



DEPARTMENT OF COMPUTER SCIENCE
IMS ENGINEERING COLLEGE, GHAZIABAD



EXECUTICE COUNCIL



Shri Sanjay Agarwal
Chairman



Shri Ramesh
Chaudhary
General Secretary



Shri Rakesh Chharia
Treasurer



Smt. Anshu Gupta
Joint Secretary



Shri Naresh
Agarwal



Sh. Nitin Agarwal
Executive Member



Shri Pramod Agarwal
Executive Member



Shri Sudhir Shukla
Executive Member



Shri Ashok
Chaturvedi



Shri Apurve Goel



Shri Rajiv Chaudhary
Executive Member



Ms. Garima Aggarwal



Shri Vidur Chharia
Executive Member



Dr. Pankaj Agarwal,
HOD, CSE



Dr. Sraban Mukherjee,
Director

Editorial Board



Ms. Sapna Yadav,
Chief Editor



Mr. Anurag Gupta,
Editor



Ms. Juhi Chaudhary,
Editor

Student Coordinators



Priyanshu Yadav,
CS III Year



Nitish Singh,
CS III Year



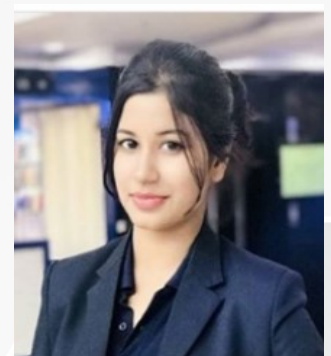
Krati Singh,
CS III Year



Mukhar Bajpai,
CS II Year



Suyash Yadav,
CS II Year



Priyanka Sharma,
CS II Year

Vision-

Our vision is to impart vibrant, innovative and global education to make IMS the world leader in terms of excellence of education, research and to serve the nation in the 21st century.

Mission -

- ▮ *To develop IMSEC as a centre of Excellence in Technical and Management education.*
- ▮ *To inculcate in its students, the qualities of Leadership, Professionalism, Executive competence and corporate understanding.*
- ▮ *To imbibe and enhance Human Values, Ethics and Morals in our students.*
- ▮ *To transform students into Globally Competitive professionals.*

Vision -

To be recognized as a Centre of Excellence imparting quality education and creating new opportunities for students to meet the challenges of technological development in Computer Science & Engineering.

Mission -

- ▮ *To promote technical proficiency by adopting effective teaching learning processes.*
- ▮ *To provide environment & opportunity for students to bring out their inherent talents for all round development.*
- ▮ *To promote latest technologies in Computer Science & Engineering and across disciplines in order to serve the needs of Industry, Government, Society and the scientific community.*
- ▮ *To educate students to be Successful, Ethical and Effective problemsolvers and Life-Long learners who will contribute positively to the society.*

PROGRAM EDUCATIONAL OBJECTIVES

Graduates of the program will be able to apply fundamental principles of mathematics, engineering, management, basic programming languages in problem understanding & formulating its solutions. They will be aware of the role of computing in multiple disciplines.

- Graduates will learn to apply the principles of advanced computer programming & approaches, software engineering, project management, emerging techniques & tools while developing real world computational solutions and projects. Graduates should also learn to collaborate & apply innovative aspects in problem solving.*

- Graduates will enhance their technical, aptitude, communication & professional skills through value addition programs, project based learning, engineering events, self-learning, re-search, interaction with industry & alumni. Help our graduates to establish a productive Computer Science and Engineering career in Industry, Government or Academia.*

- To promote the understanding of professionalism, ethics, social responsibilities among graduates. They will contribute to the society through active engagement with professional societies, schools, civic organizations or other*

PROGRAM SPECIFIC OUTCOMES (PSO'S)

Student should learn to demonstrate the basic understanding of Computer Science & Engineering fundamentals, programming, and professional/social ethics and apply mathematical foundations to design & solve computational problems.

- Student should learn to apply analysis, design, development, testing & management principles in the development of computational solutions & software systems; He/she is expected to function effectively in development teams.*

- Student is expected to gain enough value addition and technical expertise on latest industry specific skills through self learning & training. They are expected to have good communication skills with correct attitude and aptitude.*

- Students are expected to inspire for lifelong learning & do well in their professional careers. They are also expected to act as a good citizen by inculcating in them moral values & ethics.*



ARTICLES

DEEP LEARNING



Dr. Pankaj Agarwal,
HOD, CSE

Deep learning is getting lots of attention lately and for good reason. It's achieving results that were not possible before.

In deep learning, a computer model learns to perform classification tasks directly from images, text, or sound. Deep learning models can achieve state-of-the-art accuracy, sometimes exceeding human-level performance. Models are trained by using a large set of labeled data and neural network architectures that contain many layers.

What is Deep Learning?

Deep learning is a machine learning technique that teaches computers to do what comes naturally to humans: learn by example. Deep learning is a key technology behind driverless cars, enabling them to recognize a stop sign, or to distinguish a pedestrian from a lamppost. It is the key to voice control in consumer devices like phones, tablets, TVs, and hands-free speakers.

How does deep learning attain such impressive results?

In a word, accuracy. Deep learning achieves recognition accuracy at higher levels than ever before. This helps consumer electronics meet user expectations, and it is crucial for safety-critical applications like driverless cars. Recent advances in deep learning have improved to the

point where deep learning outperforms humans in some tasks like classifying objects in images.

While deep learning was first theorized in the 1980s, there are two main reasons it has only recently become useful:

1. Deep learning requires large amounts of **labeled data**. For example, driverless car development requires millions of images and thousands of hours of video.
2. Deep learning requires substantial **computing power**. High-performance GPUs have a parallel architecture that is efficient for deep learning. When combined with clusters or cloud computing, this enables development teams to reduce training time for a deep learning network from weeks to hours or less.

Examples of Deep Learning at Work

Deep learning applications are used in industries from automated driving to medical devices.

Automated Driving: Automotive researchers are using deep learning to automatically detect objects such as stop signs and traffic lights. In addition, deep learning is used to detect pedestrians, which helps decrease accidents.

Aerospace and Defense: Deep learning is used to identify objects from satellites that locate areas of interest, and identify safe or unsafe zones for troops.

Medical Research: Cancer researchers are using deep learning to automatically detect cancer cells. Teams at UCLA built an advanced microscope that yields a high-dimensional data set used to train a deep learning application to accurately identify cancer cells.

Industrial Automation: Deep learning is helping to improve worker safety around heavy

machinery by automatically detecting when people or objects are within an unsafe distance of machines.

Electronics: Deep learning is being used in automated hearing and speech translation. For example, home assistance devices that respond to your voice and know your preferences are powered by deep learning applications.

Examples of Deep Learning at Work

Deep learning applications are used in industries from automated driving to medical devices.

Automated Driving: Automotive researchers are using deep learning to automatically detect objects such as stop signs and traffic lights. In addition, deep learning is used to detect pedestrians, which helps decrease accidents.

Aerospace and Defence: Deep learning is used to identify objects from satellites that locate areas of interest, and identify safe or unsafe zones for troops.

Medical Research: Cancer researchers are using deep learning to automatically detect cancer cells. Teams at UCLA built an advanced microscope that yields a high-dimensional data set used to train a deep learning application to accurately identify cancer cells.

Industrial Automation: Deep learning is helping to improve worker safety around heavy machinery by automatically detecting when people or objects are within an unsafe distance of machines.

Electronics: Deep learning is being used in automated hearing and speech translation. For example, home assistance devices that respond to your voice and know your preferences are powered by deep learning applications.

How Deep Learning Works

Most deep learning methods use **neural network** architectures, which is why deep learning models are often referred to as **deep neural networks**.

The term “deep” usually refers to the number of hidden layers in the neural network. Traditional neural networks only contain 2-3 hidden layers, while deep networks can have as many as 150.

Deep learning models are trained by using large sets of labeled data and neural network architectures that learn features directly from the data without the need for manual feature extraction.

