like the Fabrication Lab where they learned about how the chip is fabricated starting from a silicon wafer and undergoing various processes. They also visited the Assembling section where the chip is finally assembled to the form it is made available to customers. They also got an insight into the Testing section where the final stringent testing of the chip is done so as to make a complete product.

On the whole, the visit was quite beneficial for the students as they got practical exposure to the VLSI industry and also helped them enhance their technical skills.

ELECTRONIC@

RIDDLE:

When I point up it's bright, but when I point down it's dark. What am I?

ANSWER at 'E' PAGES AHEAD
Where IC of NOR GATE =740E

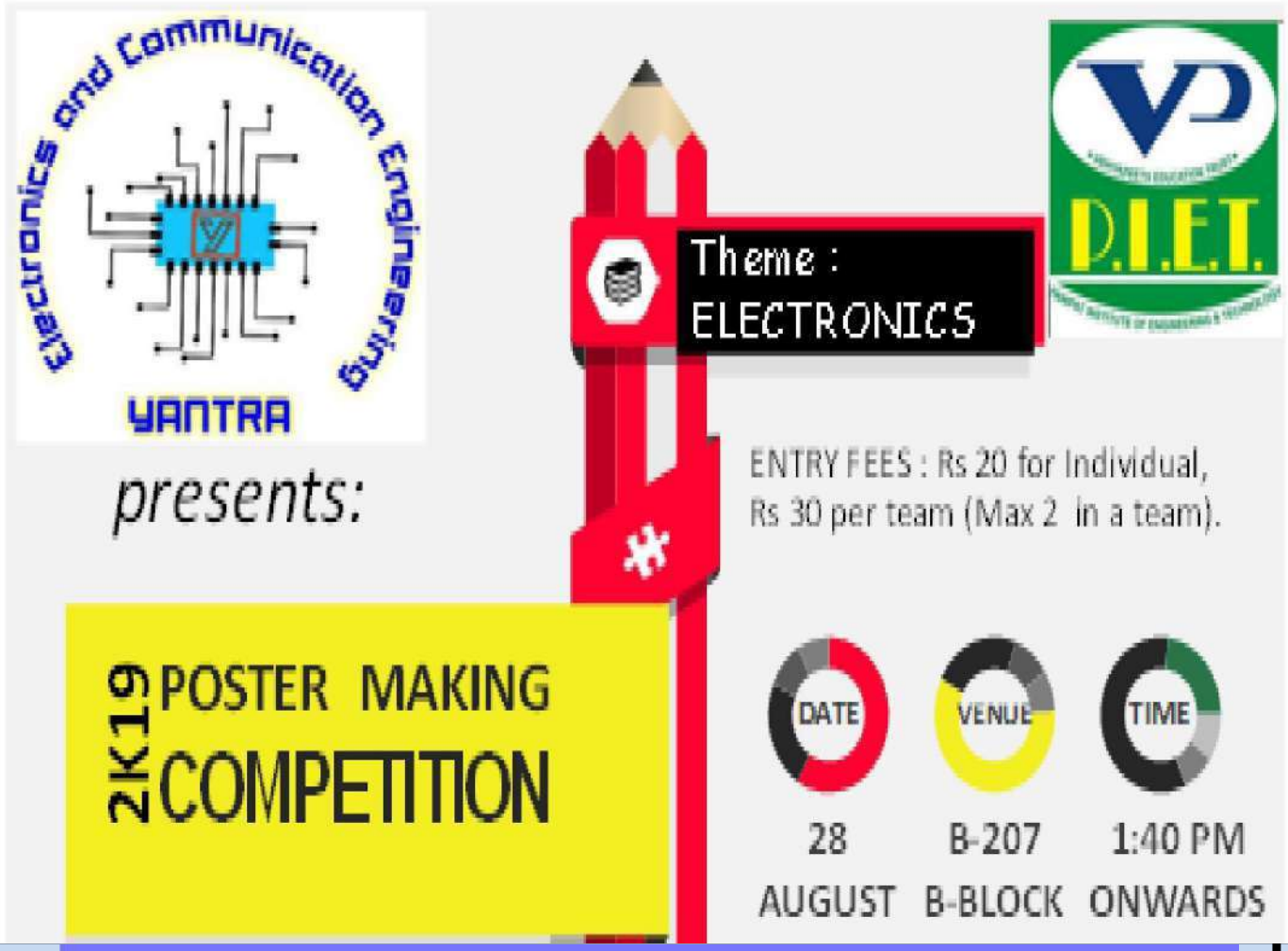
ACTIVITIES OF

Yantra club

Electronics and Communication Engineering
YANTRA

A CLUB WITH A MOTIVE OF ALL-OVER PERSONALITY DEVELOPMENT OF STUDENTS

POSTER MAKING



- *Yantra Club activities:*
  - *Poster making competition was organized by **Yantra** club on 28th Aug, 2019. The **theme** of the Event was "Innovation".*
  - *Poster making inculcates the habit of learning by doing among students. They also learn to work in a team. It facilitates creative thinking, extensive research and reading.*
  - *Students from all years and branches of Engineering participated and presented the theme with textual and graphic elements.*

WINNERS

Name	Year	Roll no.	Position
Gaurav	Final Yr	2817924	Ist
Harpreet	Final Yr	2816268	Ist
Surajdeep	3rd Yr	2817280	2nd
Monika	3rd Yr	2817289	2nd

POSTER MAKING

Stars of the event
(team yantra club)

S.No	Name	Year
1.	Sanyam Jain	3rd
2.	Udit Verma	3rd
3.	Priya	3rd
4.	Raghav	3rd
5.	Manvi	3rd
6.	Tanya	2nd
7.	Mubarak	2nd
8.	Ankit	2nd

ENGINEERS' DAY

As a tribute to greatest Indian Engineer, Bharat Ratna Mokshagundam Visvesvarya, Yantra club organized Circuit Junkies, Extempore and Crossword competition on 15th Sept, 2019. Students from all Engineering departments participated in the events.

Winners :

Event	Name	Year	Roll no.	Position
Circuit Junkies	Mohit & Chirag	2nd (ECE)	2818251 & 2818260	1st
	Raj Kumar & Aasis Kumar	3rd (ECE)	2817253 & 2817282	2nd
Extempore	Rahul Yadav	1st (CSE)	2819181	1st
	Sanyam Jain	3rd (ECE)	2817291	2nd
Crossword	Shang Korong	2nd (ECE)	2818253	1st
	Kanika Narang	2nd (IT)	2818401	2nd
	Priyesh Arya & Nidhi	2nd (IT) 4th (ME)	2818281 2816408	3rd

GLIMPSE OF THE EVENT

HOLI Celebration

March 5, 2020

Technical seminar

tech

rangoli

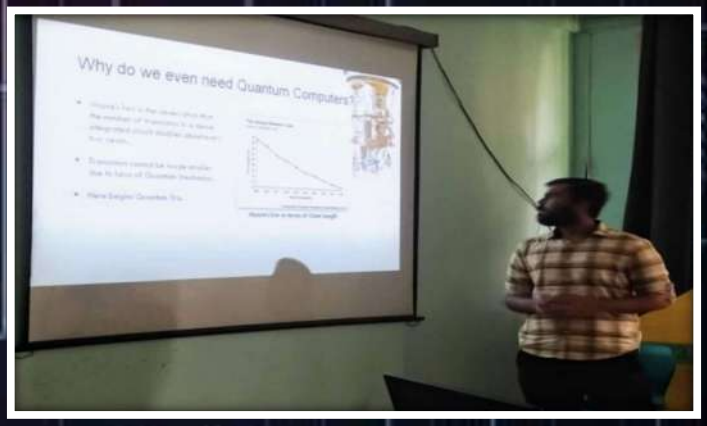
Lucky draw

Technical Seminar

To increase the awareness of latest technologies among students, Yantra Club, ECE organized Technical Seminar. Students of various branches participated in it, and presented marvellous presentations on upcoming Technology.

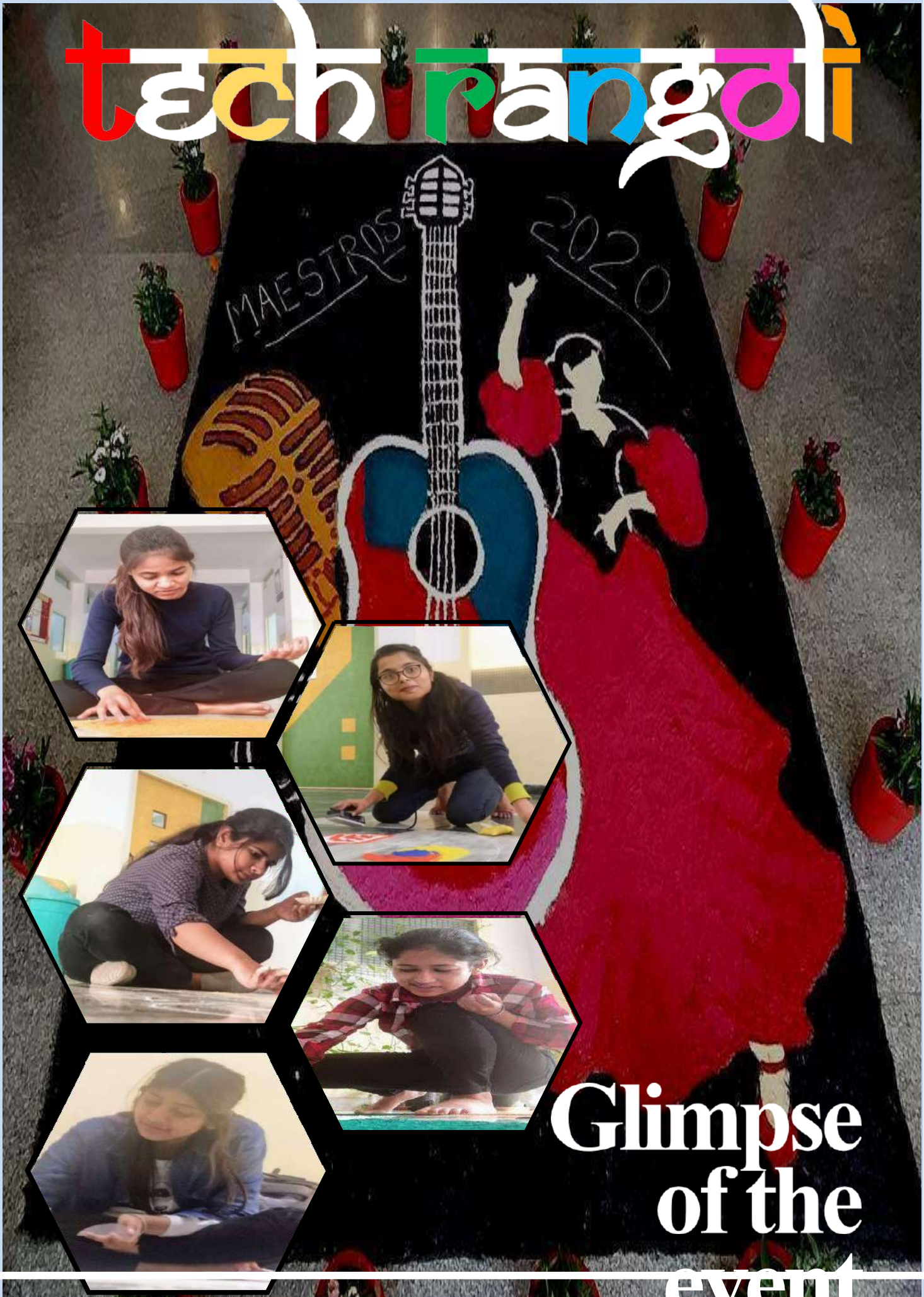
Winners were :

1st Meghna ECE 4th year
Anurag ECE 4th year
2nd Kashish IT 2ND year
3rd Shreya IT 2ND year



Event Highlights

tech rangoli



Glimpse of the event

TO BRING OUT CREATIVITY OF STUDENTS AND CELEBRATE THE FESTIVAL HOLI, "TECH RANGOLI" WAS ORGANIZED BY YANTRA CLUB.

WINNERS : 1ST JYOTI (IT 3RD) & PRACHI (IT 3RD)

2ND PRIYA (ECE 3RD) & NAMREET (IT 3RD)

HOLI AND NO COLORS ???

NOT POSSIBLE !!!

POSTER MAKING
Women Empowerment

With theme #EachforEqual, Yantra Club, ECE celebrated International Women's Day and was dedicated to women's achievements in the social, economic, cultural, and political spheres.

RIDDLE:

What never asks questions but is often answered?

ANSWER at 'L' PAGES AHEAD
Where 1 mm=10^{-L} m


WOMEN ARE NOT PROBLEM
THEY ARE SOLUTION !!
ASTRONAUT
DANCER
SPORTS WOMEN
TICKET CHECKER
LAWYER


RISE ABOVE THE STORM AND WILL FIND SUNSHINE...

Maestros 2020

Every year Department Of Electronics And Communication Engineering, PIET conduct technical events as a part of Maestros. This year also certain technical events organized by ECE DEPT. were the part of Maestros 2020 :

ELECTRO EXPO

CIRCUITRON

Glimpse of the ELECTRO-EXPO

Ans – Door Bell

The purpose of the event is to teach them skills such as problem solving, and helps to develop additional skills integral to their future, such as critical thinking and time management.
And more importantly, students get an opportunity to create authentic projects which are not just personal and meaningful to them but also to the welfare of society.

