**August-September 2020 Edition** 

# Department of Information

**Technology** 

**SPECIAL EDITION ON** 

**BLOCKCHAIN** 

IMS Engineering College

**IMS** 

NAAC Accredited With Grade 'A'

Approved by AICTE, NEW DELHI AND AFFILIATED TO DR

P.J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW

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#### VISION & MISSION

# IMS ENGINEERING COLLEGE

# **VISION**

Our vision is to impart vibrant, innovative and global education and 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 center 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.



#### **Department Of Information Technology**

# VISION

To impart futuristic technical educational and establish a department of excellence by preparing students to apply their knowledge and varied skills as a competent technocrat to contribute towards solving complex societal problems and thus building a peaceful and prosperous nation.

#### **MISSION**

**M1:** To impart quality engineering education so that they become perfect IT professionals by getting high quality of technical education, research, training, professionalism with strong ethical values.

M2: To educate students in such a way that they shape up their minds to ensure their productive career in industry and academia.

M3: To help students to excel in research and innovation that discovers new knowledge which enables new technologies and systems.

M4: To prepare students to become an industry ready IT professional by inculcating creativity, team spirit, leadership and ethical competence through industry-academia collaboration, continuous curricular, co-curricular and extra-curricular activities.



# Department of Information Technology PROGRAM OUTCOMES (POs)

#### ENGINEERING GRADUATES WILL BE ABLE TO:

- 1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- 11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- 12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



#### PROGRAM EDUCATIONAL OBJECTIVES [PEO]

PEO1: Graduates of the program will be able to apply fundamental principles of engineering in problem solving and understand the role of computing in multiple disciplines.

PEO2: Graduates will learn to apply the various computational techniques & tools for developing solutions & projects in real world.

PEO3: Graduate will be employed as Information Technology (IT) professional beyond entry-level positions or be making satisfactory progress in graduate programs.

PEO4: Graduate will be able to demonstrate that they can function, communicate collaborate and continue to learn effectively, and ethically as a socially responsible information technology professional. They will contribute to the society by the

#### PROGRAM SPECIFIC OUTCOMES [PSO]

By the completion of program the students will have following program specific outcomes.

PSO1: Foundation of computer system: Ability to understand the principles and working of computer systems & information technology.

PSO2: Foundations of software development: Possess professional skills and knowledge of software design process. Familiarity and practical competence with a broad range of programming language and open source platforms.

PSO3: Foundation of mathematical concepts: Ability to apply mathematical methodologies to solve computation task, model real world problem, using appropriate data structure and suitable algorithm.

PSO4: Applications of computing and research ability: Ability to use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.



### Updesh Kumar Jaiswal

(Editor, ITanium Magazine), Assistant Professor, IT Department, IMS Engineering College, Ghaziabad

#### Dear Readers,

As the Editor, I am glad beyond words to present this edition of ITanium, the Bi-monthly magazine of the IT Department, to you all. This is a special edition for all of us, because with this edition, ITanium completes its one year of successful publication and circulation.

On this delightful occasion, I extend my warmest regards and sincere thanks to the our Chairman Sir, Shri Sanjay Agarwal, our Director Sir, Prof. Dr. Sraban Mukherjee and Head, IT Department, Dr. S. N. Rajan, without their blessings, wishes and support, the success of ITanium would not have been possible. Their guidance and insights are extremely valuable to us and will always be so.

I must thank the Editorial Team behind ITanium, whose hard work and perseverance in bringing out ITanium is directly reflected in the quality of the content that ITanium delivers. They are in true sense the backbone of magazine. At the same time, Faculty, Alumni and Students who submit their Articles for publication also deserve a huge round of applause. They must take the largest share in the success of the magazine.

Last but not the least; I am highly indebted to the readers of ITanium including the faculty, students and alumni of IMS Engineering College, Ghaziabad, who spend their precious time in going through every edition of the magazine and sharing their views & appreciations with us. I am heartily thankful to them for their wishes and support.

With this, I finally present this edition of ITanium to our readers. I hope they will enjoy it and share their thoughts on this edition with us. Let me end in the words of Ralph W. Sockman – "The larger the island of knowledge, the longer the shoreline of wonder".

Thank You!!



#### Student **Achievement &** Awards:

- · Student participation & paper presentation in various National & International Conferences.
- · Students awarded in various National Level Technical Project Competitions
- HACKATHON-2020 Screening
- Active participation in Cultural & CSR activities
- · Active participation in Sports: Up to Zonal & State level

#### Innovation & Entrepreneurship:

- · Students Innovative projects
- · Demonstration in TECHNOVATION, HACKATHON -(SIH -2020)
- · Regular interaction with Alumni Entrepreneur
- Participation in Entrepreneurship Awareness Camp(NIESBUD, Ministry Of Skills Development Government Of India)
- Startup Support(MSME)

#### **IMS Engineering College**

(NAAC 'A' Grade Accriditation, Affiliated to Dr A P J Abdula Kalam Technical University, Lucknow & Accriditated by AICTE, New Delhi)

#### INFORMATION **TECHNOLOGY** DEPARTMENT

#### Campus:

Established in 2002. NAAC Accredited with Grade 'A' Approved by AICTE, New Delhi Affiliated to Dr. A P J Abdul Kalam Technical University, Lucknow Ranked 6th by TOI Survey

#### Department:

Quality focused & Global standard academic system

Highly qualified & well experienced faculty members

Faculty participation in research & Ph.D Programs **Excellent Placement Record** 

Departmental Club: InfoCorp, Techninjas 2.0 Departmental E-Magazine: ITanium

Alliance with RedHat Academy ,NPTEL, Local Chapter, NASSCOM, Amazon AWS, Adobe Spark, COURSERA

#### Laboratories:

- · Data Analytic Lab
- Geo-Spatial Lab
- Open Source Lab
- Data Warehouse & Big Data Processing Lab

#### Placement (2018-19):

Major Recruiters: TCS, Wipro, Accenture, Infosys, Genpact etc.