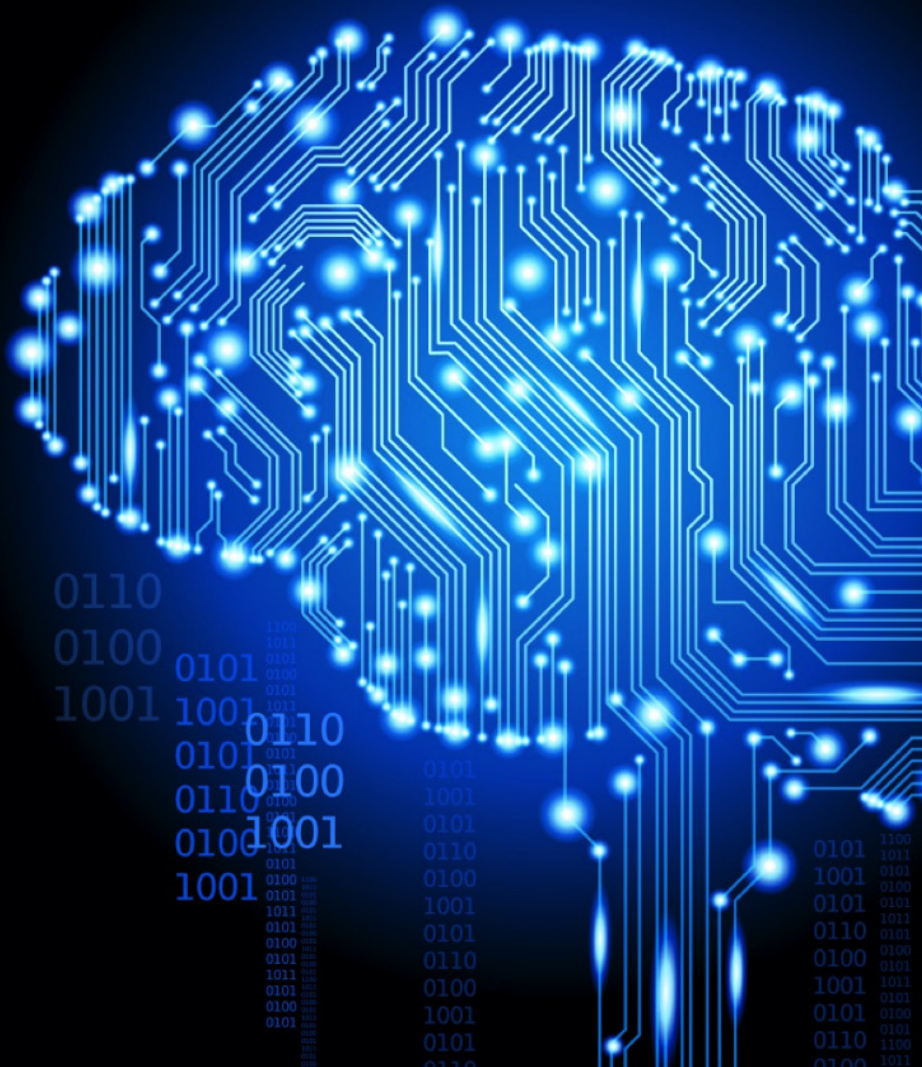
One of the most popular types of deep neural networks is known as convolutional neural networks (**CNN** or **ConvNet**). A CNN convolves learned features with input data, and uses 2D

convolutional layers, making this architecture well suited to processing 2D data, such as images.

CNNs eliminate the need for manual feature extraction, so you do not need to identify features used to classify images. The CNN works by extracting features directly from images. The relevant features are not pretrained; they are learned while the network trains on a collection of images. This automated feature extraction makes deep learning models highly accurate for computer vision tasks such as object classification.

CNNs learn to detect different features of an image using tens or hundreds of hidden layers. Every hidden layer increases the complexity of the learned image features. For example, the first hidden layer could learn how to detect edges, and the last learns how to detect more complex shapes specifically catered to the shape of the object we are trying to recognize.

Reference: [Matworks.com](https://www.matworks.com)



HEALTHY EATING TIPS FOR BUSY STUDENTS

The average college student is often pressed for time, under a lot of stress and eating on the go. You may find it difficult to avoid bad habits like skipping meals or frequently visiting fast food restaurants. But eating a healthy diet can help you feel better, cope with stress and perform better in the classroom and on the athletic field. It really isn't that hard to get started.

Eat a good breakfast. Studies show that skipping breakfast detracts from scholastic achievement. When there isn't time to sit down and enjoy your morning meal, grab a bagel, piece of fruit and some juice. Most of these items can be easily stored in your residence hall room.

If you must eat fast foods, choose wisely. Choose pizza with half the cheese, a regular size roast beef sandwich, baked potato or green salad with reduced calorie dressing. Limit high fat offerings like French fries, fried chicken or fish sandwiches.

Keep healthy snacks on hand. This way, if hunger strikes during a late night study session, you won't be tempted by vending machine candy, chips or ice cream. Possibilities include fresh or dried fruit, pretzels, unbuttered popcorn, rice cakes or whole wheat crackers. If you have a refrigerator, consider raw vegetables with low-fat yogurt or cottage cheese dip.

Eat plenty of foods rich in calcium. People in their early twenties need to be building up stores of calcium in their bodies to prevent osteoporosis later in life. If you don't like milk, try to include ample amounts of low-fat yogurt, low-fat cheese and green leafy vegetables in your diet.

If you need to lose weight, do it sensibly. Starvation and/or diets that offer a quick fix usually backfire and are harmful. There is no truth to the theories that suggest eating foods in any particular combination will promote weight loss. The only safe way to lose weight,

feel good while doing it, and keep it off, is to eat a balanced diet and exercise.

Limit your sugar intake – Sugar provides calories in your diet but few other nutrients, and it contributes significantly to tooth decay. Use it sparingly and consider sweetening coffee, tea, cereal, and fruit with diet sweeteners instead.

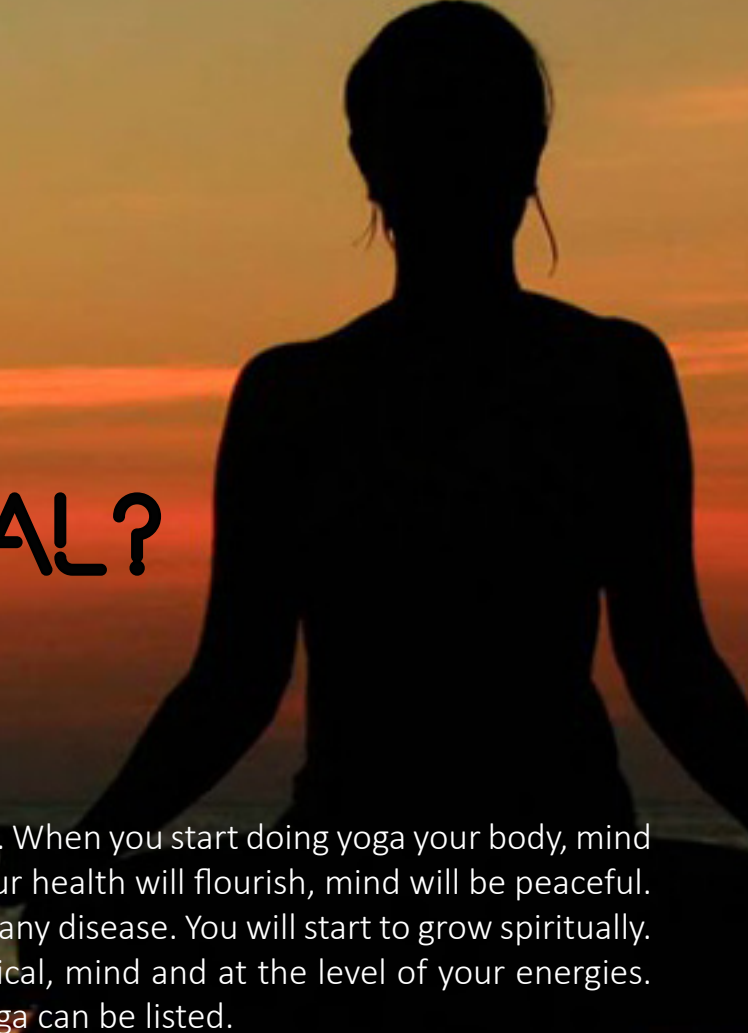
Limit your alcohol intake. If you drink alcohol, keep in mind that it supplies calories but no nutritional value. A light beer, a glass of wine or an ounce of liquor each has about 100 calories. There may also be health problems associated with drinking alcohol.

Drink lots of water. Your body needs at least eight glasses a day, and, if you exercise vigorously, you may need more. To remind yourself, carry a water bottle along to class and keep it handy during late night study sessions.

Enjoy your food. Food is a lot more than nourishment for our bodies, so take the time to enjoy and savor it!



WHY IS YOGA ESSENTIAL?



Yoga basically means union of body, mind and soul. When you start doing yoga your body, mind and energies will be aligned in such a way that your health will flourish, mind will be peaceful. Health will flourish means your body will not have any disease. You will start to grow spiritually. So basically yoga will deal with all the levels physical, mind and at the level of your energies. There are generally uncountable benefits from yoga can be listed.

Increased flexibility.