Glimpse of the CIRCUITRON

WINNERS :

CIRCUITRON

1ST DEV & RAHUL ,PIET

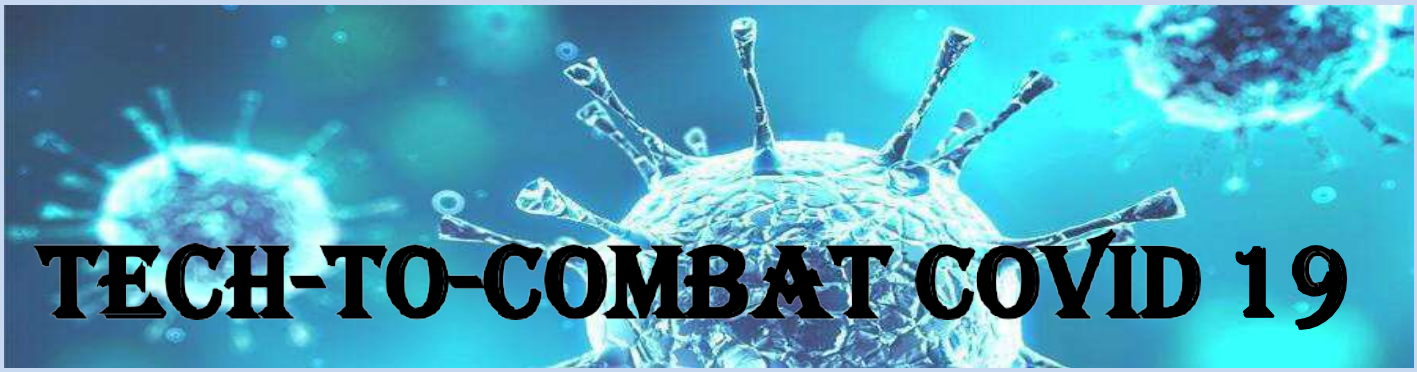
2ND SANYAM & PIYUSH,PIET

ELECTRO-EXPO

1ST CAFFINE AFTER SHOCKS
CGC, LANDRAN

2ND A.T.G,CGC LANDRAN

3RD ELECTRIX, PIET
SAMALKHA



TECH-TO-COMBAT COVID 19

Yantra Club, Department Of Electronics And Communication Engineering, PIET conducted an online Inter-College Power-point competition "TECH-TO-COMBAT COVID19" on JUNE 5 , 2020

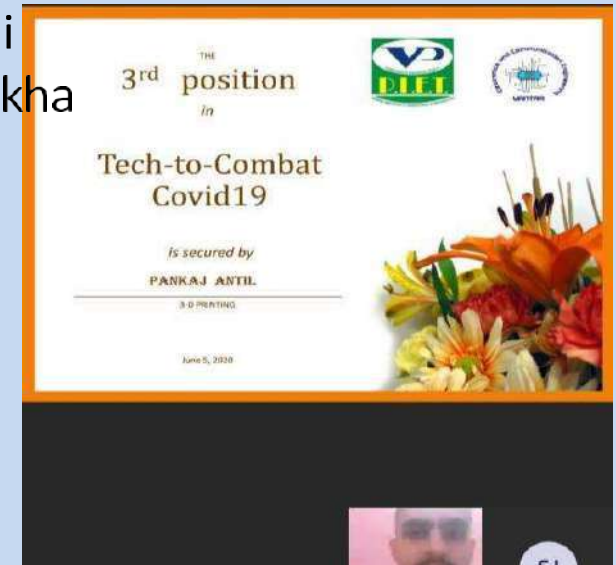
The purpose of the event was to make students research on the industry 4.0 technologies and come up with the solutions that could help the world and India to combat Covid-19 and repercussions. Students of host college PIET Panipat and various other colleges from Chandigarh to Chennai like AIACTR New Delhi, CGC landran, RIT Chennai, BIET Jhansi, HMRITM New Delhi, DCRUST Murthal and so on participated in it and came up with tremendous ideas and the projects that they have been working upon.

The young minds who secured position were :

1st Keshav Verma (ECE 3rd yr) CGC, Landran

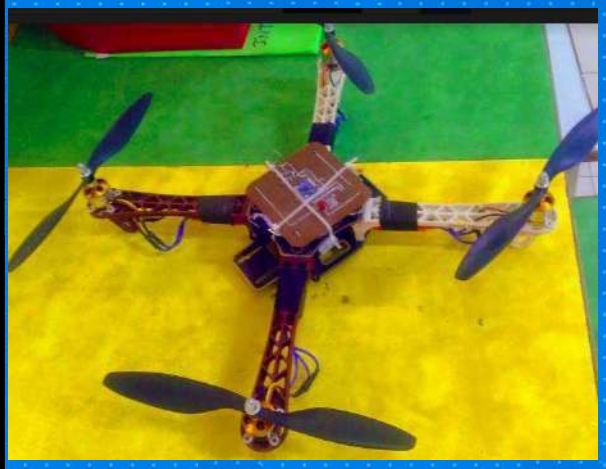
2nd Gopinath S (ECE 4thyr) RIT,Chennai

3rd Pankaj Antil (TE 4th yr) PIET,Samalkha



tech-minds...

Camera-packing Drone to Videotape Extreme Sports

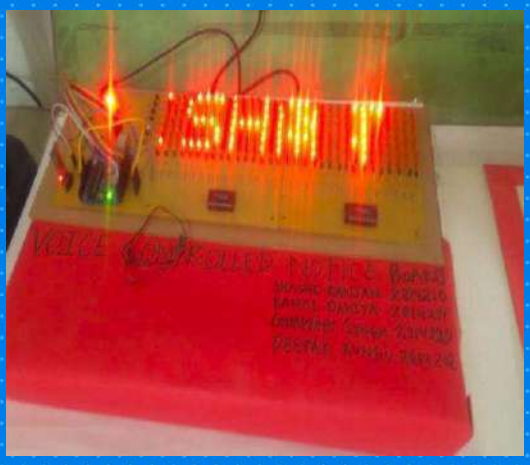


The use of drones for specific monitoring and inspection tasks now performed by people can significantly reduce these risks. During inspections, installations in most cases need to be shut down temporarily, involving high **costs** due to loss of productivity.

IOT based Raspberry Pi Home Security System with Email Alert

This project is quite easy to design. A PIR sensor is used to detect the presence of any person and a Pi Camera is used to capture the images when the presence it detected.

Voice Based Notice Board Using Android



Working of this Project is very simple. A PIR sensor is used to detect the presence of any person and a Pi Camera is used to capture the images when the presence it detected.

IOT Garbage Monitoring System

This project IOT Garbage Monitoring system is a very innovative system which will help to keep the cities clean. This system monitors the garbage bins and informs about the level of garbage collected in the garbage bins via a web page. For this the system uses ultrasonic sensors placed over the bins to detect the garbage level and compare it with the garbage bins depth.

Smart Street light Management

A Control system Is designed to control a set of street lights. During day , street lights would be Off and during night time , street lights would be bright or dim depending upon the various parameters. Parameters may include : •Whether Vehicles/Pedestrian are passing •traffic density, •Visibility of road (affected due to smoke or fog). •Any Mishappening Cloud Data Monitoring is also achieved

Smart Traffic Control Management

A network of Infrared sensors is setup up to the fixed distance which helps in monitoring and comparing the traffic on the roads and thus controlling traffic depending upon the density of vehicles.

EMERGENCE OF SHEARLETS

Shearlets emerged as a part of an extensive research activity during the last 10 years, which allows encoding of several classes of multivariate data through its ability to represent anisotropic features such as singularities to represent anisotropic features such as singularities for example: edges in natural images. For higher dimensional data analysis, it is of fundamental importance to understand these geometric structures which go beyond the limitations of Fourier, Wavelets and Curvelets systems.

The emergence of Wavelets was a great success as it has the ability to provide optimally sparse approximations of a large class of frequently occurring signals, fast algorithmic implementations compared to traditional Fourier methods, rich mathematical structure which allows one to design families of Wavelets. As a consequence of all these properties, Wavelets have revolutionized image and signal processing area with wide range of applications ranging from de-noising, enhancement, feature extraction, classification etc.

Despite their success, Wavelets are not very effective when dealing with multivariate data as Wavelet representation is not sparse, that is many wavelet coefficients are needed to accurately represent the edges.

Wavelet representations are optimal for approximating data with point wise singularities only but cannot handle singularities along curves. This limitation of Wavelets prompted the mathematicians, engineers and scientists to introduce some form of directional sensitivity, and "directional" Wavelets were introduced such as Steerable pyramids by Simonelli, directional filter banks by Bamberger and Smith and 2 D directional wavelets by Antoine, Complex wavelets.

The breakthrough occurred with the introduction of Curvelets by Candes and Donoho in 2004 with a pyramid of analyzing functions defined not only at various scales and locations as Wavelets, but also at various orientations. Construction of Curvelets involves rotations and these operators don't preserve the digital lattice.

In 2005, Do and Vitterli introduced a discrete filter bank version of Curvelet framework– Contourlet. Contourlet has a tree structured filter bank implementation similar to standard Wavelet systems. But the limitation of Contourlet is that there is a limit in the no. of directions used for shearing. This limitation was over-comed by a new class of affine systems dealing efficiently with multivariate data viz Shearlets.

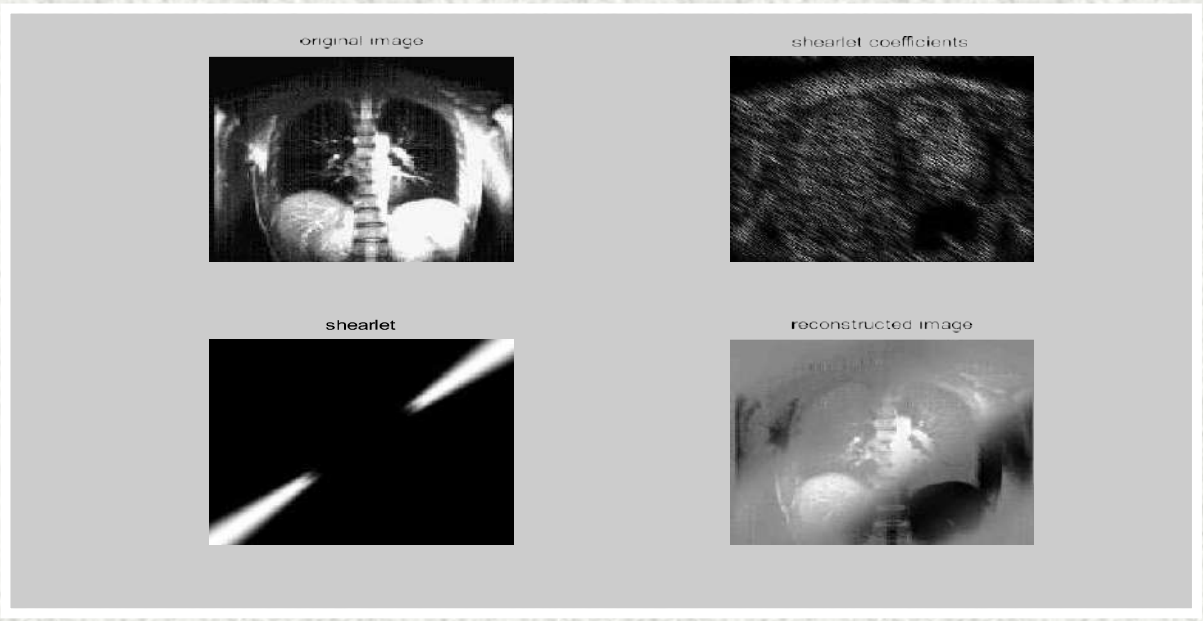
Shearlets was introduced by Guo, Kutyniok, Labate, Limand Weiss, derived from composite Wavelets. In contrast to rotation used by Curvelets, Shearlets makes use of shearing to control directional selectivity.

The important features of Shearlets include:

- Spatial localization
- High Directional sensitivity
- Fast Algorithmic implementations
- Optimally Sparse approximations of anisotropic features in multivariate data
- Parabolic Scaling
- Compactly supported analyzing elements

APPLICATION OF SHEARLETS IN BIOMEDICAL IMAGING:

- Shearlets find application in various imaging modalities such as Projection radiography which include Digital radiography, Routine diagnostic radiography such as Chest X-ray, fluoroscopy, Mammography, Neuro radiology, Mobile x-ray systems. In nuclear medicine such as Scintigraphy, SPECT, PET as well as in Ultrasound imaging and Magnetic Resonance imaging also Shearlet transform is found to be useful.
- Wavelet transform has been applied to a wide variety of biomedical signals such as ECG, EEG, DNA sequences, heart sounds etc. But for biomedical imaging applications, Shearlets outperforms Wavelets and its other variants such as Curvelets, Contourlets etc. For analysis of biomedical images, image enhancement is essential to explore the portions or features that need to be examined for any abnormality. Shearlet transform is effectively used in image enhancement.
- For example, in ultrasound medical images, weak edges are usually related to important physical or structural properties so that it is desirable to make weak edges more prominent while keeping the strong features intact. Another application is in mammography, where image enhancement can be useful to improve the visibility of small tumors.
- Traditional enhancement techniques don't preserve the geometric features of the data; as a result, while enhancing weak edges, they also amplify noise and produce visual artifacts. The advantage of Shearlet framework is to provide a unique ability to control the geometric information associated with multidimensional data. Nowadays 3D Discrete Shearlet transform is used for Video enhancement.



The MRI image of lungs, with the extracted shearlet coefficients, followed by shearlet and the reconstructed image after enhancement

Shearlet transform is effective in denoising biomedical images. For example: MRI images of head, brain is subjected to Gaussian noise and Shearlet transform followed by thresholding and inverse Shearlet transform can denoise them with low Mean Square error and high value of PSNR.

There are numerous other applications where Shearlets play an active role such as feature extraction, classification, image impainting, image separation etc.

Dr. Ruchira Aneja

Associate Professor

(ECE)

INTERNET OF THINGS (IOT)

Introduction :-

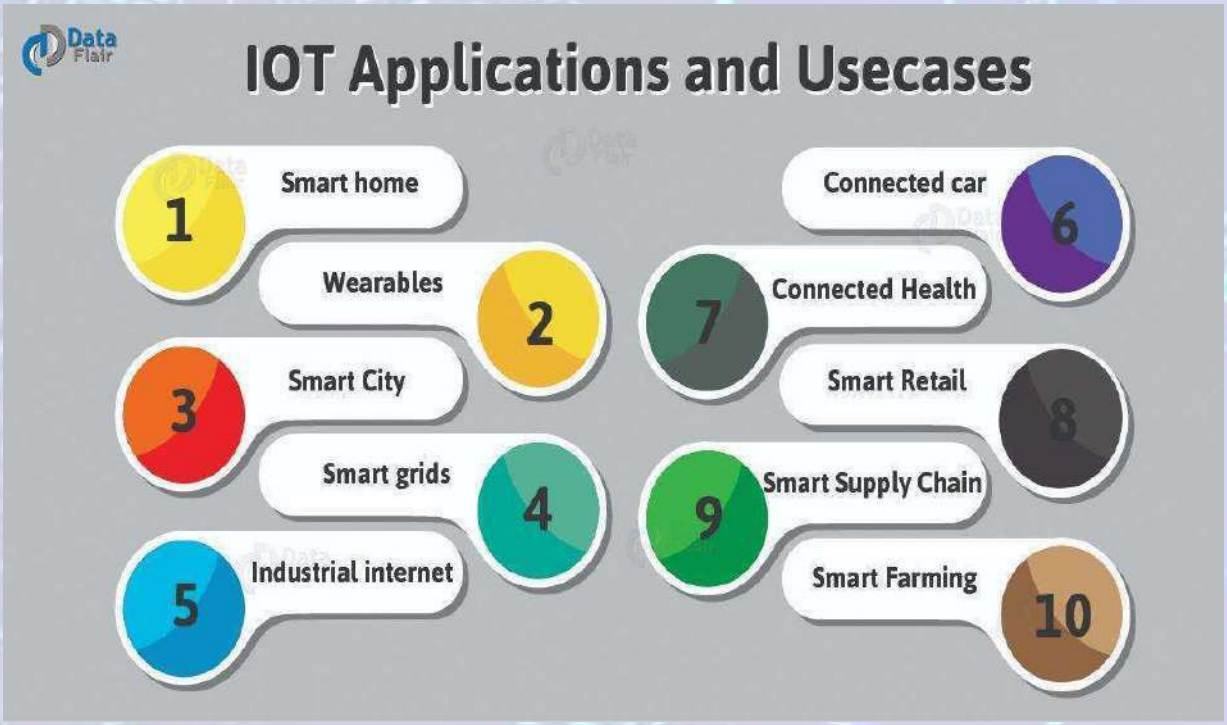
The Internet of Things, or IoT, refers to the billions of physical devices around the world that are now connected to the internet, collecting and sharing data. Thanks to cheap processors and wireless networks, it's possible to turn anything, from a pill to an aeroplane to a self-driving car into part of the IoT. This adds a level of digital intelligence to devices that would be otherwise dumb, enabling them to communicate real time data without a human being involved, effectively merging the digital and physical worlds.

How IoT works???

An IoT ecosystem consists of web-enabled smart devices that use embedded processors, sensors and communication hardware to collect, send and act on data they acquire from their environments. IoT devices share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analyzed or analyzed locally. Sometimes, these devices communicate with other related devices and act on the information they get from one another. The devices do most of the work without human intervention, although people can interact with the devices -- for instance, to set them up, give them instructions or access the data.

Pros of IoT :-

- Ability to access information from anywhere at any time on any device;
- Improved communication between connected electronic devices;
- Transferring data packets over a connected network saves time and money;
- Automating tasks helps improve the quality of a business' services and reduces the need for human intervention.



Cons of IoT :-

- As the number of connected devices increases and more information is shared between devices, the potential that a hacker could steal confidential information also increases;
- Enterprises may eventually have to deal with massive numbers -- maybe even millions -- of IoT devices and collecting and managing the data from all those devices will be challenging.
- If there's a bug in the system, it's likely that every connected device will become corrupted;

- Since there's no international standard of compatibility for IoT, it's difficult for devices from different manufacturers to communicate with each other.

Future Scope of IoT:

- Controlling various household devices of house with internet.
- Industrial automation and management through internet.
- Machine-driven fireplace exits systems.
- Improvement of security problems in extremely restricted areas.

Mrs. Sapna Arora

Associate Professor

(ECE)

QUANTUM DOTS

The quantum dots are semiconductors whose electronic characteristics are closely related to the size and shape of the individual crystal.

Normally, smaller size crystals have larger band gap and greater energy difference between the highest valence band and the lowest conduction band Therefore, more energy is necessary to excite the dot, and has high emission efficiency.

The height and energy between different energy levels varies inversely with the size of Q-dot . The quantum dots of the same material, but with different sizes, can emit light of different colors. If the size of crystal is small, then band gap between the higher valence band and the lowest conduction band becomes high and more energy is require for exciting the dot and consequently, more energy is released when the crystal returns to its resting state.

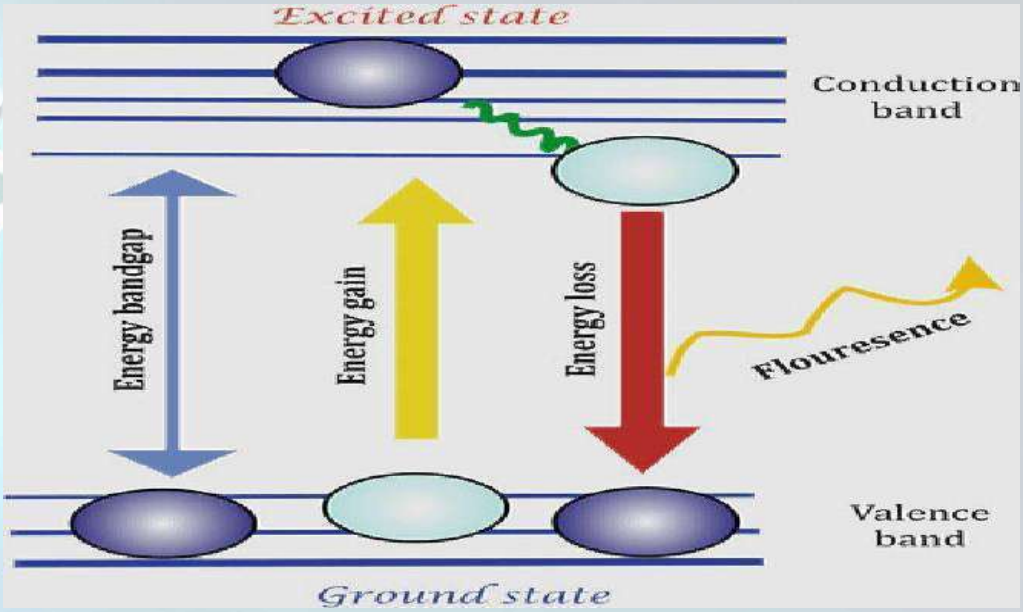


Fig:Schematic diagram of excitation and emission of quantum dots

A principal advantage with quantum dots is that by controlling the size of crystals, the conductive properties of the material is controlled. Because of their small size, qdots displays uniqe optical and electrical properties. The most immediately apparent of these is the emission of photons under excitation, which are visible to human eyes as light.

The wavelength of these photon emissions depends not on the material from which the qdot is made but its size. The physical reason is the quantum confinement effect. The

larger dots have lower energy in the fluorescence spectrum. The smaller dots emit bluer higher energy light . A main advantage with quantum dots is that, because of the high level of control possible over the size of the crystals produced, it is possible to have very precise control over the conductive properties of the material.

Colloidal nanocrystal quantum dots can easily be attached to DNA or proteins by a sulphur-metal bond and can act as luminescent label to monitor biological reactions. The quantum dots have an arrower, tunable and symmetric emission spectrum and are more photostable (long-lived). For the reason of these excellent properties, an intense effort is put in modifying the surface of the quantum dots, for their further use in imaging particular biological targets.

In few past years, researchers in Chemistry and Physics have focused a great part of their interest in fabrication of nanoparticles such as nanowires, quantum dots, nanorods, nanotubes or nanofilms .The reasons for this are the possible applications of nanoparticles in several extremely important fields, e.g. in catalysis, coatings, textiles, data storage, biotechnology, health care, biomedical and pharmaceutical industries.

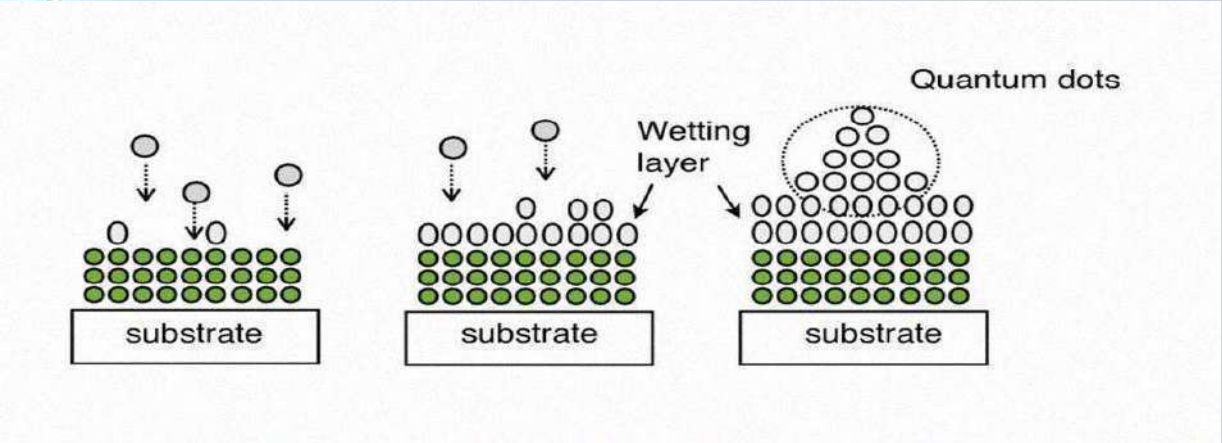


Fig: Stranski-Krastanov mode of growth

Concerning the medical applications

Two general approaches for the preparation of QDs have been reported over the last decade:

(1) formation of nanosized semiconductor particles through colloidal chemistry and

(2) epitaxial growth and/or nanoscale patterning , i.e.. employing lithography-based technology.

The former QD synthesis relies on rapid injection of semiconductor precursors into hot and vigorously stirred specific organic solvents containing molecules that can coordinate

with the surface of the precipitated QD particles. The fabrication of epitaxial QDs usually follows the Stranski-Krastanov mode of growth on wetting layer with formation of coherent islands . Epitaxial method of QDs preparation is widely used in optoelectronics (lasers, infrared photodetectors) and nanotechnologies.

Mr. Sudhir Mahajan

Assistant Professor

(ECE)

ASIMO ROBOT

Robots, the suppositious concept that has been demonstrated a million times in movies, comes to life with the brilliant exertion of Honda. ASIMO or Advanced Step in Innovative Mobility is a state-of-the-art humanoid robot created by Honda in the year 2000. Aimed to be a multi-functional portable assistant, ASIMO is intended to function in real-world environments. The creation of ASIMO was envisioned to help people who are bedridden or disabled. ASIMO beats humans in tasks that can be devastatingly dangerous for them for instance, going in hazardous areas, scrapping fires, or defusing a bomb.

The composition of ASIMO has been kept purely welcoming and friendly. The era of robots' existence has been a topic of continuous debates and has invited numerous advantages and disadvantages of the actuality of robots but, Honda with its very first creation has proved that robots can operate efficiently. Honda, with the joint efforts of its eccentric robotic research and development team, successfully launched ASIMO after 20 years of consecutive hard work. Following this ASIMO team continues to excel and refine their wonderful creation. Below are ASIMO's configurations: Height: The brainy masterpiece stands tall with a height of 4 ft. 3 in. and weighs around 48 kg further making it a welcoming robot. The average height of ASIMO brands it a participant of comfortable conversations with the elderly and people with less mobility. Its companionable height makes it a perfect size for assisting household tasks and people confined to bed or wheelchairs. Skills: ASIMO was tossed to aid the needs of the elderly and disabled as well as manage household errands.

ASIMO has human-like features as it can make gestures, speak anc interact like humans which makes it a friendlier robot. ASIMO holds the capability to sense the movements of numerous objects while capturing visual Information by its camera eyes. The determination of direction and distance is also done by the two camera eyes of ASIMO. The former features of ASIMO enables human-like features ASIMO ROBOT Movement: ASIMO is accomplished in an average walking with a speed of 2.7 kilometers per hour. Talking about running speed, ASIMO can run with an average speed of around 9 kilometers per hour. The movements of ASIMO are managed by aimed Zero Moment Point control as well as floor reaction control that allows ASIMO to stay firm at a particular position and maintain it healthily. The body position, length of steps and speed are adjustable by ASIMO. ASIMO's hands, legs, waist, and neck have variable degrees of movement. The degree of freedom is defined specifically of each robot and to frame further, ASIMO has 57 degrees of freedom.

The fundamental body parts of ASIMO like wrist, shoulder, hip joints and neck individually has around three degrees of freedom whereas, hands with one thumb and four fingers have two degrees of freedom. For the determination of obstacles, ASIMO has visual sensors. In totality, ASIMO has sensors that help it in autonomous navigation. The lower portion of ASIMO has one infrared sensor and one laser sensor. The infrared sensors help ASIMO determine the floor patterns to confirm the navigational path of the strategic map while the laser sensor aids ASIMO to sense the ground surface. Other Specifications of ASIMO:

1. Battery: ASIMO runs on a Lithium-ion battery which is fixed in its backpack and takes 3 hours to completely charge ASIMO. The battery weighs around 6 kg.

2. Operating Time: ASIMO can successfully run or walk for a good one hour.

3.Languages: ASIMO is skilled in English and Japanese language.The latest version of ASIMO was released in 2011 which came installed with more modified sensors and more balancing powers than its previous incarnations.

ASIMO's most recent update comes with dexterous hands and refined touch sensors. To conclude, artificial intelligence has brilliantly taken birth in the present generation with one live example, ASIMO which in the present time imparts lectures and teachings in various colleges. ASIMO has made a presence in Disneyland and also at NASA which makes ASIMO a star of every world and in the other parallel worlds. The Verdict: The level of technology used and years of tremendous research have made ASIMO a state- of-the-art creation. ASIMO is very costly which makes it attainable only by celebrities or by the government. Well, now we all wait for ASIMO's presence in public healthcare hospitals, private hospitals, and in households to assist the elderly and their need. Although due to its star value, the era of an ASIMO in every house is years away.

HIMANSHU

ECE 1ST YEAR

FUTURE WITH 5G TECHNOLOGY

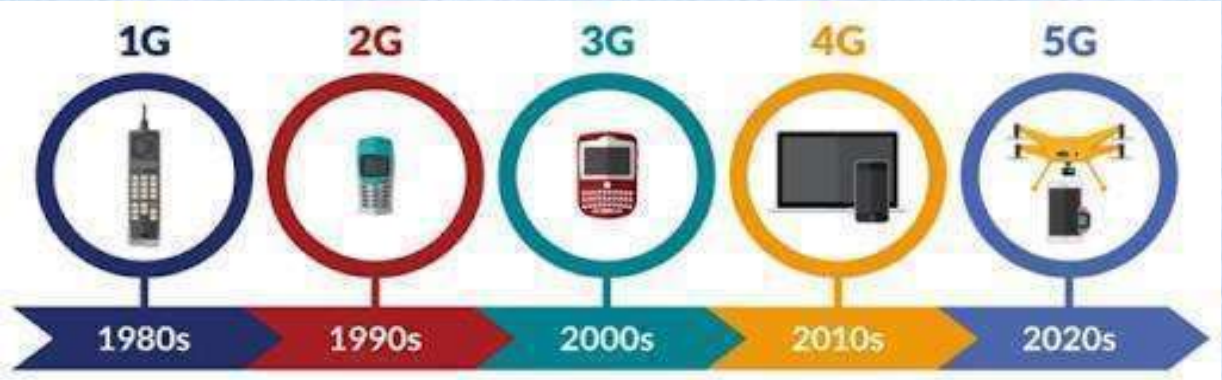
With fanfare, excitement and speculation, 5G is slowly making the transition from general idea to network implementation. Network operators are already scheduling 5G network trials and test beds to sort out how the 5G vision will be realized.