Yoga is excellent for flexibility. Some styles make it their main focus, but even the more athletic styles will usually spend plenty of time stretching as you get ready for the tougher moves of the day, and as you cool down from them.

For those of us who never make time to stretch, this is a great way to get time in for flexibility training. The more time you spend stretching, the more it helps your overall flexibility, so a yoga class will do a lot more for you than a few 30-second stretches at the end of your gym days.

Increased muscle strength and tone.

We can call calisthenics the evolved form of yoga. In fact, there various fitness programs which have a combined routine of calisthenics and yoga and it's something you should try if you are a fitness freak. Yoga

basically helps increase the muscle strength and also improves your body posture.

Reduces stress and keeps you happy

A recent study has shown that practicing regular yoga and meditation results in **higher serotonin levels** (the happiness hormone). To put it simply, just 15 minutes of yoga a day can start changing your brain chemistry and improving your mood.

As you tune in to the balance between strength and flexibility in your practice, you learn how to listen to your body. You learn how to practice with a strong foundation and ease of movement and embody integrity in your awareness. Remember that yoga is not about pushing your limits, nor is it about falling asleep; it's about the integrity of focused ease, attention, and a balance of strength and lightness.

Litterary



The Good Life

When some people talk about money
They speak as if it were a mysterious lover
Who were out to buy milk and never came
back, and it makes me nostalgic
for the years I lived on coffee to work on payday
Like a journeying for water
From a village without a well , then living one or
two nights like everyone else on roast chicken
and red wine
Hence, money doesn't define the good life style
Self -satisfaction is what rules everywhere

-Itika Tyagi
CS-2

CURRENT AFFAIRS



1. India improves its ranking on Corruption Perceptions Index 2018; moves to 78th position

India improved its ranking on the 2018 Corruption Perceptions Index (CPI) by three points and moved to 78th position with a score of 41. India ranked at 81st place on the Corruption Perceptions Index 2017. In the list of 180 countries, China and Pakistan lagged far behind India at 87th and 117th position, respectively.

According to the Index, Denmark is the least corrupt country followed by New Zealand; while Somalia, Syria and South Sudan are the most corrupt countries in the world.

2. UP Cabinet approves construction of Ganga Expressway to connect Prayagraj with Western UP

Uttar Pradesh State Cabinet on January 29, 2019 approved the construction of a four-lane Ganga Expressway connecting Prayagraj to Western Uttar Pradesh. Ganga Expressway will provide better connectivity to Prayagraj. Once completed, it would be longest expressway in the world.

The Cabinet also gave its assent for the Bundelkhand Expressway and the development of the Bundelkhand region. The Bundelkhand Expressway will be 296 km long and would cost Rs 8,864 crore. It will pass through 182 villages.

3. India signs agreement with OECD for participation in PISA 2021

The Union Human Resources Development Ministry on January 28, 2019 signed an agreement with Organisation for Economic Co-operation and Development (OECD) for India's Participation in Programme for International Student Assessment-PISA 2021.

The student assessment by PISA will ensure learning outcome through education. It would lead to an improvement in the learning levels of the children and enhance the quality of education in the country.

It would also indicate the health of the education system of the nation and would motivate other schools and states in the subsequent cycles.

4. SC forms Constitution Bench to hear plea challenging 'Hindu prayers' in Kendriya Vidyalayas

The Supreme Court on January 28, 2019 constituted a Constitution Bench for hearing a plea challenging the mandatory requirement to recite Sanskrit and Hindi prayers in morning assembly sessions of 1,125 Kendriya Vidyalayas (KVs) across the country.

The bench of Justices R F Nariman and Vineet Saran observed that the matter of Hindu prayer recitation in Kendriya Vidyalayas required examination by constitution bench and accordingly placed the matter before the Chief Justice of India Ranjan Gogoi to constitute bench.

5. Train 18 named as 'Vande Bharat Express'; set to run between Delhi and Varanasi at speed of 160 kmph

The Union Minister of Railways and Coal, Piyush Goyal on January 27, 2019 named India's first engineless train, 'Train 18' as the 'Vande Bharat Express', acknowledging its made-in-India status. The train was manufactured by the Integral Coach Factory (ICF) in the period of 18 months under the 'Make in India' initiative of PM Narendra Modi.

Vande Bharat Express is the next major leap for Indian Railways in terms of speed and convenience. It is India's first semi-high speed train equipped with world class passenger amenities.

6. Bharat Ratna 2019: Pranab Mukherjee, Nanaji Deshmukh, Bhupen Hazarika conferred with highest civilian honour

The President, Ram Nath Kovind on January 25, 2019 conferred the 2019 Bharat Ratna Award, country's highest civilian honour, on former president and Congress leader Pranab Mukherjee. The award was also conferred on RSS ideologue Nanaji Deshmukh and singer Bhupen Hazarika, both posthumously.

Congress leader Pranab Mukherjee, who was the 13th President of India and served from 2012 until 2017, had served under Indira Gandhi. He was also the Finance Minister under the premiership of Manmohan Singh.

7. Padma Awards 2019 announced: Gautam Gambhir, Prabhu Deva, Late Kader Khan among awardees

The Padma Awards 2019, one of the highest civilian awards of India, were announced on January 25, 2019 on the occasion of Republic Day eve. This year, President Ram Nath Kovind approved conferment of 112 Padma Awards including one duo case (in a duo case, the Award is counted as one). The list comprises 4 Padma Vibhushan, 14 Padma Bhushan and 94 Padma Shri Awards, of which, 21 of the awardees are women.

8. 10% reservation for economically weak in general category comes into force

The Constitution (103rd Amendment) Act, 2019, the Act providing 10 percent reservation in government jobs and educational institutions to Economically Weaker Sections (EWS) of General Category, came into effect on January 14, 2019.

The move came after the Union Government exercised its powers conferred by sub-section (2) of section 1 of the Constitution (One Hundred and Third Amendment) Act, 2019 and appointed January 14, 2019 as the date on which the provisions of the said Act shall come into force.

9. 15th Pravasi Bharatiya Diwas: India, Mauritius agree upon partnership in various sectors

The Prime Minister, Narendra Modi inaugurated the 15th Pravasi Bharatiya Diwas on January 22, 2019 in his parliamentary constituency, Varanasi, Uttar Pradesh. In the history of Pravasi Bhartiya Diwas, the event is being held for the first time in Varanasi, the cultural and spiritual capital of India.

Prime Minister Narendra Modi and his Mauritian counterpart Pravind Kumar Jugnauth held talks on January 22, 2019 on the sidelines of the event. They discussed ways to boost bilateral trade and investment, including finalisation of a comprehensive economic partnership agreement.

10. Virat Kohli named ICC Test, ODI Player and Cricketer of the year 2018

Indian skipper Virat Kohli on January 22, 2019 became the first cricketer to win all the top three ICC individual awards including the Sir Garfield Sobers Trophy for ICC Cricketer of the Year, the ICC Men's Test Player of the Year and the ICC ODI Player of the Year for his performances in 2018. The Indian captain, who recently led India to its historic series win down under, was also named the captain of the ICC Test Team and the ODI Team of the year 2018, the line-ups of which were dominated by Indian players. Besides, Indian wicketkeeper Rishabh Pant claimed the ICC's Emerging Cricketer of the Year award.

11. PM Narendra Modi conferred with first-ever Philip Kotler Presidential Award

The Prime Minister Narendra Modi was on January 14, 2019 conferred with the first-ever Philip Kotler Presidential Award. The Award focuses on the triple bottom-line of 'People, Profit and Planet'. The award will be offered annually to the leader of a Nation.

As per the award citation, the Prime Minister has been selected for his outstanding leadership for the nation. It is under his leadership that India is now identified as the Centre for Innovation and Value Added Manufacturing (through Make in India initiative).

12. Gujarat becomes first state to implement 10 per cent quota for EWS in general category

Gujarat Chief Minister Vijay Rupani announced on January 13, 2019 that his government will implement the 10 per cent reservation for economically weaker sections of the general category with immediate effect.

The announcement comes less than a week after the Indian Parliament passed a constitutional amendment bill to facilitate 10 per cent reservation for upper castes in higher education and employment.

13. ISRO launches Kalamsat, Microsat-R satellites on PSLV-C44 rocket

The Indian Space Research Organisation (ISRO) launched a student's satellite Kalamsat and an imaging satellite Microsat-R from the Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh on January 24, 2019, marking its first launch of the year in 2019.

The national space agency's rocket, PSLV C44 carried the satellites into the orbit. After about 14 minutes into the flight, the rocket ejected 700-kg Microsat R satellite at an altitude of about 277 km.