5g networks promise to support new services, more video, and cloud connectivity. There are three main case uses driving the 5grevolution:

1. Enhanced mobile broadband. With the promise of 10 gbpsconnectivity and latency of less than five milliseconds, it's no surprise the ongoing surge in demand for mobile connectivity will accelerate dramatically. The industry estimates this increased speed will result in a 10- to 100-fold increase in the number of5g-connected devices over the number of 4G devices.

2. The Internet of Things (IoT). Thanks to 5G's virtualized, radiotechnology-agnostic core, published predictions estimate as many as 20 billion IoT connections by 2020—connections that will drive smart buildings and smart cities. CommScope anticipates 5G will offer 1,000 times the bandwidth of 4G and up to five times the density, making room for all those "things" on the network.

3. High-reliability, low-latency networks. Beyond just doing what4G does better and faster, 5G opens new doors to allow driverless cars to coordinate over the network, enable augmented reality and virtual reality and expand the horizons of remote surgery and other applications that can fulfil their promise only on a network with such ultralow latency times as 5G's five-millisecond threshold.

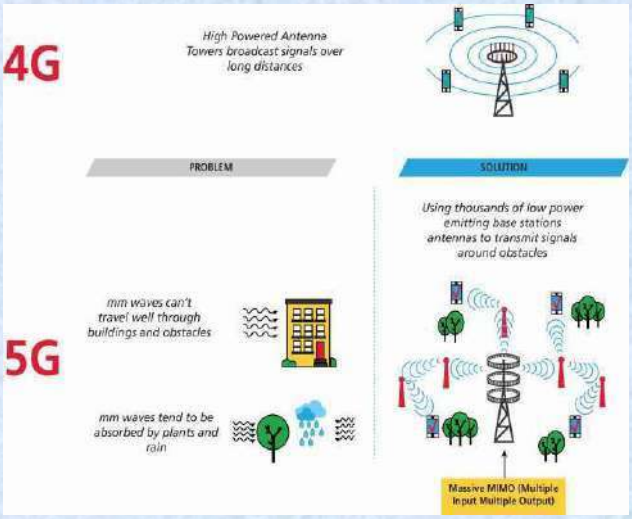


With these case uses in mind as the template for a real-world 5Grollout, it makes sense to also consider what can be done to make these applications possible.

For operators, that plan boils down to three key strategies:

The first is densification, or the practice of increasing capacity in a given area through more antennas, small cell sites or other measures. Upgrading to MIMO and sector splitting technologies also falls under this strategy.

The second is virtualization, shifting the work of physical equipment to virtualized environments operating in centralized data centers. This strategy's inherent efficiency can reduce costs by as much as 70 percent.



The third strategy is optimization of existing assets and processes, including—but not limited to— repurposing earlier-generation wireless and TV spectrum and moving computing resources closer to the edge. Throughout the converged network, efficiency will be a critical design requirement for all aspects of 5G.

Priyesh Arya

ECE 2nd year

GUT PROBE IN A PILL

Introduction :-

A small, swallow able device captures detailed images of the gut without anaesthesia, even in infants and children.

Why it matters: -

The device makes it easier to screen for and study gut diseases, including

one that keeps millions of children in poor countries from growing properly.

Key player: -

Massachusetts General Hospital

Availability: -

Now used in adults; testing in infants begins in 2019 in Pakistan, where EED is prevalent, and infant testing is planned for 2019.

Environmental enteric dysfunction (EED) may be one of the costliest diseases you've never heard of. Marked by inflamed intestines that are leaky and absorb nutrients poorly, it's widespread in poor countries and is one reason why many people there are malnourished, have developmental delays, and never reach a normal height. No one knows exactly what causes EED and how it could be prevented or treated.

Practical screening to detect it would help medical workers know when to intervene and how. Therapies are already available for infants, but diagnosing and studying illnesses in the guts of

such young children often requires anesthetizing them and inserting a tube called an endoscope down the throat. It's expensive, uncomfortable, and not practical in areas of the world where EED is prevalent.

So, Guillermo Tearney, a pathologist and engineer at Massachusetts General Hospital (MGH) in Boston, is developing small devices that can be used to inspect the gut for signs of EED and even obtain tissue biopsies. Unlike endoscopes, they are simple to use at a primary care visit.

tissue biopsies. Unlike endoscopes, they are simple to use at a primary care visit.

Tearney's swallow able capsules contain miniature microscopes. They're attached to a flexible string-like tether that provides power and light while sending images to a briefcase-like console with a monitor. This lets the health-care worker pause the capsule at points of interest and pull it out when finished, allowing it to be sterilized and reused. (Though it sounds gag-inducing, Tearney's team has developed a technique that they say doesn't cause discomfort.) It can also carry technologies that image the entire surface of the digestive tract at the resolution of a single cell or capture three-dimensional cross sections a couple of millimetres deep.

The technology has several applications; at MGH it's being used to screen for Barrett's oesophagus, a precursor of oesophageal cancer. For EED, Tearney's team has developed an even smaller version for use in infants who can't swallow a pill. It's been tested on adolescents.

Mubarak

ECE 2nd year

OpenCV

OpenCV is a collection of software algorithms put together in a library to be used by industry and academia for computer vision applications and research. OpenCV started at Intel in the mid-1990s as a method to demonstrate how to accelerate certain algorithms in hardware. In 2000, Intel released OpenCV to the open source community as a beta version, followed by v1.0 in 2006. In 2008, Willow Garage took over support for OpenCV and immediately released v1.1.Developed in efficient C/C++ code, OpenCV also presents a stable Python interface since 2009.

OpenCV uses the BGR color format instead of RGB. The reason the early developers at OpenCV chose BGR color format is that back then BGR color format was popular among camera manufacturers and software providers, which is not true nowadays.

OpenCV Color Model is a system for creating a full range of colors using the primary colors. Color Model is further divided into two parts:

1. **Additive Color Model :-** It uses light to represent colors in computer screen. Primary colors used in this are RGB (Red, Green, Blue).
2. **Subtractive Color Model:-** It uses inks to print those digital images on paper.

   Colors used are CMYK (Cyan, Magenta, Yellow & Black).

Various operations can be performed on the image:

- **Blurring:-** The goal of blurring is to reduce the noise in image by the following command:

  cv2.blur (image_name, ksize = (n*n))
- **Thresholding:-** Thresholding transform images into binary images by the following command: ret, threshold = cv2.threshold(image_name, thresh_value, max_value, filter name)
- **Morphological Transformations:-** It is used to manipulate the images by filtering and it can be done in the form as Erosion, Dilation, Opening, Closing.
- **Edge Detection:-** It identify parts in an image where brightness changes sharply or discontinuously.

Applications:- Face Detection, Motion Detection, Line Detection, Edge Detection.

Piyush

ECE 4th Year

OPTICAL FIBRE

An optical fiber is a thin fiber of glass or plastic that can carry light from one end to the other. The study of optical fibers is called fiber optics, which is part of applied science and engineering.

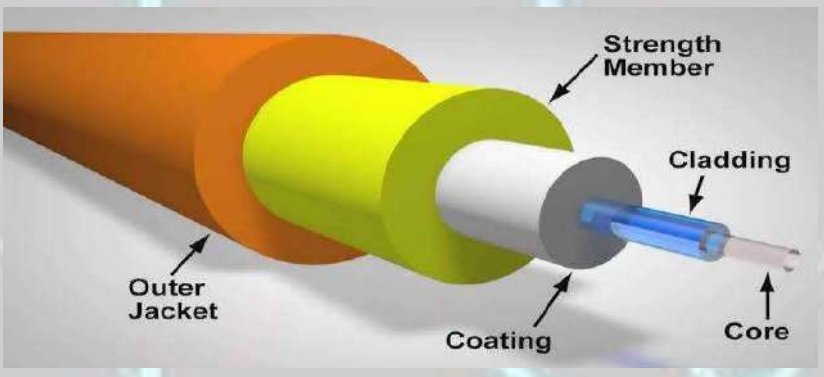
Optical fibers are mainly used in telecommunications, but they are also used for lighting, sensors, toys, and special cameras for seeing inside small spaces.

Optical fibers carries signal from one end to other end at the speed of light.

How it works?

The layers in one kind of optical fiber.
1.- Core 8 μm
2.- Cladding 125 μm
3.- Buffer 250 μm
4.- Jacket 400 μm

An optical fiber is a long, thin strand of clear material. Its shape is usually similar to a cylinder. In the center, it has a core. Around the core is a layer called the cladding. The core and cladding are made of different kinds of glass or plastic, so that light travels slower in the core than it does in the cladding.



Light can travel inside the core and bounce off of the cladding. No light escapes until it comes to the end of the fiber, unless the fiber is bent sharply or stretched.

If the cladding of the fiber is scratched, it may break. A plastic coating called the *buffer* covers the cladding to protect it. Often, the buffered fiber is put inside an

even tougher layer, called the *jacket*. This makes it easy to use the fiber without breaking it.

USES :-

In long distance communication (telecommunication). Since the light does not leak out of the fiber much as it travels, the light can go a long distance before the signal gets too weak. This is used to send telephone and internet signals between cities.

A TOSLINK plug : Fiber is sometimes used for shorter links too, such as to carry the sound signals between a compact disc player and a stereo receiver. The fibers used for these short links are often made of plastic. TOSLINK is the most common type of optical plug for stereos.

Sanyam Jain

ECE 3rd year

WEARABLE BIOSENSORS

Wearable systems are totally non-obtrusive devices that allow physicians to overcome the limitations of ambulatory technology and provide a response to the need for monitoring individuals over weeks or months. The healthcare system is going through a transformation in which continuous monitoring of inhabitants is possible even without hospitalization. The advancement of sensing technologies, embedded systems, wireless communication technologies, Nano technologies, and miniaturization makes it possible to develop smart systems to monitor activities of human beings continuously. The datasets recorded using these systems are then processed to detect events predictive of possible worsening of the patient's clinical situations or they are explored to access the impact of clinical interventions. An increase in world population along with a significant aging portion is forcing rapid rises in healthcare costs.

Popular types of wearable Biosensors are: Ring sensor and Smart Shirt.

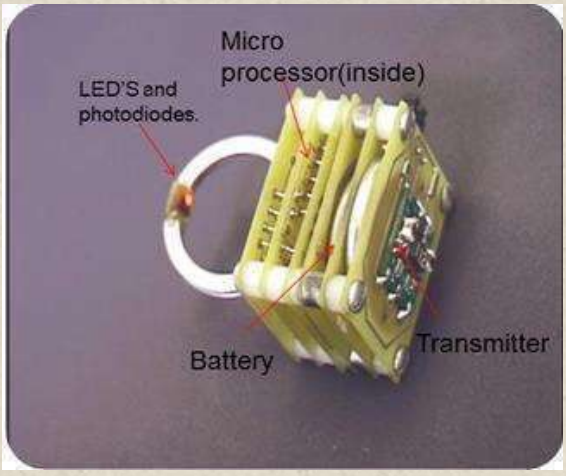


Image of Ring Sensor

Image of Smart Shirt

Three main components of wearable biosensors are:

- Biological element: For sensing the presence and concentration of a substance.

- Transducer: The product of interaction of biological component and sample may be a suitable chemical, charge etc., which can be converted by transducer into an electrical signal.
- Associated Electronic Devices: The electrical signal may be further amplified and can be read on digital panels.

Continuous monitoring, detection of transient phenomena, promote further diagnostic and therapeutic measures, easy to use, reducing hospitalization fee are some of the major advantages of Wearable Biosensors. There are several applications of Bio-sensors in various fields such as: Wireless supervision of people during hazardous operations, in an overcrowded emergency department, in cardiovascular disease for monitoring the hyper tension, chronic surveillance of abnormal heart failure, combat casualty care, medical monitoring.

MEGHA ARORA

ECE 4th Year

M@ESTROS 2020

GEMS OF ECE

ABHINAV SRIVASTAV
2ND YR
ROADIES 5.0 WINNER

MANVI, SANYAM, NISHANT
& RAGHAV 3RD YR
ELECTRO-EXPO 3RD

DEV & RAHUL
3RD YR
CIRCUITRON -1ST

SANYAM & PIYUSH
3RD AND 4TH YR
CIRCUITRON -2ND

SPORTS MEET 2020

कौटिल्य और तान्या बने वार्षिक खेल महोत्सव में बेस्ट खिलाड़ी

सभालखा/एक्शन इंडिया ब्यूरो
पाईट कॉलेज, पड़ीकल्याणा में तीन दिन

साकस्सी के लड़कों के मुकाबले में
निकल के विद्यार्थियों ने बाजी मारी,
। रस्साकस्सी के गर्ल्स फाइनल
ाबले में एम बी ऐ के साक्षी,
ानी, रितिका और पूर्व की टीम ने
ाबले को जीता। 100 मीटर की
। में मैकेनिकल के कौटिल्य ने
इनल रेस जीती।

Tanya
2nd yr

1ST

- 100m ,200m ,400m
- Badminton Singles
- Crossfeet

CROSSFEET-1ST
ASHISH

CRICKET – 2ND

RAKESH	JATIN
ABHINAV	HARSHIT
LAKSHAY	GAURAV
ANKUSH	PIYUSH

TUG OF WAR-2ND

ANKUSH	PIYUSH
ASHISH	SUMIT
ARUN	

e-LEARNING
DURING LOCKDOWN

DEPT OF ELECTRONICS AND COMMUNICATION ENGINEERING

MHRD IIC ACTIVITIES

Attended Leadership Talk series by Leaders-

1. Dr. Anil Sahastrabudhi (AICTE Chairman)
2. Dr. Pratha
3. Mr. Yashraj Bharadwaj (Youngest Cofounder of Company- Zenith Vipers)
4. Mr. Ronnit Screwala (Chairman Upgrad)
5. Prof. K.K. Aggarwal (NBA Chiarman)

WEBINARS

Faculty members & students of 3rd and 4th year ECE attended webinar on XILINX Vivado tool for FPGA and got certificates for the same.

CERTIFICATION COURSES

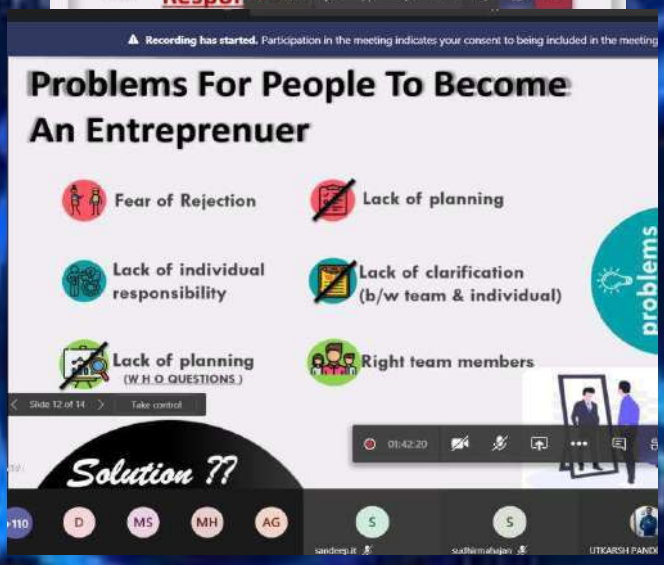
Faculty members & students of all years have enrolled themselves in courses to upgrade their knowledge in emerging technological areas.

e-LEARNING
DURING LOCKDOWN

DEPT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CLUB ACTIVITIES

Institution Innovation Council (IIC) at PIET, in association with ED Cell, Techno GearHeads Club, IT and Yantra Club, ECE has started a series of talks with Innovators & Entrepreneurs. First session was taken by Mr. Utkarsh Pandey and Mr. Jatin Arora, students of B.Tech. IT department on 15/4/20.



Objectives of the talk:

- To learn about the terms- Entrepreneurship, start up and Innovation.
- To learn how to pick a particular business
- To create an effective business model
- To know the barriers in journey of Entrepreneur
- To know secrets of successful Entrepreneur

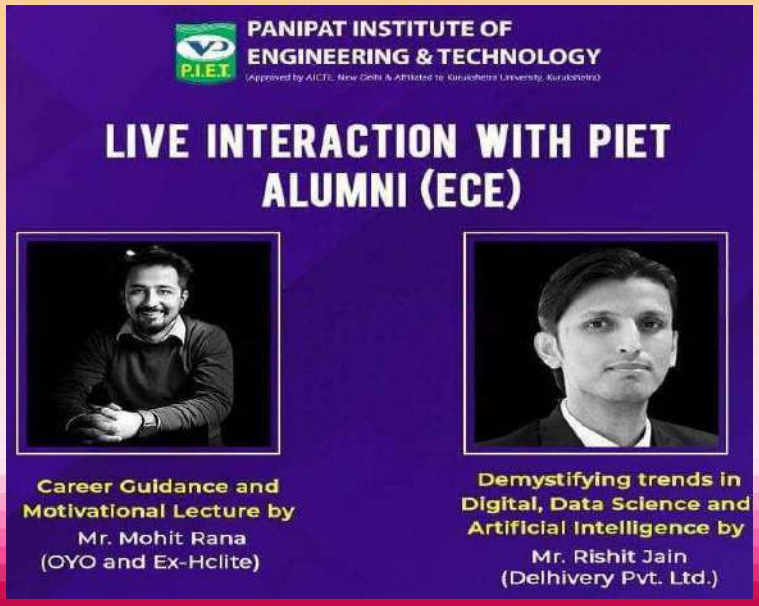
ALUMNI TALK

Ms. Sakshi Shukla
Pursuing M.S. in UNC Charlotte, USA

ECE Department organized the alumni interaction program on 09th April 2020. Experience In Genpact as a Software , Ms Sakshi Shukla gave motivation and carrier guidance. It helped students take knowledge regarding IELTS and GRE in the first Interaction program.

In the second interaction program on Apr 11,2020, alumni shared their experience in the corporate sector and also gave a presentation on the important topic:

Topic1- Carrier Guidance and Motivational Lecture was be delivered by



Mr. Mohit Rana

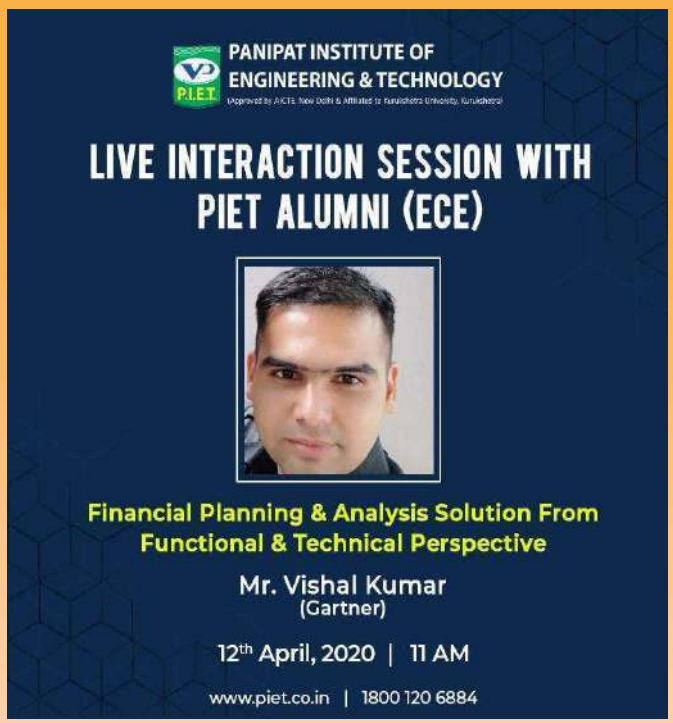
College Placement- INDIAN NAVY @
PACKAGE -12LPA(
Experience in HCL
Currently working in OYO as SDE2

Topic2- Demystifying trends in Digital, Data Science and Artificial Intelligence was delivered by

Mr. Rishit Jain

College Placement - Hitachi Consulting
Currently Working in Delhivery Pvt. Ltd.
Profile- Product Management, Artificial Intelligence, and Data Science

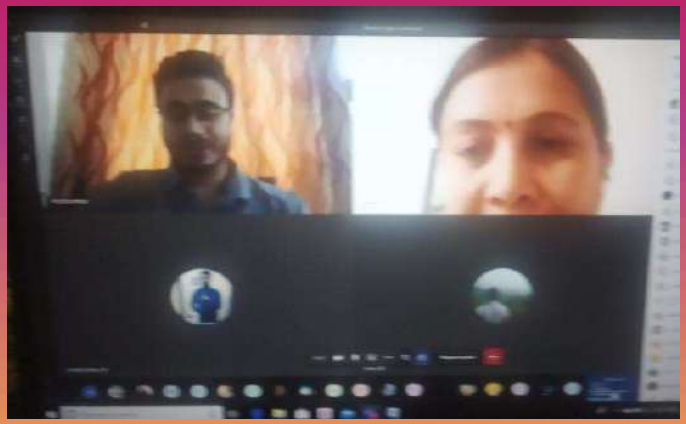
ALUMNI TALK



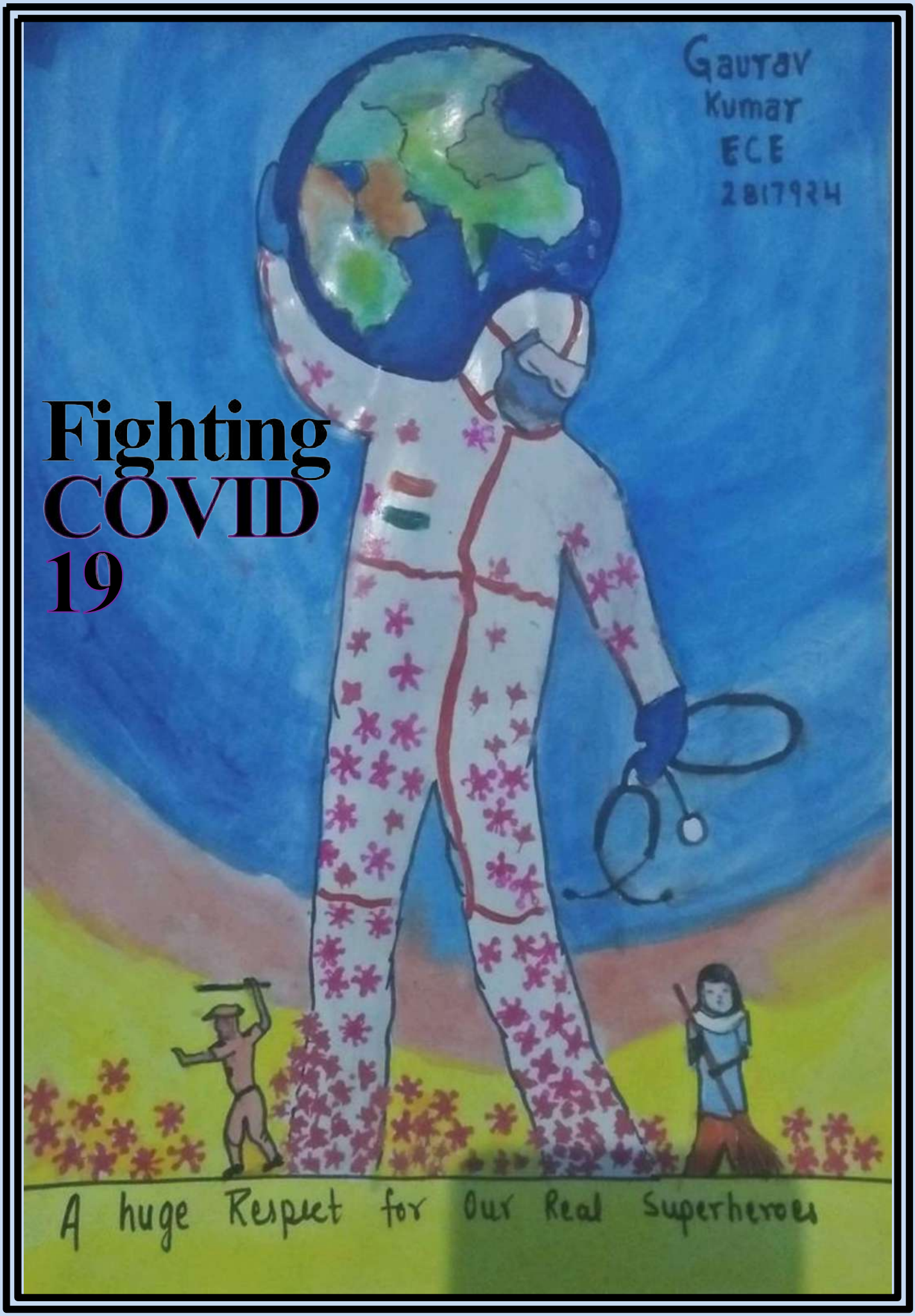
ECE Department organized the 3rd alumni interaction program on 12th April 2020 on Microsoft Team App by By Mr. Vishal Kumar (Gartner) He is an alumnus of PIET, Department of Electronic & Communication Engineering.Interactive session will be about Financial Planning & Analysis Solution from functional & technical prospective

Alum Talks
By Mr. Vishal Kumar
(Gartner)

The Forth Alumni interaction program was organized on 2nd May 2020.
Mr. Kunal Gupta is an alumnus of PIET, Department of ECE.Interactive session was about Startup & Mobile Application Development Tools and he shared his experience in the corporate sector and also motivated the students.



Alum Talks
By Mr. Kunal Gupta
Novorise Fintech India Pvt Ltd


Gaurav
Kumar
ECE
2817924
Fighting
COVID
19
A huge Respect for Our Real Superheroes

How to Prepare Ourselves for COVD-19 Environment

As all of us are facing COVID 19 environment. Some people are worried regarding their business's others are facing financial crisis. There are several ways by which person can cope up with situation. There are three **A's** which can help a person to cope up in this difficult scenario.

1. ACCEPTANCE: - We should accept this COVID 19 situation as it will go a long way. Once we will accept it our mind will spontaneously find out ways to survive with it. It is human nature that we can't accept changes very easily.

2. Appreciation: - When we will adjust and change our self to COVID 19 environment then we will start appreciate the changes. Moreover, we will learn from these changes and make our self-independent. These changes also lead us to achieve new heights in our personal and professional career. We also take COVID 19 as new opportunities in our day to day life. We will become more environment friendly by wisely using the natural resources.

3. Adaptance: - Once we accept the changes, it becomes very easy for us to adjust our self-according to changes. For example, as we prepare for the winter season by

arranging woolen so that we can face and cope up with chilled environment. Similarly, we should prepare ourselves for COVID19 environment.

Mrs. Sapna Arora

Associate Professor

(ECE)

Positive Side-Effects of Unwelcomed Intruder- CORONA

A sanskrit phrase found in Hindu texts "Vasudhaiva Kutumbakam" means all creatures living on Earth are members of a family. This year,2020, we got a new member named 'Novel CORONA', into our family on Earth. Nodoubt, this has created a lot of chaos in the entire world,however it has taught us some good lessons & there are some notable postive side effects (although short term) as outlined below-

1) Pollution Free Environment

Restrictions on movements of people & traffic on road and in the air, drastic improvement in air quality is observed. The lockdown has caused concentration of pollutant in the air, reduced to a great extent. With resuced emissions of greenhouse gases,we are not adding warmth into atmosphere.

Levels of air pollutants and warming gases over some cities and regions are showing significant drops as coronavirus impacts work and travel.

2) New life to wild life

In many cities, wild animals have come out in the absence of people on streets, and are roaming to explore new areas. Several sea craetures have also been seen to appear suddenly on the coastlines due to lack of fishing activity. Many animals are enjoying having all natural reserves and parks available for themselves.

A hawksbill sea turtle hatchling crawls toward the ocean on Janga Beach in Paulista, Brazil, on March 22, 2020. ***Paulista City Hall***

3) Family Life

This fast going modern life has left very little or no time to spend with family members. Lockdown imposed for all resulted in a forceful gathering of all under a roof & help everyone recall real beauty of life. Everyone has got time to think & reflect themselves. Traditional games have now become a part of daily cores.

Family time during Lockdown

Mrs. Monika Gambhir

Assistant Professor

(ECE)

STRESS: THE BIGGEST THREAT

Oh! Did you hear Mr. X's Daughter/Son jumped off the roof, taking poison etc., as she/he failed in her/his board exam or due to other issues. These lines are very common headlines of the news and newspapers today. These increase number of heart attack cases, suicide cases etc., are due to six letter word "STRESS" which look like a very small word but has affected adversely the lives of people in some way or the other.

Stress occurs when you perceive that demands placed on you such as work, projects, school or relationships etc., exceed your ability to cope some stress can be beneficial at time, producing a boost that provides the drive and energy to help people get through situation situations like exams or work deadlines.

However, an extreme amount of stress can have health consequences, affecting the immune, cardiovascular and neuroendocrine and central nervous systems, and take a severe emotional toll.

Untreated chronic stress can result in serious health conditions including anxiety, insomnia, muscle pain, high blood pressure and a weakened immune system. Research shows that stress can contribute to the development of major illnesses, such as heart disease, depression and obesity.

We are just running a rat race, without stopping and realizing how stupid we are and what we are doing?

It's high time, we should over throw this word out of our lives. Life is not meant to be taken so seriously as we are rather temporary here. We are just like prepaid cards, and we are lucky, we may lost for a 50 years, don't just set carrier and academic goals but set goals to give you a balanced successful life. Balanced means ensuring your health, relationships mental peace in good order. We are people not pre-programmed devices.

Here are five healthy techniques that research has shown to help reduce stress in the short and long term.