The Kalamsat is a 10 cm cube nanosatellite weighing about 1.2 kg and has a life span of about two months.

14. Justice T B N Radhakrishnan sworn in as first Chief Justice of Telangana HC

Justice Thottathil Bhaskaran Nair Radhakrishnan was on January 1, 2018 sworn in as the first Chief Justice of the Telangana High Court.

The oath to the office was administered to Justice Radhakrishnan by Telangana and Andhra Pradesh Governor ESL Narasimhan at a ceremony held at Raj Bhavan. The ceremony was attended by Telangana Chief Minister K Chandrasekhar Rao and other judges, lawyers and senior government officials. With this, the state of Telangana will have its first independent high court.

15. Cabinet approves merger of Vijaya Bank, Dena Bank and Bank of Baroda; first-ever three way merger in Indian Banking

The Union Cabinet, chaired by Prime Minister Narendra Modi, on January 2, 2019 approved the 'Scheme of Amalgamation' for merger of Bank of Baroda, Vijaya Bank and Dena Bank.

The amalgamation will be the first-ever three-way consolidation of banks in India. The merger of Bank of Baroda, Dena Bank and Vijaya Bank was proposed by the Union Finance Ministry on September 17, 2018.

The amalgamated entity will be India's second largest Public Sector Bank and India's third largest bank with a total business of more than Rs 14.82 lakh crore.

16. Bill to make marital rape a crime introduced in Lok Sabha

A private bill titled the Women's Sexual, Reproductive and Menstrual Rights Bill 2018 has been introduced in the Lok Sabha by Congress MP Dr Shashi Tharoor. The bill proposes to make marital rape a crime and gives more decisional autonomy to women in termination of pregnancy.

The bill proposes the deletion of exception 2 to Section 375 of Indian Penal Code, which states that sexual intercourse by a man with his own wife is not rape. It also grants women an absolute right to termination of pregnancy where they may terminate pregnancy merely by request until the 12th week of pregnancy.

17. Smriti Mandhana named ICC Women's Cricketer of the Year

India's left-handed opener Smriti Mandhana has won the Rachael Heyhoe Flint Award for the ICC Women's Cricketer of the Year. Mandhana was also adjudged as the ICC Women's ODI Player of the Year. The announcement was made by the International Cricket Council on December 31, 2018.

The 22-year-old, who has also been named in the ICC Women's ODI Team of the Year and the ICC Women's T20I Team of the Year, scored 669 runs at an average of 66.90 in 12 ODIs and 622 runs at a strike-rate of 130.67 in 25 T20Is during the voting period, which ran from January 1 to December 31, 2018.

The cricketer had played a crucial role in India's semi-final appearance at the ICC Women's World T20 in the West Indies, scoring 178 runs in five matches at a strike-rate of 125.35.

18. Lok Sabha passes Citizenship Amendment bill

The Lok Sabha on January 8, 2019 passed the Citizenship (Amendment) Bill, which seeks to amend the Citizenship Act, 1955 to make illegal migrants who are Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan, eligible for citizenship.

The bill has now been tabled in the Rajya Sabha.

Under the 1955 Act, one of the requirements for citizenship by naturalisation is that the applicant must have resided in India during the last 12 months and for 11 of the previous 14 years. The bill relaxes this 11-year requirement to six years for persons belonging to the all the six religions from the three countries.

19. RBI forms Nandan Nilekani led Committee to boost digital payments

The Reserve Bank of India (RBI) on January 8, 2018 constituted a High-Level Committee on Deepening of Digital Payments to encourage digitisation of payments and enhance financial inclusion. The five-member committee will be headed by UIDAI's former Chairman Nandan Nilekani.

The committee will review the existing status of digitisation of payments and suggest ways to bridge any gaps in the ecosystem. The Committee will submit its report within a period of 90 days from the date of its first meeting.

20. Vinesh Phogat becomes first Indian athlete to be nominated in Laureus World Comeback of Year Award

Indian star wrestler Vinesh Phogat on January 17, 2019 became the first Indian athlete to be nominated for the prestigious Laureus World Comeback of the Year Award.

Vinesh has been nominated in "Laureus World Sporting Comeback" category for the year 2019 and will be competing for the award with some of the world's greatest sportsmen including golfer Tiger Woods, Canadian snowboarder Mark McMorris, American alpine ski racer Lindsey Vonn, Japanese figure skater Yuzuru Manyu and Dutch para-snowboarding star Bibian Mentel-Spee.

The Awards will be presented on February 18, 2019 in Monaco, a tiny independent city-state on France's Mediterranean coastline.

21. ISRO launches UNNATI Programme

National space agency, the Indian Space Research Organisation (ISRO) on January 17, 2019 launched the UNNATI (UNISpace Nano-satellite Assembly and Training by ISRO) programme at the U R Rao Satellite Centre, Bengaluru.

UNNATI is a capacity building programme on nanosatellite development. The programme was launched following an announcement made by ISRO Chairman K Sivan during a symposium in Vienna on June 18, 2018.

The background is a deep blue gradient with abstract, layered geometric shapes that create a sense of depth and movement. The shapes are composed of various shades of blue, from a very dark navy at the bottom to a lighter, almost white blue at the top. The overall effect is modern and minimalist.

MOTIVATION

THINKING

Thinking means to contemplate
There can be two type of thinking

1. scarcity thinking
2. Abundance thinking

Scarcity thinking:

"there will never be enough"

Competes to stay on top hordes things from others.

Won't share knowledge.

Won't offer help to others.

Suspicious of others.

Resents competition.

Afraid of being replaced.

Believes times are tough.

Believes the pie is shrinking.

Thinks small and avoids risk.

Abundance thinking:

"there will always be more"

Collaborates to stay on top.

Generous with others

Shares knowledge.

Freely offers help to others.

Trusts and build rapport

Welcomes competition

Avoid narrow minded people and start exploring



priyanka

Cs2

One Step Forward

Growth isn't always consistent. You relapse, you fall but remember that doesn't mean you're back at square one. You don't lose growth you had before the relapse.

Take your time, continue from where you left of but never stop.

Don't let yourself be controlled by three things



Money

Ask me why, because money has nothing to do with your personal mind growth. It is the one of the outcome of your mind growth



People

Think out of the box, don't let yourself get affected by the people you surround. Think for sustainable growth.



Past Experiences

Don't look back. Learn from it and move on. Don't repeat your mistakes

PERSISTENCE

THE ONLY KEY FOR SUCCESS

Persistence means to learn and then update a new version without saying no or giving up.

Repeat Daily:

*"I will remain focused on my goals.
Even if i face a moment of difficulty, or
a setback, i will not give up. I know
consistency is the key to success. I know
that i can do it. Its natural for things to
not go to plan. But the challenge will
not block me. If i commit to a process, it
is only a matter of time"*

Technical skills is important but without persistence, courage and determination, all efforts can go in vain.

-priyanka

Cs2

TECHNOLOGY



48MP CAMERA ON XIAOMI REDMI NOTE 7



FAKE
OR
REAL

Xiaomi recently launched its Redmi Note 7 phone in WW China. The highlight of the phone is its 48MP camera sensor on the back. The company has used a 48MP Samsung GM1 sensor at the back along with a secondary 5MP camera for portrait shots.

If we talk about hardware, Redmi Note 7 packs a Snapdragon 660

chipset under the hood. When we look into Snapdragon 660 features, the chipset supports only up to the 25MP single camera. So, how does Redmi Note 7 support a 48MP camera? Is it fake? Let us know the truth behind the 48MP sensor and how it works.

Redmi Note 7 48MP camera:

At present, the 48-megapixel camera is offered by Samsung's GM1 and Sony's IMX586 sensors. Redmi Note 7 comes with Samsung GM1 sensor. Samsung's sensor is a $0.8\mu\text{m}$ -pixel sensor that is actually a 12MP sensor that results in a 48MP image by combining 4 pixels into 1.

So, even if the output image from Redmi Note 7 is 48MP, it is actually from a 12MP sensor. The Samsung ISOCELL Bright GM1 sensor uses four-in-one pixel binning technology to make a 12MP image into a 48MP image.

pixel" and this is called pixel binning. However, the resulting image of this 4-in-1 pixel binning has an effective resolution 4x of the resolution of the sensor.

Thus by combining raw data from four pixels into one, the output image is of a higher resolution as it captured a larger amount of light and also reduced the noise. Xiaomi used this sensor and claims to offer 48MP images that are actually captured from a 12MP sensor. However, the resulting image is brighter and has less noise after using the pixel binning because of the combination of four pixel's data into one.

What is Pixel Binning?

The pixel binning is basically an ISP level implementation process where 4 pixels combine information into 1 pixel. In Samsung GM1 sensor, pixel binning takes pixels in a 2×2 grid and combines them into one.