1. Take a break from the stressor.
2. Regular exercise
3. Smile and laugh
4. Get social support
5. Meditate

"Never Be Serious in Life, Always Be Sincere"

Gaurav Kumar
ECE 4th Year

MIND !T

CAN YOU COUNT THE F's IN THIS SENTENCE?

Quick! Count the number of times that the letter F appears in the following sentence:

"Finished files are the result of years of scientific study combined with the experience of years."

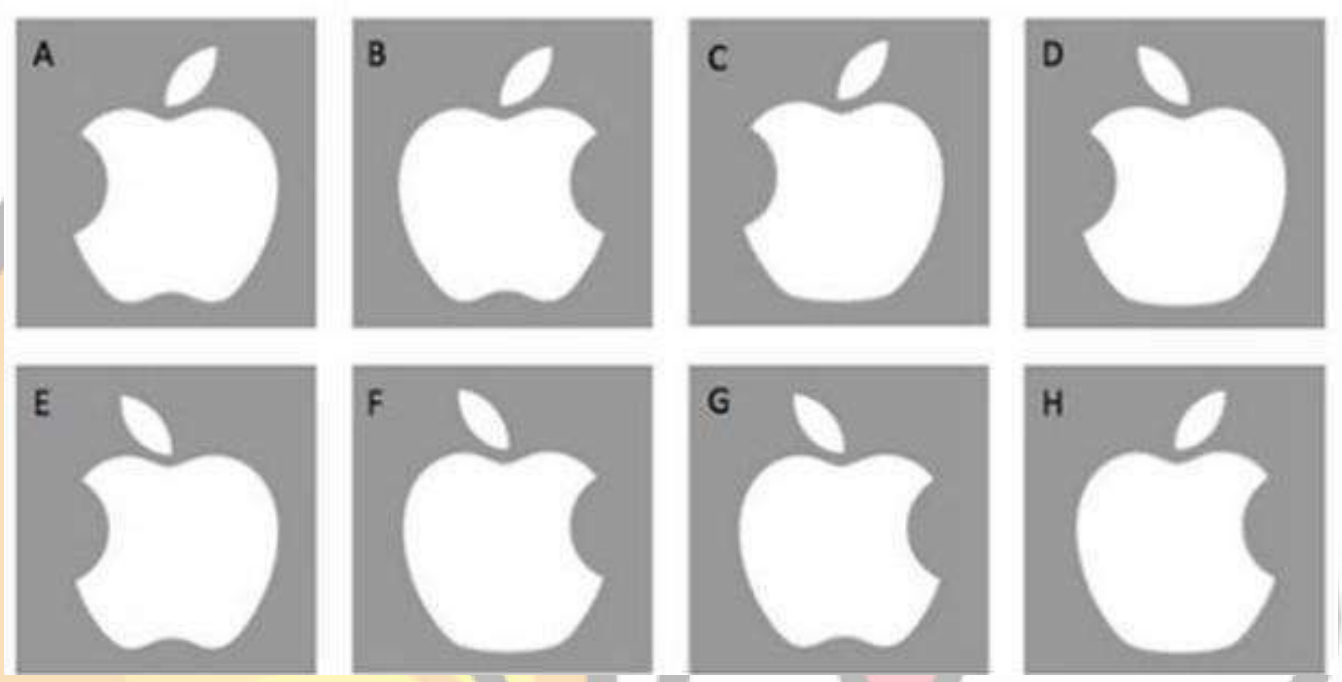
How many did you find ???

Solution: Most people say three. Why? We often don't correctly process the word "OF" for two reasons. First, the letter F usually makes the "f" sound, like in "fox". However, in the word "of", it makes a "v" sound. Second, you have probably read the word "of" so many times in your life that you process it as one unit, overlooking the second letter/ sound.

HOW SMALL CAN COMPONENTS GET?

There is an actual theory to this which is called Moore's Law, which states that the amount of transistors that can be placed in integrated circuit doubles every two years.

How well do you know the Apple logo ?



Solution: The answer is in fact "B".
If you didn't pick the right one, then you are not alone in struggling to recall the exact details of the simple picture.

CROSSWORD...

Across
3 Constant, 6 Ohm, 9 Ionization, 12 Chip, 13 Oscillator, 14 Resistor, 15 Lower

Down
1 Silicon, 2 Circuit, 4 Sampling, 5 Recombination, 7 Transistors, 8 Electrons, 10 Amplifier, 11 Diode

Across

3 The current out of an ideal current source

6 Unit of electrical resistance

9 Occurs when an atom or molecule gains either positive or negative charge

12 A basic component of electronic device

13 Circuit that creates a waveform output from a direct current input

14 A two terminal electronic component that opposes an electric current

15 The reverse saturation current in a Silicon Diode is _____ that that of Germanium diode

Down

1 Most commonly used semiconductor

2 The path between two points along which an electrical current can be carried is called

4 Process of obtaining a set of samples from a continuous function of time x(t) is referred as

5 Depletion layer is caused by

7 Semiconductor device used to switch electronic signals

8 Current is considered to be movement of

10 Electronic devices use to boost the power voltage or current

11 Semiconductor device that essentially acts as a one-way switch for current

ENGINEER

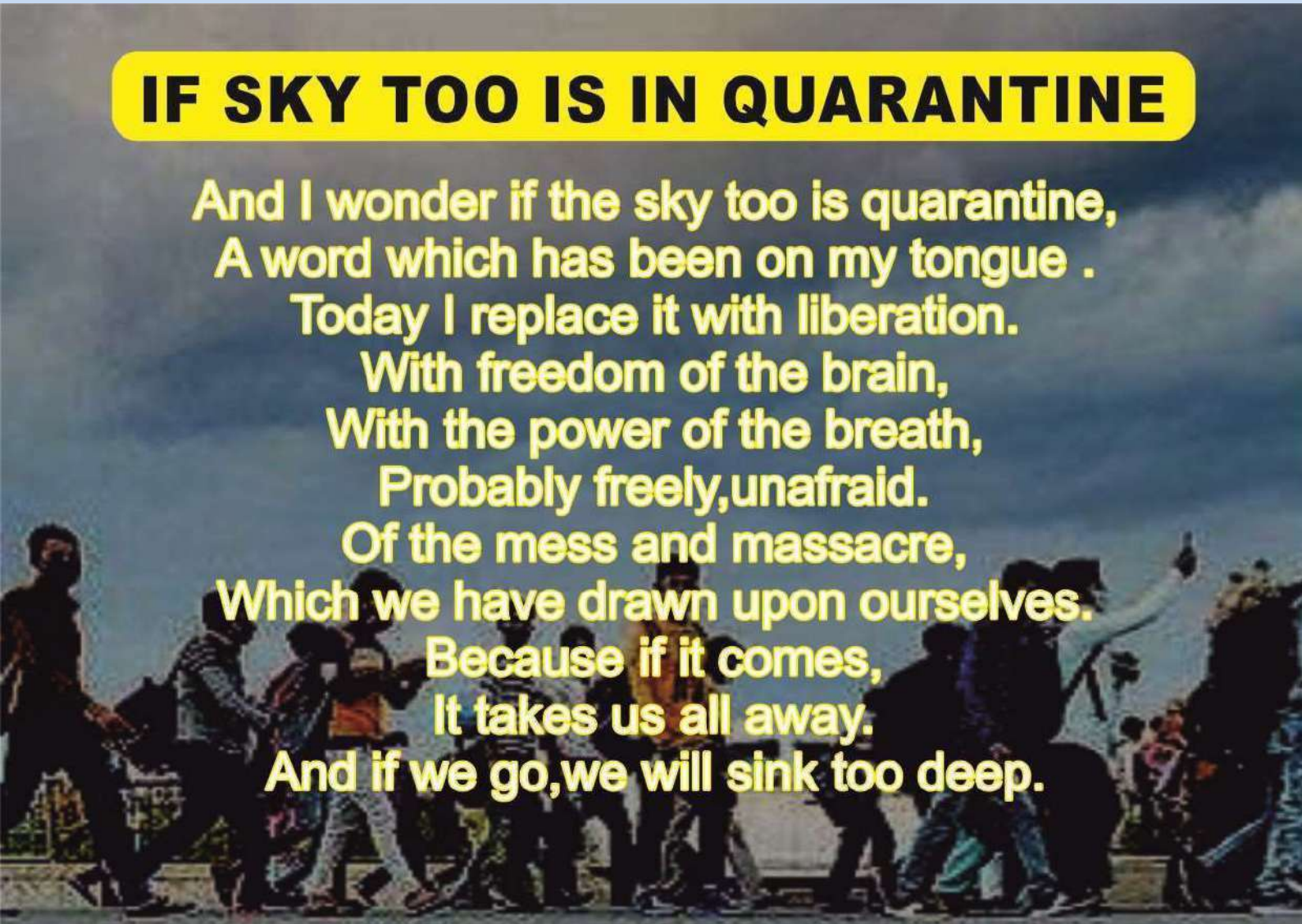
And a

ARTIST

All paintings are created by :

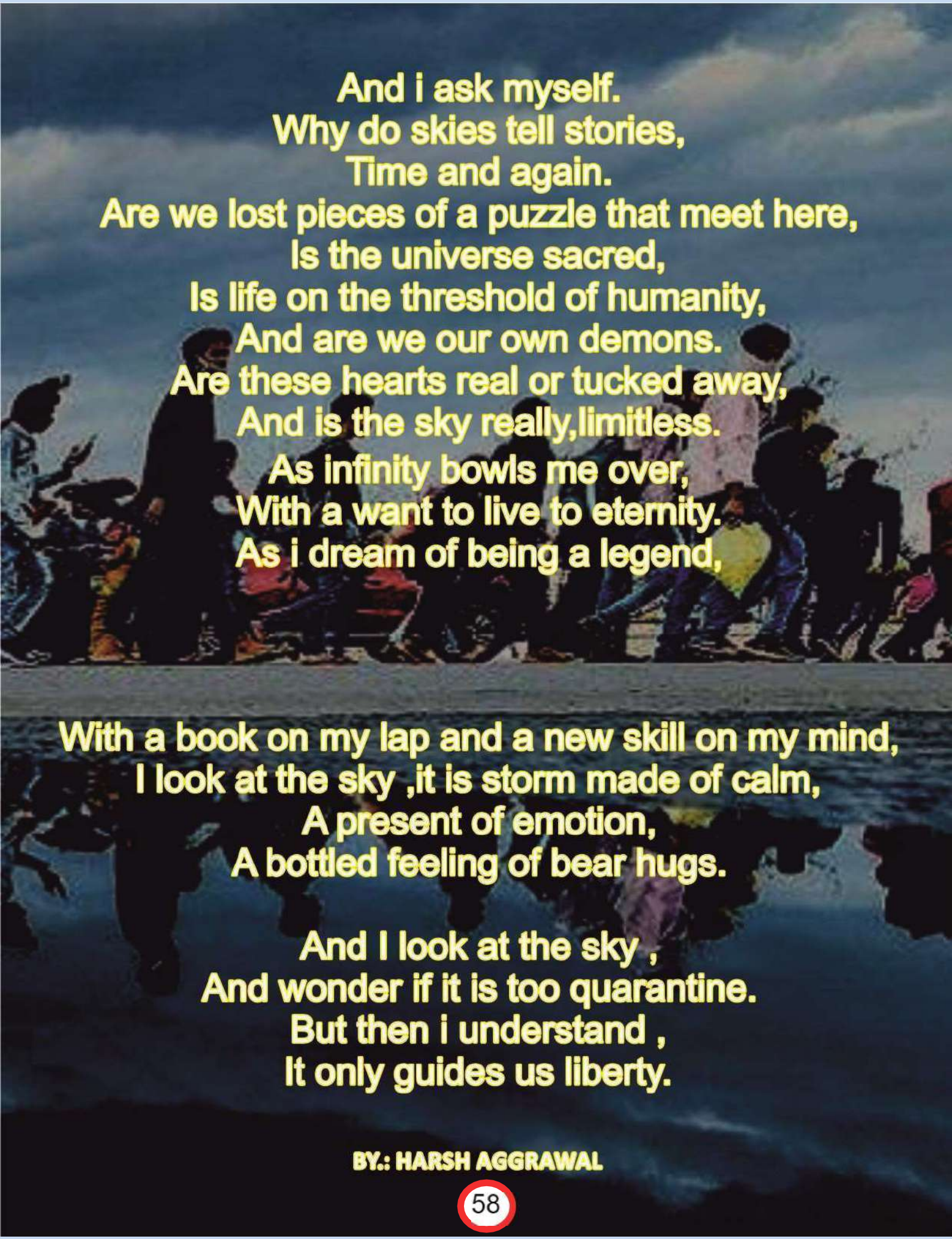
Prof. Swati Gu...

IF SKY TOO IS IN QUARANTINE



And I wonder if the sky too is quarantine,
A word which has been on my tongue .
Today I replace it with liberation.
With freedom of the brain,
With the power of the breath,
Probably freely,unafraid.
Of the mess and massacre,
Which we have drawn upon ourselves.
Because if it comes,
It takes us all away.
And if we go,we will sink too deep.

And i wonder if the sky today is also in quarantine.
Does it know how is it to be stuck.
To be locked inside.
To be afloat yet gloomy,
To be itself, yet living a duality.
Do the clouds really come around as we think they do,
Or is the sky always forced to look pretty.
Is it dim or shy,
Is it dull or grey,
Is it bored or the blue,
Does it seek sunshine just as we do.