So, the information captured by 4 individual pixels is now combined into one large pixel that is also called Super Pixel. This data collected by 4 adjacent pixels combine into one "super



Getting started with the sport of competitive programming

This document is to guide those people who want to get started or have just started with competitive programming.

Originally, this document was prepared during the summers of 2014 to help the freshers of Indian Institute of Technology, Kanpur. So, we thought it might be useful to others as well.

Prerequisite : Basics of any programming language. We will follow C/C++.

PARTICIPATE PARTICIPATE PARTICIPATE (the only mantra)

[SPOJ](#): It's a problem Archive (recommended for all beginners)

- o Start with problems having maximum submissions. Solve first few problems (may be 20). Build some confidence. Then start following some good coders (check their initial submissions). Then start solving problems topic wise.
- o Never get stuck for too long in the initial period. Google out your doubts and try to sort them out or you can discuss with someone (ONLY IN THE BEGINNING).
- o Before getting into live contests like [codeforces](#) or [codechef](#), make sure that you have solved about 50-70 problems on SPOJ.

[CODECHEF](#): Do all the three contests every month. Do participate in CodeChef LunchTime for sure

- o Even if you are unable to solve a problem do always look at the editorials and then code it and get it accepted (this is the way you will learn).
- o And even if you are able to do it, do look at the codes of some good coders. See how they have implemented. Again, you will learn.
- o Same point apply to TopCoder and Codeforces as well.

[Codeforces](#): 4 to 5 short contests of 2 hour in a month (Do them once you develop some confidence).

[TopCoder](#): Once you have proper experience and you can write codes very fast.

Online Programming Contests

You write codes and submit them online . The judge runs your code and checks the output of your program for several inputs and gives the result based on your program's outputs. You must follow exact I/O formats. For example, do not print statements like: "please enter a number", etc. :P

Each problem has constraints:

Properly analyse the constraints before you start coding.

- Time Limit in seconds (gives you an insight of what is the order of solution it expects) -> order analysis (discussed later).
- The constraints on input (very imp): Most of the time you can correctly guess the order of the solution by analysing the input constraints and time limit .
- Memory Limit (You need not bother unless you are using insanely large amount of memory).

Types of errors you may encounter apart from wrong answer :

Run Time Error (Most Encountered)

Segmentation fault (accessing an illegal memory address)

- You declared array of smaller size than required or you are trying to access negative indices .

Declaration of an array of HUGE HUGE(more than 10^8 ints) size

- o Dividing by Zero / Taking modulo with zero :O .
- o USE gdb (will learn in coming lectures

Compilation error

- o You need to learn how to code in C++.
- o USE GNU G++ compiler or IDEONE(be careful to make codes private).

Time Limit Exceeded

- o You program failed to generate all output within given time limit.
- o Input Files are not randomly generated , they are made such that wrong code does not pass.

- o Always think of worst cases before you start coding .Always try to avoid TLE.
- o Sometimes a little optimizations are required and sometimes you really need a totally new and efficient algorithm (this you will learn with time).
- o So whenever you are in doubt that your code will pass or not .Most of the time it won't pass .
- o Again do proper order analysis of your solution .

Wrong Answer [most encountered]

Wrong answer means that the output given by your program did not match the correct output for that input (or did not fulfill the conditions in case multiple solutions were possible). This is the most frequently occurring bug that you will face and getting rid of it can be a pain.

- First of all you must check that your program gives correct output for the sample test cases, exactly satisfying the output format.
- Read your code completely once before testing. This way you will be able to remove any obvious bugs.
- Check for incorrect variable initializations / uncleared memory, etc. These errors can also occur when you copy paste code.
- In case you keep getting wrong answer even after you have tried to find the bug in your program you must rethink upon you algorithms and prove it if you haven't done so.If you find bug in your algorithm start working on new algorithm.



Suyash Yadav
(2nd Year CSE)



Sphere online judge

VIRTUAL REALITY !!

Technology usually takes off when businesses figure out how to make real money with it. This is predicted to happen soon with VR, as it's already starting to be used in business communications, retail, entertainment, sports, health and other industries. It has the potential to completely change how we work, shops, plays and consumes media. And it's going to get here sooner than most people think.

Virtual Reality gaming is here in the form of Oculus Rift. This history-defining 3D headset lets you mentally feel that you are actually inside a video game. In the Rift's virtual world, you could turn your head around with ultra-low latency to view the world in high resolution display.



By, Suprateek
Halsana

1

Deep learning accelerators such as GPUs, FPGAs, and more recently TPUs. More companies have been announcing plans to design their own [accelerators](#), which are widely used in data centers. There is also an opportunity to deploy them at the edge, initially for inference and for limited training over time. This also includes **accelerators for very low power devices**. The development of these technologies will allow machine learning (or smart devices) to be used in many IoT devices and appliances.

2

Assisted transportation While the vision of fully autonomous, self-driving vehicles might still be a few years away, increasingly automated assistance is taking place in both personal and municipal (dedicated) vehicles. Assisted transportation is already very useful in terms of wide recognition and is paving the way for [fully autonomous vehicles](#). This technology is highly dependent on deep learning accelerators (see #1) for video recognition..

TECHNOLOGY TRENDS PREDICTED TO REACH ADOPTION IN 2019

3

The Internet of Bodies (IoB). IoT and self-monitoring technologies are moving closer to and even inside the human body. Consumers are comfortable with self-tracking using external devices (such as fitness trackers and smart glasses) and with playing games using augmented reality devices. Digital pills are entering mainstream medicine, and body-attached, implantable, and embedded IoB devices are also beginning to interact with sensors in the environment. These devices yield richer data that enable more interesting and useful applications, but also raise concerns about security, privacy, physical harm, and abuse..

4

[Social credit algorithms](#). These algorithms use facial recognition and other advanced biometrics to identify a person and retrieve data about that person from social media and other digital profiles for the purpose of approval or denial of access to consumer products or social services. In our increasingly networked world, the combination of biometrics and blended social data streams can turn a brief observation into a judgment of whether a person is a good or bad risk or worthy of public social sanction. Some countries are reportedly already using social credit algorithms to assess loyalty to the state.

5

Advanced (smart) materials and devices.

We believe novel and advanced materials and devices for sensors, actuators, and wireless communications, such as tunable glass, smart paper, and ingestible transmitters, will create an explosion of exciting applications in healthcare, packaging, appliances, and more. These technologies will also advance pervasive, ubiquitous, and immersive computing, such as the recent announcement of a cellular phone with a foldable screen. The use of such technologies will have a large impact in the way we perceive IoT devices and will lead to new usage models.

6

Active security protection. The traditional method of protecting computer systems involves the deployment of prevention mechanisms, such as anti-virus software. As attackers become more sophisticated, the effectiveness of protection mechanisms decreases as the cost increases. However, a new generation of security mechanisms is emerging that uses an active approach, such as hooks that can be activated when new types of attacks are exposed and machine-learning mechanisms to identify sophisticated attacks. Attacking the attacker is a technological possibility as well, but is almost always illegal.

7

Virtual reality (VR) and augmented reality (AR).

These related technologies have been hitting the mainstream in some respects for a number of years. For a well-known example, Pokemon Go is a game that uses the camera of a smartphone to interpose fictional objects in real-world surroundings. Gaming is clearly a driver of these technologies, with other consumer devices becoming affordable and commonplace. VR and AR technologies are also useful for education, engineering, and other fields. However, there has been a Catch-22 in that there is a lack of applications resulting from the high cost of entry, yet the cost has stayed high due to a lack of applications. With advertisements for VR headsets appearing during prime-time television programs, we may have finally reached a tipping point.

8

Technology for humanity (specifically machine learning). We are approaching the point where technology can help resolve societal issues. We predict that large-scale use of machine learning, robots, and drones will help improve agriculture, ease drought, ensure supply of food, and improve health in remote areas. Some of these activities have

Automated voice spam (robocall) prevention. Spam phone calls are an ongoing problem of increasing sophistication, such as spoofing the caller ID number of the victim's family and business associates. This is leading people to regularly ignore phone calls, creating risks such as true emergency calls going unanswered. However, emerging technology can now block spoofed caller ID and intercept questionable calls so the computer can ask questions of the caller to assess whether he or she is legitimate.

Chatbots. These artificial intelligence (AI) programs simulate interactive human conversation using key pre-calculated user phrases and auditory or text-based signals. Chatbots have recently started to use self-created sentences in lieu of pre-calculated user phrases, providing better results. Chatbots are frequently used for basic customer service on social networking hubs and are often included in operating systems as intelligent virtual assistants. We have recently witnessed the use of chatbots as personal assistants capable of machine-to-machine communications as well. In fact, chatbots mimic humans so well that some countries are considering requiring chatbots to disclose that they are not human. Industry is looking to expand chatbot applications to interaction with cognitive-impaired children as a way to provide therapeutic support.