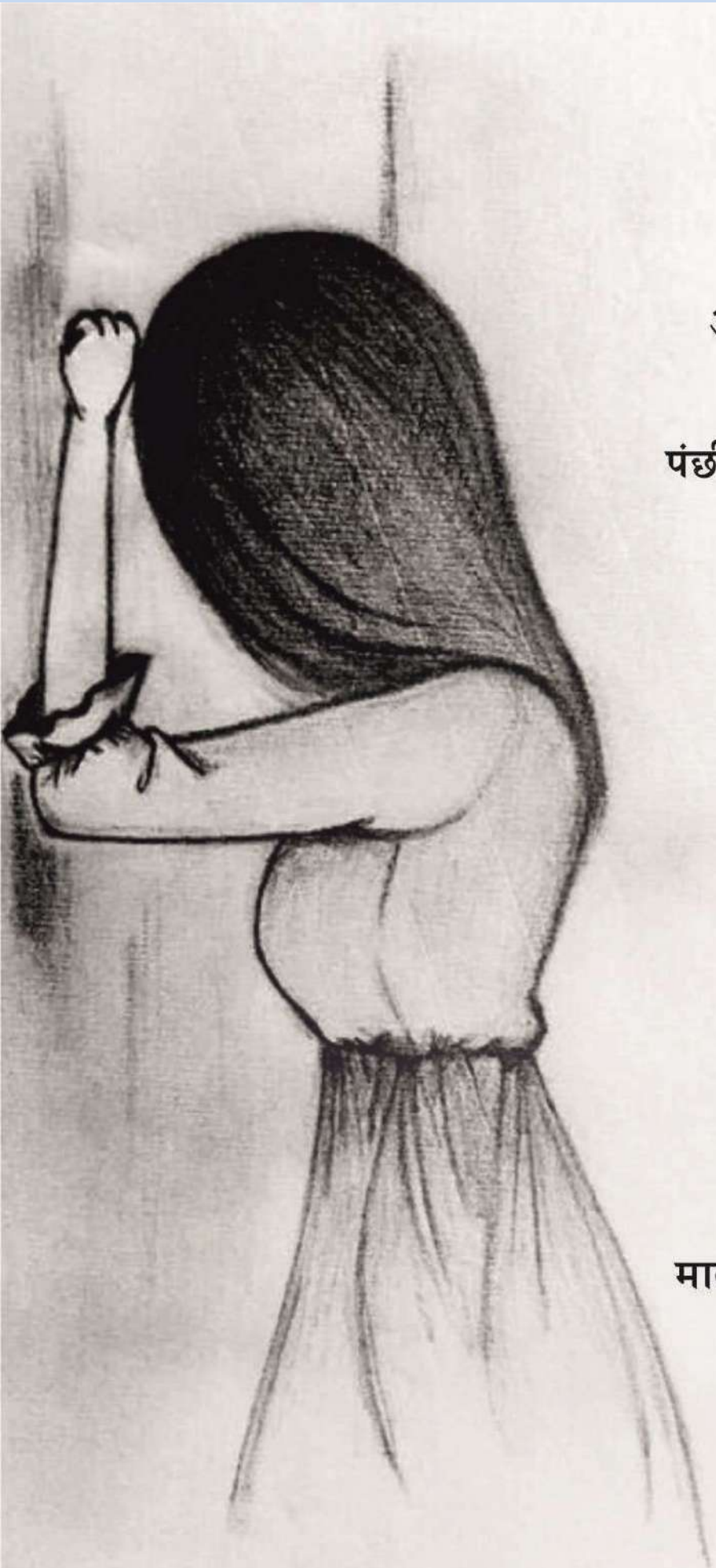


And i ask myself.
Why do skies tell stories,
Time and again.
Are we lost pieces of a puzzle that meet here,
Is the universe sacred,
Is life on the threshold of humanity,
And are we our own demons.
Are these hearts real or tucked away,
And is the sky really,limitless.
As infinity bowls me over,
With a want to live to eternity.
As i dream of being a legend,

With a book on my lap and a new skill on my mind,
I look at the sky ,it is storm made of calm,
A present of emotion,
A bottled feeling of bear hugs.

And I look at the sky ,
And wonder if it is too quarantine.
But then i understand ,
It only guides us liberty.

BY.: HARSH AGGRAWAL



सपने

सपनो को साकार कर पाऊ में,
अपने जीवन का उध्स्य ढूढ पौऊ में,
जीवन का पिंजरा खोलकर,
पंछी की तरह इस गगन में उड़ जाऊ में,

सपनो को साकार कर पौउ में |

खुद को कुछ ऐसा बना पाऊ में,
इस भीड़ में सवप्रथम आ जाऊ में,
चट्टानों से भी टकराकर,
अपना ल्श्य साथ पाऊ में,

सपनो को साकार कर पौउ में |

सबको अपना रंग दिखा पाऊ में,
की सबको दिलों में बस जाऊ में,
कुछ ऐसा काम करू की,
माता- पिता का नामरोशन कर पाऊ में,

सपनो को साकार कर पौउ में |

रिया

Mother, Ma'am, Mummy-
A special word for every child.
Feelings of my heart with whom I share,
You are the one who only cares.

Doing good things in my life you always guide,
To make me happy you only try.
Lucky to have you as my friend,
I feel safe when you hold my hand.

Scolding me for my bad deed,
Your selfless love in this world I only need.
Gets angry on me sometimes,
But one hug and kiss makes everything fine.

You're an inspiration to me -that's true,
With all your guidance I grew.
Handles all the problems with a smile on your face,
Wanna walk on the footprints that you trace.

You are the one who overcome my fear,
I wish to have you always my near.
Your presence in my life makes me strong,
Your gratitude awares me wherever I am wrong.

Your actions show that you are smart,
Without you my day can't be start.
On this planet you are a wonderful creature,
All what makes you special is your distinguish feature.

You always pray to have my future bright ,
Hope our bond of love reaches new height.
You binds our family together,
Shower your blessings on me forever.

Truly, love you mother,
Your place can't be taken by any other.
No word in the dictionary can describe you,
I am blessed to have you.
"Love you Maa. . "

RIYA POPLI
1ST YR

A virus outbreak from China,
Spreads across the world.
Has a great impacts on human lives, that all we have heard.

Powerful, deadly virus,
Named novel coronavirus.
Which in presence scenario,
Makes all of us nervous.

Having no vaccine,
Makes it pandemic.
Whole world is fighting,
With this epidemic.

Take it seriously,
And don't lose hope.
U can see it's dangerous impacts,
On USA and Europe.

Eat hygienic food,
To boost up your immunity.
Your self-isolation can ,
save the community.

Make a proper distance,
If you are sick.
From health or wealth,
only one you can pick.

Rigidly follow the rules of lockdown ,
Don't rush hurrily to your hometown.
Have various impacts on the globe greatly ,
Leads to huge distruction economically.

One can protect himself,
By having preventions.
Worldwide scientists are indulged,
In vaccine inventions.

Foremost precaution is ,
To do self-quarantine.
Do whatever you like,
To complete in this free time.

After listening news,
Don't get panic .
Use this auspicious time,
And be dynamic.

Together we will oppose this virus,
And things will be fine.
Moreover our country will,
Again rise and shine.

RIYA POPLI
1ST YR

CORONAVIRUS

rajma chawal

Wo lecture ke beech mein
rajma chawal khaana,
Aur khaate khaate atak jaana.
Wo Samose ke saath chai ki
chuskiyaan,
Paise dene ke naam par dikhate
sab kanjoosiyan.
Yeh sab toh bahaane do-chaar
hai,
Asli nageene toh mere yaar
hain.
Ek ke naa aane par bhi adhoora
lagta tha.
Jeena inhone hi to sikhaya tha ,
Wrna jindagi toh main bi kaat
raha tha.
Jinki wajah se college jaata tha,
Boring lecture bi majedaar ho
jaata tha.

Abb toh sessional bi bunk
karne lag gaya tha,
Aise yaaron ko jo paa lia tha.
Ulte sidhe kaam karke haalat
itni bigadi,
Ki hum bi bann gaye Khatron
Ke Khiladi.

Kuch ki kabhi alag class hoti thi,
Parr humse kahan durr raha
jaata tha,
Paani peene ke bahane sab
bahar aajate,
Crush ke saamne aane par sab
jor jor se chillate.

Bahut yaad aayega fir adde par
jaana
Wo momos ke liye ladai...
Aaj party kon dega BHAI ??

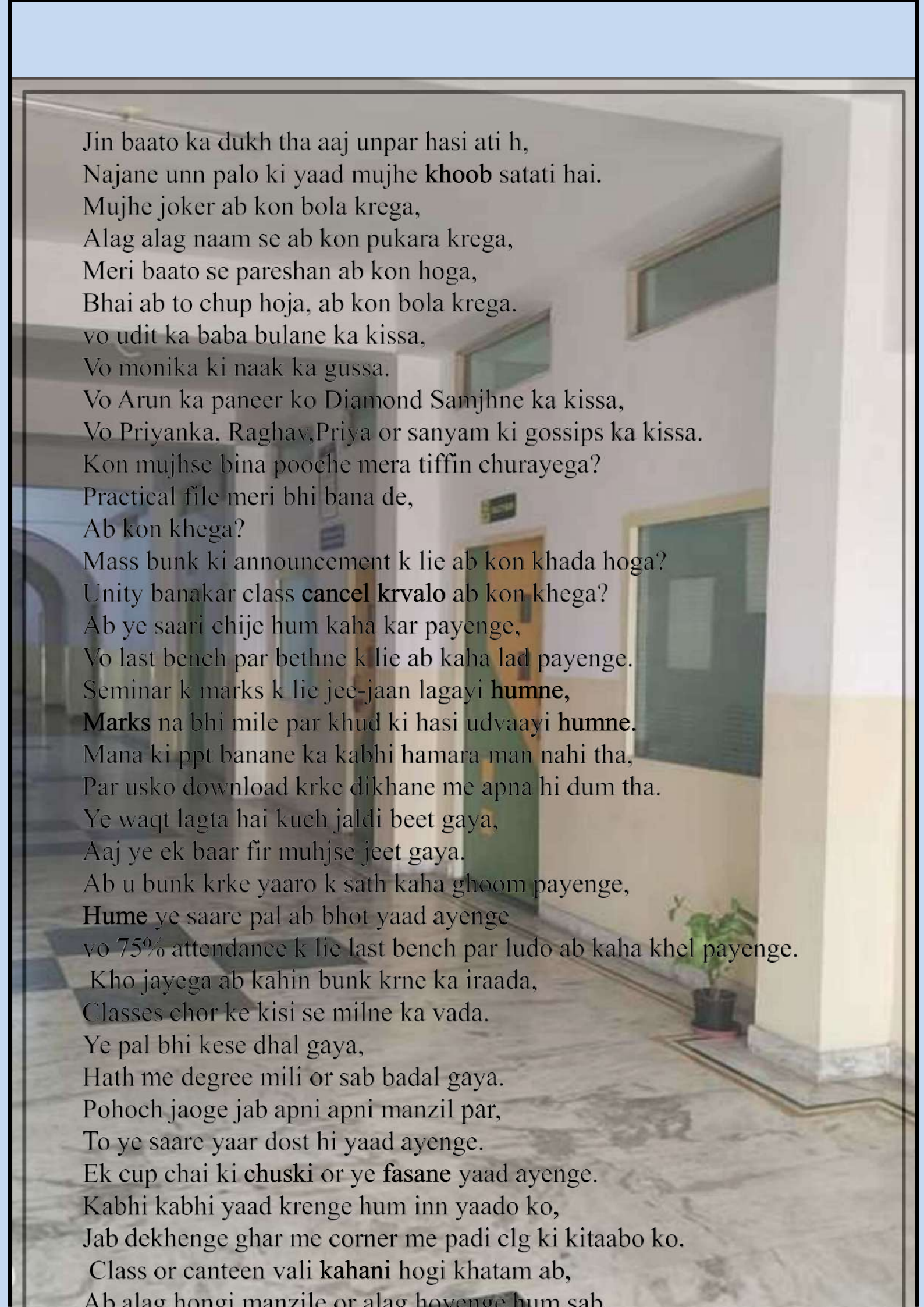
Itna taura toh apna bi chalta tha,
Lecture mein na hote hue bi sabki
proxy lagwa deta tha.

Tour bahut cancel kiye humne
Par jitne bi kiye unka jitna jikr
karun kam hai
Itni yaadein banake baitha hoon
Ki harr lamha firr se jeene ka
mann hai .
College ka yeh akhri saal hai,
Tum bin kaise rahunga uske baad,
Ye soch soch kar boora mera haal
hai.
Kaha kisi shaks ne bilkul sahi hai,
School college ke yaaron ki baat
hi alag hai,
Sang rahe toh ladte rehte hai,
Parr door inke bina reh bi ni
paatein hain.

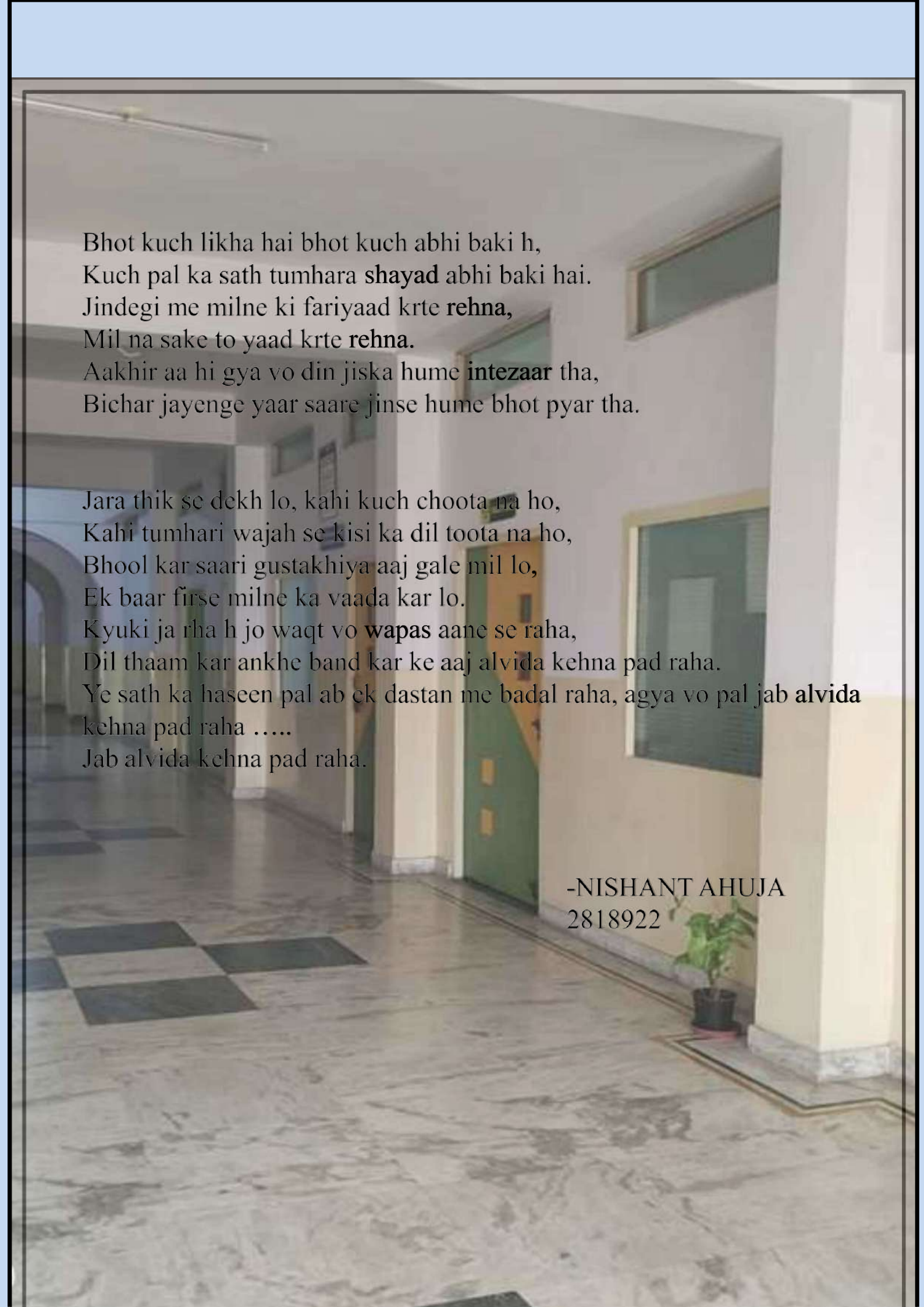
Hamare mein toh aisa hai ji..
Agar koi ruth bhi jaaye toh usse
manana konsi badi baat hai !
Bus ek rajma chawal ki toh baat
hai...
Bus ek rajma chawal ki toh baat
hai...
-Sanyam Jain

Last Day Of College...