SUYASH YADAV
(2ND YEAR CSE)

EXPLORING PYTHON



python™

by,
Dr. Avdhesh Gupta

Python MCQ

Q 1 - Which of the following function sets the integer starting value used in generating random numbers?

A - choice(seq)

B - randrange ([start,] stop [,step])

C - random()

D - seed([x])

Q 2 - What is the output of print list[1:3] if list = ['abcd', 786 , 2.23, 'john', 70.2]?

A - ['abcd', 786 , 2.23, 'john', 70.2]

B - abcd

C - [786, 2.23]

D - None of the above.

Q 3 - Which of the following function convert an integer to hexadecimal string in python?

A - unichr(x)

B - ord(x)

C - hex(x)

D - oct(x)

Q 4 - What is the following function compares elements of both lists?

A - cmp(list1, list2)

B - len(list1, list2)

C - max(list1, list2)

D - min(list1, list2)

Q 5 - Which of the following function convert a string to a frozen set in python?

A - set(x)

B - dict(d)

C - frozenset(s)

D - chr(x)

Q 6 - Which of the following is correct about Python?

A - It supports functional and structured programming methods as well as OOP.

B - It can be used as a scripting language or can be compiled to byte-code for building large applications.

C - It provides very high-level dynamic data types and supports dynamic type checking.

D - All of the above.

Q 7 - Which of the following function convert an integer to an unicode character in python?

A - unichr(x)

B - ord(x)

C - hex(x)

D - oct(x)

Q 8 - What is the following function returns the lowest index in list that obj appears?

A - list.index(obj)

B - list.insert(index, obj)

C - list.pop(obj=list[-1])

D - list.remove(obj)

Q 9 - Which of the following environment variable for Python contains the path of an initialization file containing Python source code?

A - PYTHONPATH

B - PYTHONSTARTUP

C - PYTHONCASEOK

D - PYTHONHOME

Q 10 - What is the output of print list[2:] if list = ['abcd', 786 , 2.23, 'john', 70.2]?

A - ['abcd', 786 , 2.23, 'john', 70.2]

B - abcd

C - [786, 2.23]

D - [2.23, 'john', 70.2]

Q 11 - Which of the following function returns a randomly selected element from range?

A - choice(seq)

B - randrange ([start,] stop [,step])

C - random()

D - seed([x])

Q 12 - Which of the following function checks in a string that all characters are numeric?

A - islower()

B - isnumeric()

C - isspace()

D - istitle()

Q 13 - Which of the following function convert a string to a float in python?

A - int(x [,base])

B - long(x [,base])

C - float(x)

D - str(x)

Q 14 - Which of the following environment variable for Python is used in Windows to instruct Python to find the first case-insensitive match in an import statement?

A - PYTHONPATH

B - PYTHONSTARTUP

C - PYTHONCASEOK

D - PYTHONHOME

Q 15 - Which of the following function replaces all occurrences of old substring in string with new string?

A - replace(old, new [, max])

B - strip([chars])

C - swapcase()

D - title()

Q 16 - Which of the following function convert a String to a set in python?

A - set(x)

B - dict(d)

C - frozenset(s)

D - chr(x)

Q 17 - Which of the following function randomizes the items of a list in place?

A - shuffle(lst)

B - capitalize()

C - isalnum()

D - isdigit()

Q 18 - Which of the following function checks in a string that all characters are in uppercase?

A - isupper()

B - join(seq)

C - len(string)

D - ljust(width[, fillchar])

Q 19 - Which of the following function removes all leading whitespace in string?

A - lower()

B - lstrip()

C - max(str)

D - min(str)

Q 20 - Which of the following operator in python evaluates to true if the variables on either side of the operator point to the same object and false otherwise?

A - **

B - //

C - is

D - not in

Answers

1	2	3	4	5	6	7	8	9	10
D	C	C	A	C	D	A	A	B	D
11	12	13	14	15	16	17	18	19	20
B	B	C	C	A	A	A	A	B	C

Few Python doubts

Fill in the missing code:

```
def print_directory_contents(sPath):
```

```
    """
```

This function takes the name of a directory and prints out the paths files within that directory as well as any files contained in contained directories.

This function is similar to os.walk. Please don't use os.walk in your answer. We are interested in your ability to work with nested structures.

```
    """
```

```
    fill_this_in
```

Answer

```
def print_directory_contents(sPath):
```

```
    import os
```

```
    for sChild in os.listdir(sPath):
```

```
        sChildPath = os.path.join(sPath,sChild)
```

```
        if os.path.isdir(sChildPath):
```

```
            print_directory_contents(sChildPath)
```

```
        else:
```

```
            print(sChildPath)
```

Looking at the below code, write down the final values of A0, A1, ...An.

```
A0 = dict(zip(('a','b','c','d','e'),(1,2,3,4,5)))
```

```
A1 = range(10)
```

```
A2 = sorted([i for i in A1 if i in A0])
```

```
A3 = sorted([A0[s] for s in A0])
```

```
A4 = [i for i in A1 if i in A3]
```

```
A5 = {i:i*i for i in A1}
```

```
A6 = [[i,i*i] for i in A1]
```

If you don't know what **zip** is don't stress out. No sane employer will expect you to memorize the standard library. Here is the output of **help(zip)**.

```
zip(...)
```

```
zip(seq1 [, seq2 [...]]) -> [(seq1[0], seq2[0] ...), (...)]
```

Return a list of tuples, where each tuple contains the i-th element

from each of the argument sequences. The returned list is truncated

in length to the length of the shortest argument sequence.

If that doesn't make sense then take a few minutes to figure it out however you choose to.

Answer

```
A0 = {'a': 1, 'c': 3, 'b': 2, 'e': 5, 'd': 4} # the order may vary
```

```
A1 = range(0, 10) # or [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] in python 2
```

```
A2 = []
```

```
A3 = [1, 2, 3, 4, 5]
```

```
A4 = [1, 2, 3, 4, 5]
```

```
A5 = {0: 0, 1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81}
```

```
A6 = [[0, 0], [1, 1], [2, 4], [3, 9], [4, 16], [5, 25], [6, 36], [7, 49], [8, 64], [9, 81]]
```

Why This Matters

1. List comprehension is a wonderful time saver and a big stumbling block for a lot of people
2. If you can read them, you can probably write them down
3. Some of this code was made to be deliberately weird. You may need to work with some weird people

What does this code output:

```
def f(x,l=[]):  
    for i in range(x):  
        l.append(i*i)  
    print(l)
```

```
f(2)  
f(3,[3,2,1])  
f(3)
```

Answer

```
[0, 1]  
[3, 2, 1, 0, 1, 4]  
[0, 1, 0, 1, 4]
```

Consider the following code, what will it output?

```
class A(object):  
    def go(self):  
        print("go A go!")  
    def stop(self):  
        print("stop A stop!")  
    def pause(self):  
        raise Exception("Not Implemented")
```

```
class B(A):  
    def go(self):  
        super(B, self).go()  
        print("go B go!")
```

```
class C(A):
```

```
    def go(self):  
        super(C, self).go()  
        print("go C go!")  
    def stop(self):  
        super(C, self).stop()  
        print("stop C stop!")
```

```
class D(B,C):  
    def go(self):  
        super(D, self).go()  
        print("go D go!")  
    def stop(self):  
        super(D, self).stop()  
        print("stop D stop!")  
    def pause(self):  
        print("wait D wait!")
```

```
class E(B,C): pass
```

```
a = A()  
b = B()  
c = C()  
d = D()  
e = E()
```

specify output from here onwards

```
a.go()  
b.go()  
c.go()  
d.go()  
e.go()  
  
a.stop()  
b.stop()
```

c.stop()

stop A stop!

d.stop()

e.stop()

b.stop()

stop A stop!

a.pause()

b.pause()

c.stop()

c.pause()

stop A stop!

d.pause()

stop C stop!

e.pause()

Answer

The output is specified in the comments in the segment below:

a.go()

go A go!

b.go()

go A go!

go B go!

c.go()

go A go!

go C go!

d.go()

go A go!

go C go!

go B go!

go D go!

e.go()

go A go!

go C go!

go B go!

a.stop()

d.stop()

stop A stop!

stop C stop!

stop D stop!

e.stop()

stop A stop!

a.pause()

... Exception: Not Implemented

b.pause()

... Exception: Not Implemented

c.pause()

... Exception: Not Implemented

d.pause()

wait D wait!

e.pause()

...Exception: Not Implemented

Consider the following code, what will it output?

```
class Node(object):
    def __init__(self,sName):
        self._lChildren = []
        self.sName = sName
    def __repr__(self):
        return "<Node '{ }>".format(self.sName)
    def append(self,*args,**kwargs):
        self._lChildren.append(*args,**kwargs)
    def print_all_1(self):
        print(self)
        for oChild in self._lChildren:
            oChild.print_all_1()
    def print_all_2(self):
        def gen(o):
            lAll = [o,]
            while lAll:
                oNext = lAll.pop(0)
                lAll.extend(oNext._lChildren)
            yield oNext
        for oNode in gen(self):
            print(oNode)
oRoot = Node("root")
oChild1 = Node("child1")
oChild2 = Node("child2")
oChild3 = Node("child3")
oChild4 = Node("child4")
oChild5 = Node("child5")
oChild6 = Node("child6")
oChild7 = Node("child7")
oChild8 = Node("child8")
oChild9 = Node("child9")
oChild10 = Node("child10")
oRoot.append(oChild1)
oRoot.append(oChild2)
oRoot.append(oChild3)
```

```
oChild1.append(oChild4)
oChild1.append(oChild5)
oChild2.append(oChild6)
oChild4.append(oChild7)
oChild3.append(oChild8)
oChild3.append(oChild9)
oChild6.append(oChild10)
```

specify output from here onwards

```
oRoot.print_all_1()
oRoot.print_all_2()
```

Answer

oRoot.print_all_1() prints:

```
<Node 'root'>
<Node 'child1'>
<Node 'child4'>
<Node 'child7'>
<Node 'child5'>
<Node 'child2'>
<Node 'child6'>
<Node 'child10'>
<Node 'child3'>
<Node 'child8'>
<Node 'child9'>
```

oRoot.print_all_2() prints:

```
<Node 'root'>
<Node 'child1'>
<Node 'child2'>
<Node 'child3'>
<Node 'child4'>
<Node 'child5'>
<Node 'child6'>
<Node 'child8'>
<Node 'child9'>
<Node 'child7'>
<Node 'child10'>
```


Place the following functions below in order of their efficiency. They all take in a list of numbers between 0 and 1. The list can be quite long. An example input list would be `[random.random() for i in range(100000)]`. How would you prove that your answer is correct?

```
def f1(lIn):  
    l1 = sorted(lIn)  
    l2 = [i for i in l1 if i<0.5]  
    return [i*i for i in l2]
```

```
def f2(lIn):  
    l1 = [i for i in lIn if i<0.5]  
    l2 = sorted(l1)  
    return [i*i for i in l2]
```

```
def f3(lIn):  
    l1 = [i*i for i in lIn]  
    l2 = sorted(l1)  
    return [i for i in l2 if i<(0.5*0.5)]
```

Answer

Most to least efficient: **f2**, **f1**, **f3**. To prove that this is the case, you would want to profile your code. Python has a lovely [profiling package](#) that should do the trick.

```
import cProfile  
  
lIn = [random.random() for i in range(100000)]  
cProfile.run('f1(lIn)')  
cProfile.run('f2(lIn)')  
cProfile.run('f3(lIn)')
```

For completion's sake, here is what the above profile outputs:

```
>>> cProfile.run('f1(lIn)')  
  
4 function calls in 0.045 seconds
```

Ordered by: standard name

ncalls	tottime	percall	cumtime	percall	filename:lineno(function)
--------	---------	---------	---------	---------	---------------------------

```
1  0.009  0.009  0.044  0.044 <stdin>:1(f1)
1  0.001  0.001  0.045  0.045 <string>:1(<module>)
1  0.000  0.000  0.000  0.000 {method 'disable' of '_lsprof.Profiler' objects}
1  0.035  0.035  0.035  0.035 {sorted}
```

```
>>> cProfile.run('f2(lIn)')
```

```
4 function calls in 0.024 seconds
```

Ordered by: standard name

```
ncalls  tottime  percall  cumtime  percall filename:lineno(function)
1  0.008  0.008  0.023  0.023 <stdin>:1(f2)
1  0.001  0.001  0.024  0.024 <string>:1(<module>)
1  0.000  0.000  0.000  0.000 {method 'disable' of '_lsprof.Profiler' objects}
1  0.016  0.016  0.016  0.016 {sorted}
```

```
>>> cProfile.run('f3(lIn)')
```

```
4 function calls in 0.055 seconds
```

Ordered by: standard name

```
ncalls  tottime  percall  cumtime  percall filename:lineno(function)
1  0.016  0.016  0.054  0.054 <stdin>:1(f3)
1  0.001  0.001  0.055  0.055 <string>:1(<module>)
1  0.000  0.000  0.000  0.000 {method 'disable' of '_lsprof.Profiler' objects}
1  0.038  0.038  0.038  0.038 {sorted}
```



Placements

AND

Job **O**pportunities

	Roll No.	Name	Company Placed
1	1414310033	ANANYA SINGH (Re-Admit)	Capital Via
2	1514310001	A. RUPALI	TCS
3	1514310003	ABHIJEET SHUKLA	WIPRO
4	1514310005	ABHINAV KR. SINGH	ACXIOM CONSULTING
5	1514310006	ABHISHEK GUPTA	Capital Via
6	1514310008	ABHISHEK KUMAR PANDEY	Capital Via
7	1514310011	ABHISHEK RAI	TCS
8	1514310013	ABHISHEK SETHI	Genpect Headstrong
9	1514310016	ABHISHEK SINGH CHAUHAN	TCS, WIPRO
10	1514310017	ABHISHEK TRIVEDI	Capital Via
11	1514310019	ADARSH KUMAR SINGH	TCS CODEVITA, Cleared 2nd Round
12	1514310028	AKHIL	TCS,WIPRO
13	1514310029	AKHILESH KUMAR	360 Degree
14	1514310031	AMAN GUPTA	Capital Via
15	1514310032	AMAN RATHORE	TCS CODEVITA
16	1514310033	AMIT KUMAR	Capital Via
17	1514310027	ANAND .	Capital Via
18	1514310038	ANANT BHARDWAJ	Capital Via
19	1514310045	ANSHUL KUMAR SAROHA	Moblezion, IndiaMart
20	1514310049	ANURAG SHAKYA	Capital Via, WIPRO
21	1514310053	ARPIT GARG	TCS
22	1514310054	ARPIT KUMAR	Capital Via, 360 Degree
23	1514310056	ASHWANI KUMAR	QA Infotech, Polestar
24	1514310057	ASRAA AHMAD	WIPRO
25	1514310059	AVIRAL RUHELA	QA Infotech, Moblizion, TCS
26	1514310060	AVNEESH JHA	TCS
27	1514310063	AYUSH TRIPATHI	Gingerwebs
28	1514310065	BIPIN KUMAR YADAV	Algoworks
29	1514310066	CHAKSHU	Moblezion
30	1514310067	CHANCHAL KUMAR MISHRA	TCS
31	1514310068	CHANDAN MISRA	Capital Via
32	1514310069	DEEKSHA PAL	Capital Via, WIPRO
33	1514310072	DIKSHA KHURANA	TCS
34	1514310073	DIVYANSH TIWARI	TCS
35	1514310075	DIVYANSHU SRIVASTAVA	Moblezion, Polestar
36	1514310077	GAURAV MISHRA	Capital Via
37	1514310080	HARI SHANKAR TIWARI	Capital Via, WIPRO
38	1514310081	HARSHIT KUMAR SINGH	Algoworks,WIPRO
39	1514310082	HARSHIT GUPTA	Capital Via
40	1514310099	LABEEB AHMED	Deloitte
41	1514310100	LAV AGARWAL	QA InfoTech
42	1514310102	LOKESH KUMAR TIWARI	TCS
43	1514310103	MAGHVENDRA SINGH	WIPRO
44	1514310104	MANDEEP SINGH	Capital Via