Aaj Waqt Ko Rokne ko jee chahta hai,
Na jane kyu kuch choot jaane se dar lagta hai.
Bache bankar hi to aye the hum sab,
Ek doosre se kitne paraye the hum sab.
Dosto 3 saal pehle ek safar ki shuruaat hui thi,
Seminar intro se jo start hui thi.
College ke kuch dino me hi hum ek hogye,
Hasne khelne k bahane anek hogye.
Sochte the ki jaldi yaha se chle jayenge,
Ab to ye bhi ni pata ki ye waqt dubara bhi kabhi payenge.
Yaad ayega hum sabko u dosto se bichar jana,
Vo raat ko der se sona,
or subah ki pehli class me apni attendance khona.
Vo Vishal jain sir ka pehla lecture,
Late hojane par gate se race lagana,
Vo 9:30 am par class me entry,
Fir attendence na milne par sir ko maska lagana.
Vo sapna mam ki extra clasess or unka samjhana,
Vo ruchira mam ki class me proxy lagva ke yaari nibhana.
Vo M1, M2, M3 ne hume bhot sataya,
In subjects ko chorho, Monika mam ne bhi bhot pyar se padhaya.
Vo Rajesh sir ka ek ek class ka hisab batana,
Bunk krke maa-baap k peso me aag na lagana.
Vo vikas goyal sir ki daant, Dhanda sir ka pyar,
Ab hum kaha dekh payenge.
1st sem k result ne hume hamari asliyat dikhayi,
Ek doosre k kandhe par haath rakh kar bole,
Hmare bass me kuch nai hai bhai.
Bahar se ane wale bacho ko ghar ki yaad satati thi,
Canteen ki thali me najane maa ki tasveer najar ati thi.
Par najane aaj dill me kuch or ata hai,
Waqt ko rokne ko jee chahta hai.



Jin baato ka dukh tha aaj unpar hasi ati h,
Najane unn palo ki yaad mujhe **khoob** satati hai.
Mujhe joker ab kon bola krega,
Alag alag naam se ab kon pukara krega,
Meri baato se pareshan ab kon hoga,
Bhai ab to chup hoja, ab kon bola krega.
vo udit ka baba bulane ka kissa,
Vo monika ki naak ka gussa.
Vo Arun ka paneer ko Diamond Samjhne ka kissa,
Vo Priyanka, Raghav,Priya or sanyam ki gossips ka kissa.
Kon mujhse bina pooche mera tiffin churayega?
Practical file meri bhi bana de,
Ab kon khega?
Mass bunk ki announcement k lie ab kon khada hoga?
Unity banakar class **cancel krvalo** ab kon khega?
Ab ye saari chije hum kaha kar payenge,
Vo last bench par bethne k lie ab kaha lad payenge.
Seminar k marks k lie jee-jaan lagayi **humne,**
Marks na bhi mile par khud ki hasi udvaayi **humne.**
Mana ki ppt banane ka kabhi hamara man nahi tha,
Par usko download krke dikhane me apna hi dum tha.
Ye waqt lagta hai kuch jaldi beet gaya,
Aaj ye ek baar fir muhjse jeet gaya.
Ab u bunk krke yaaro k sath kaha ghoom payenge,
Hume ye saare pal ab bhot yaad ayenge
vo 75% attendance k lie last bench par ludo ab kaha khel payenge.
Kho jayega ab kahin bunk krne ka iraada,
Classes chor ke kisi se milne ka vada.
Ye pal bhi kese dhal gaya,
Hath me degree mili or sab badal gaya.
Pohoch jaoge jab apni apni manzil par,
To ye saare yaar dost hi yaad ayenge.
Ek cup chai ki **chuski** or ye **fasane** yaad ayenge.
Kabhi kabhi yaad krenge hum inn yaado ko,
Jab dekhenge ghar me corner me padi clg ki kitaabo ko.
Class or canteen vali **kahani** hogi khatam ab,
Ab alag hongi manzile or alag hoyenge hum sab.



Bhot kuch likha hai bhot kuch abhi baki h,
Kuch pal ka sath tumhara **shayad** abhi baki hai.
Jindegi me milne ki fariyaad krte **rehna,**
Mil na sake to yaad krte **rehna.**
Aakhir aa hi gya vo din jiska hume **intezaar** tha,
Bichar jayenge yaar saare jinse hume bhot pyar tha.

Jara thik se dekh lo, kahi kuch choota na ho,
Kahi tumhari wajah se kisi ka dil toota na ho,
Bhool kar saari gustakhiya aaj gale mil lo,
Ek baar firse milne ka vaada kar lo.
Kyuki ja rha h jo waqt vo **wapas** aane se raha,
Dil thaam kar ankhe band kar ke aaj alvida kehna pad raha.
Ye sath ka haseen pal ab ek dastan me badal raha, agya vo pal jab **alvida** kehna pad raha .....
Jab alvida kehna pad raha.

-NISHANT AHUJA
2818922

PLACEMENT 2020

CONGRATULATIONS

CAPGEMINI…

VAISHALI

PIYUSH

ANKIT

CLOUD ANALOGY…

DEBARPITA

MEGHA

SWATI

CTL…

AAKASH

MEGHNA

ANKUSH

PLACEMENT 2020

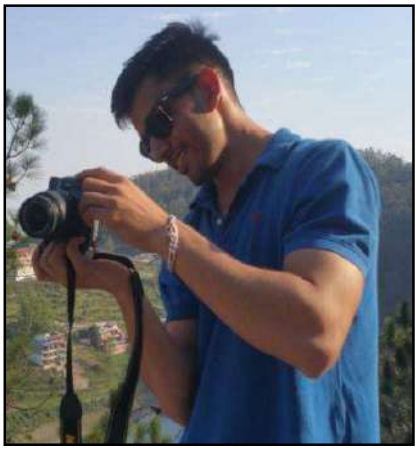
CTL…

INNU

SHUBHAM

NITESH

MATEOS…



ASHISH

CONGRATULATIONS

WHAT ALUMNI SAYS ?

Batch 2017

RISHABH MEHRA / VIVO / PACKAGE-3.5 LPA " It is good to seek perfection but it is better to seek excellence. It is good to work hard but it is better to work hard smarter. It is good to study but it is better to learn. It is good to have a dream but it is better to actually pursue it and PIET is the one who made me understand this- **YES PIET YES PIET**. "

CHARVI / VIVO /PACKAGE-3.5LPA

I have joined Vivo India Pvt. Ltd .Piet has provided me a ladder to step up into my professional life that supports us throughout our life. Faculties at Piet are well versed in their respective fields. My sincere thanks to Piet ,the placement cell ,my hod and my teachers who have actually made this possible .

MUKESH GARG/ VIVO / PACKAGE 3.5LPA

" PIET College is all about building – building friendships, building experiences, building connections, building relationships and more importantly, building your future.So, according to me PIET life is a journey as awesome and exciting as you let it be. Put aside your inhibitions and be hungry for success – opportunities are waiting for you with open arms. "

ABHEET MAHAJAN/ Capgemini PACKAGE- 3.15 LPA

Mere words are less to show my gratitude to PIET and its faculty. If one is confident, positive and hardworking then nothing can stop you from achieving your goals and be successful in life, this is what I learnt in my college and which has now become the philosophy of my life. Now being a part of technology giant 'Capgemini' its like a dream realised.

KUNALJUNEJA CAPGEMINIPACKAGE-3.15LPA

"Starting my career with a firm like Capgemini is all I could once only think of and a large chunk of credit goes to the placement cell which works day-in day-out to help us achieve our goals."

WHAT ALUMNI SAYS ?

Batch 2016

DURRE E SHAHWAAR/ THINK AND LEARN / PACKAGE-6.5LPA

P.I.E.T College 'The Hub Of Placements' .I was very fortunate to be a part of such renowned college where you get exuberant and plenteous opportunities. One of the greatest blessing and emolument is that you so good as well as decorous placement coordinators that they keep boosting confidence in you.I got placed in Think and Learn Pvt Ltd (Byjus) which is India's most loved learning company and it was possible for me to bag a job in there just because of my virtuous college. Being a part of PIET will drive you towards excellence and transcendence.

MADHUR ARYA/ THINK AND LEARN PACKAGE-6.5LPA

"Take a limitation and turn into an opportunity. Take an opportunity and turn it into and an adventure by Dreaming BIG". Piet did exactly for all students and provided opportunities so that we can Dream Big.

SAKSHI SHUKLA/ GENPACT PACKAGE-3LPA

Placed at Genpact as Technical Associate. It gives me a great feeling of satisfaction that I got placed in one of the renowned company. PIET has provided us a ladder to go ahead and grab the opportunities to excel in life. Thanks to the Placement cell, ECE department for all their efforts and inviting leading brands of corporate world to campus every year, which helped me to reach here. Now I feel proud to say that I have been a part of PIET family.

RAJAT KAMRA / GODREJ PACKAGE -5.5 LPA

I would like to take the opportunity to thank PIET for showing me all the support which i needed to kick start my career and to enter a corporate life. I would like to express my gratitude to all my teachers and my placement cell who taught me so well that i am now placed in a Multinational Indian Company like Godrej & boyce Mfg. Co. Thank You PIET

No Panic in Pandemic

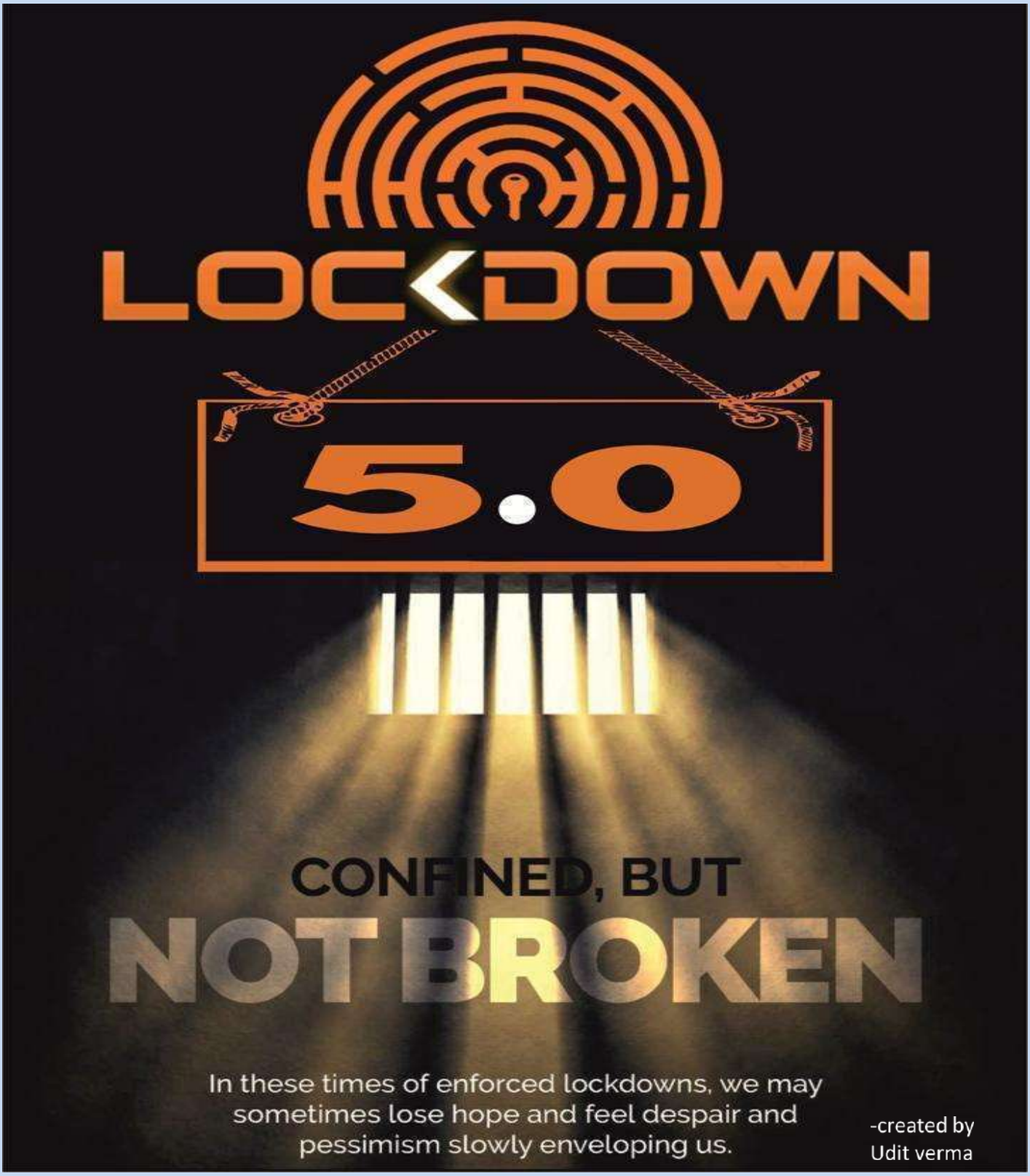
Even during this pandemic , students have not stopped themselves from learning and have come up with their ideas and skills beautifully....

Ashish
2817922

#Secret Of Success
Anger and Jealousy Should be thrown away
Difficulties will come in our life day after day
Move ahead with patience and faith
Don't stop or it will be too late

Chalti firti aankhon se
Roshni dekhi hai,
Maine Jannat to nahi dekhi hai,
Maa dekhi hai.

Designed By Udit Verma



Content Editors : Ankit, Yash Budhwar
Concepts and Designed by : Sanyam Jain , Raghav Aggarwal , Udit Verma

---

Department of Electronics and Communication Engineering
Panipat Institute of Engineering & Technology
70th KM Stone, G.T. Road, NH-44 (Previously NH-1), Samalkha,
Distt. Panipat-132102 (Haryana)
Admission Helpline No. (Campus): 9315601100, 9315602200, 8685906600
Email: info@piet.co.in | admission@piet.co.in | marketing@piet.co.in
Website: www.piet.co.in | **Toll Free:** 1800 120 6884