45	1514310106	MANNAT YADAV	Gingerwebs
46	1514310108	MANVIR SINGH	TCS, WIPRO
47	1514310114	MOHAMMAD WASIUDDIN	TCS
48	1514310115	MOHD HILAL HUSAIN	WIPRO
49	1514310116	MOHD SALMAN	WIPRO
50	1514310118	MOHIT BHARDWAJ	TCS
51	1514310126	NAVNEET SINGH MALIK	Capital Via
52	1514310128	NEETISH SINGH	TCS
53	1514310129	NEHA SHARMA	Capital Via
54	1514310132	NISHANT SRIVASTAVA	ANR
55	1514310135	NITIN SAHU	TCS
56	1514310139	OMVESH CHAUDHARY	Capital Via
57	1514310142	PRADEEP YADAV	TCS
58	1514310144	PRANSHUL GOEL	TCS
59	1514310146	PRASHANT SISODIYA	TCS
60	1514310148	PRATIYAKSHI KAPIL	UHG
61	1514310150	PRIYVART RAGHAV	TCS
62	1514310154	RAJARSHI SAHU	TCS CODEVITA
63	1514310155	RAJAT YADAV	Algoworks
64	1514310160	REEDAM CHOUDHARY	TCS, WIPRO
65	1514310165	ROOPAK SINGH	TCS
66	1514310167	RUPAL RATURI	Deloitte, TCS
67	1514310168	SACHIN GUPTA	Gingerwebs
68	1514310171	SALMAN MUSHTAQUE	Capital Via
69	1514310190	SHIVAM RAI	TCS
70	1514310189	SHIVAM MAHENDRU	Capital Via
71	1514310192	SHIVANG BHATNAGAR	ACXIOM CONSULTING,WIPRO
72	1514310195	SHIVANSH SRIVASTAVA	TCS
73	1514310198	SHREYA SINGH	TCS
74	1514310199	SHRISTY MAHESHWARY	ACXIOM CONSULTING
75	1514310200	SHUBHAM CHAURASIA	QA Infotech, Moblizion, TCS
76	1514310206	SOUMYA GUPTA	TCS
77	1514310209	SRISHTI ROBIN	TCS
78	1514310216	SYED ABBAS HAIDER	Capital Via
79	1514310220	UJJAWAL GOEL	Algoworks
80	1514310227	VAIBHAV KAPIL	Capital Via
81	1514310231	VASU AWASTHI	TCS
82	1514310232	VIBHAV KUMAR	WIPRO
83	1514310239	VINEET YADAV	TCS
84	1514310242	VISHAL SINGH	TCS
85	1514310244	VRINDA SHARMA	TCS
86	1514310247	YASH PRATAP SINGH	Capital Via
87	1514331017	ANISH ANAND	TCS

88	1514321051	MANVENDRA SINGH	WIPRO
89	1514331037	HIMANSHU CHAUHAN	QA InfoTech
90	1514340027	ANAND KUMAR SINGH	Capital Via
91	1514310015	ABHISHEK SINGH CHAUHAN	TCS
92	1514310020	ADITYA PANDEY	VVDN
93	1514310021	ADITYA PRATAP SINGH	Moblezion, TCS, UHG
94	1514310022	ADITYA PRATAP SINGH	MobiliZeon & TCS & UHG & Global Logic
95	1514310051	ARCHIT CHATURVEDI	VVDN
96	1514310071	DEVYANSH AGRAWAL	QA INFOTECH, MOBILIZEON, WIPRO
97	1514310087	HRITIK AGRAWAL	VVDN
98	1514310089	ISHIKA SHUKLA	Deloitte, TCS
99	1514310096	KSHITIJ PRATAP SRIVASTAVA	WIPRO
100	1514310105	MANISH BANSAL	TCS CODEVITA
101	1514310110	MEGHNA RAJ SAXENA	TCS, WIPRO
102	1514310124	NAVEEN MISHRA	Instalocate, Testbook
103	1514310138	OJAS MODI	QA InfoTech
104	1514310145	PRASHANT CHAUHAN	TCS
105	1514310149	PRAVEEN TYAGI	Polestar
106	1514310156	RAKSHIT CHAUDHARY	TRIDENT, WIPRO
107	1514310158	RANJEET RAI	CapitalVia
108	1514310194	SHIVANSH SRIVASTAVA	TCS
109	1514310207	SOURAV DAS	TCS
110	1514310230	VARUN TYAGI	TCS
111	1514310241	VISHAL AGRAWAL	TCS
112	1514310243	VISHAL SINGH	TCS
113	1514310245	VYOM MADHUR	TCS
114	1514331042	JAGVEER	TCS
115		ADDI .	Capital Via



UPCOMING EVENTS

▶▶ CSI Nashik Chapter organizing Computer Society of India (CSI) Region VI Student Convention (RSC-19) on 22nd and 23rd February, 2019. MET IOE CSI Accredited wing is hosting this convention at MET's Bhujbal Knowledge City, Institute of Engineering, Nashik.

The primary aim of the Regional Student Convention is to put students in the center stage of Technology-led inclusive growth to realize Vision 2020. During Student Convention various events such as Paper and poster presentation, Project Competition, Blind Coding and ICT quiz will be organized.

For Online Registration online payment is mandatory. Please Visit Below Link for registration and account details. <https://docs.google.com/forms/d/e/1FAIpQLScFQVv9X1gQLxgx0NqwtHqVOXrVpAZuTS5nwLruuntFORrdGA/viewform>


▶▶ IIT Allahabad's Incubation Center, IIITA Info Communication Incubation Center (IIIC) is going to organise their second edition of E-summit from 8th to 10th March 2019. E-summit '19 is coming with a great line of events namely B-plan contest where you get your startups incubated, Business Hackathon to build the best hacks for given problem statements, Networking Conclave where you can meet prominent personalities of the startup ecosystem, Startup Intern Fair and Expo where you can present and also get interns, an Accelerator Program for every aspiring entrepreneur, a great line of speakers to boost your enthusiasm and many more informal events and quizzes are awaiting for you.

Event Timings:-

- Event Start Date - Fri, 08 Mar '19
- Event start Time - 10:30 am

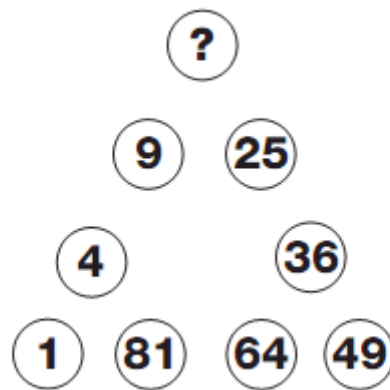
▶▶ Tryst 2019 IIT Delhi & Robotech Labs organizes Blockchain Workshop on 3rd March 2019.

▶▶ Machine Learning with AI Workshop @ UTSAHA 2K19. Zealous Information Technology Association - KSRCT presents Machine Learning with AI Workshop on 7 Feb'19. Register seat now @ <https://ksrctzita.info/workshop>

An abstract graphic design featuring a close-up, isometric view of a computer keyboard. The keys are dark grey with white lettering. The word "PUZZLES" is prominently displayed across several keys in the center. The image is overlaid with large, vibrant orange and dark blue geometric shapes, including triangles and rectangles, creating a dynamic and modern aesthetic. A thick orange border frames the entire composition.

PUZZLES

Which number replaces the question mark?



Which number replaces the question mark?



► You have 240 barrels of wine, one of which has been poisoned. After drinking the poisoned wine, one dies exactly 24 hours. You have 5 slaves whom you are willing to sacrifice in order to determine which barrel contains the poisoned wine. How do you achieve this in 48 hours?

► A dealer has 1000 coins and 10 bags. He has to divide the coins over the ten bags, so that he can make any number of coins simply by handing over a few bags. How must divide his money into the ten bags?

► *There is a room with a door (closed) and three light bulbs. Outside the room there are three switches, connected to the bulbs. You may manipulate the switches as you wish, but once you open the door you can't change them. Identify each switch with its bulb.*

► *A mother tells her two children, a boy and a girl, to play without getting dirty. However, while playing, both children get mud on their foreheads. The mother says "At least one of you has a muddy forehead". She then asks the children to answer "Yes" or "No" to the question: "Do you know whether you have a muddy forehead?" The mother asks this question twice. What will the children answer each time this question is asked, assuming that a child can see whether his/her sibling has a muddy forehead, but cannot see his or her own forehead? Assume that both children are honest and that the children answer each question simultaneously.*

*It is with immense happiness that we place in the hands of our readers this edition of **'THE BYTE'**. This magazine is a platform that exhibits the literary skills, innovative ideas of teachers and students. It was crazy when we stated it but when it all come together, we were more than happy.*

We express our considerable appreciation to all the authors of the articles in this magazine. These contributions have required a generous amount of time and effort. It is this willingness to share knowledge, concerns and special insights with fellow beings that has made this magazine possible. We hope you enjoy reading these articles, as seen through the IMS student's journalistic eye.

Thank you all!!

Dear Readers ,

Editorial Board
welcomes articles
for the next issue of
"THE BYTE", Feb
2019.

Please send your
articles @ below
email ids:

sapyadav08@gmail.com
engineer.anurag@gmail.com
juhi020890@gmail.com

T
H
M A N Y
K
S