Highest Package: 7.3 Lakhs Students placed:101 (2018-19) Companies Visited in Campus: 52

#### **Industry MOU:**

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"The Pessimist Sees Difficulty In Every Opportunity. The Optimist Sees Opportunity In Every Difficulty."

-Winston Churchill

"If You Are Working On Something That You Really Care About, You Don't Have To Be Pushed. The Vision Pulls You."

-Steve Jobs

"We May Encounter Many Defeats But We Must Not Be Defeated."

-Maya Angelou

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# Blockchain Technology and its Advanced Concepts



# Sagar Srivastava Software QA SME, Infosys Limited, Mysuru B.Tech. IT Dept. (IMS Engineering College, Ghaziabad (2014 - 2018)

We always come across this fancy term in technological front, yet know a very little about it. Let's demystify it together , first with the basics and then sliding down towards some more advanced and trendy concepts around the Block Chain Technology (BCT).

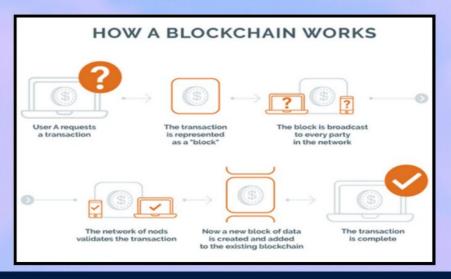
#### What is Blockchain?

"A blockchain is a peer-to-peer network of computers or servers known as "nodes" that both participate and monitor the transfer of information and assets. Every transfer is recorded on each user's computer (node), generating a platform of trust based on several identical copies of the ledger."

Blockchains are a type of distributed ledger technology where data is structured into blocks .When new data is added, new blocks are created, forming a chain of blocks (hence the name). As with distributed ledgers in general ,cryptography provides security for the system.

#### Origin of Blockchain

Blockchain was initially released in 2008 as a vehicle to transfer Bitcoin .But since then it's been recognized as away to share more than just currency,including records, electricity, contracts, etc. Notable users of public blockchains are Ethereum, Ripple, and of course Bitcoin.

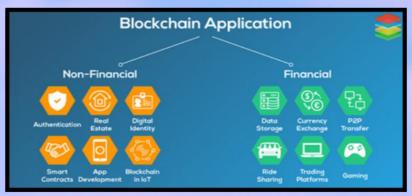


#### **How does Blockchain Work?**

In order to send data, blockchain uses a distributed ledger & hash function. The code (hash) are entered into a distributed ledger (the blockchain). They're copied with each new block & each new entry needs to match with the last entry, therefore preventing any tampering. Once the majority of Nodes agree the transaction is valid, and the new data matches the prior entries, it's entered into a block. A block is a collection of hashes that are compiled and shared with each node, making up a blockchain.

#### Risks and Limitations of Blockchain

Regulators believe this technology encourages criminal activities, due to its anonymity. Use of public ledger implies personal information is limited to the user's digital signature & username. Block chain is disruptive. Although this is a very positive quality in the eyes of users like business owners, it threatens the platforms of banks & government institutions that benefit from the outdated, slow, costly, & unsecure processes blockchain seeks to correct.



#### **Applications of Block Chain**

- 1) Marketing with blockchain involving Streamlining business operations and smart contracts.
- 2) In the field of Healthcare , Retail , Voting , Education , Banking and Cyber Security.
- 3) Creation of Decentralized asset transfer system with integral responsibility of each participants.
- 4) Supply Chain, Real Estate, Media & supporting State with the Record Management.
- 5) Blockchain erases the need for a human mitigator . No intermediary, such as a banker or lawyer needs to approve your transaction.
- 6) If the transaction is deemed legitimate , it's blocked & added to the chain.
- 7) This makes the process quicker, cheaper, & of course free from human error and fraud.
- 8) Blockchain is useful for its Speed and technically no fees for the transactions.

#### Advanced Concepts of Blockchain with Future Scope

**Byzantine fault tolerance (BFT)** is what keeps the blockchain fundamentally secure. For simplicity ,let's say there were 100 nodes in a blockchain network (there are currently about 10,500 full Bitcoin nodes in the world). What if one node wants to tamper with the latest block and say other Bitcoin users sent him a whole bunch of Bitcoin when they really didn't? Then solution is Byzantine Generals Problem in block–chain is Proof of Work. Proof of Work does not care about the message itself, only that the nodes agree to the final message. This majority network consensus keeps it secure and provides a solution.

Smart Contracts & Turing Completeness in the Blockchain Technology is a phenomenal leap brought by Ethereum. You can think of it as a programmable Bitcoin. Smart contracts are little programming functions that sit on the Ethereum blockchain. You invoke a smart contract by calling the contract (or function) address and the arguments you send it will produce a deterministic result based on the logic of the function. A sample Ethereum smart contract function solves our very favorite Alice Bob problem. It does a simple check to transfer token from Alice to Bob by taking signature in Bob's wallet address & an amount to transfer. The require statement ensures Alice has enough Ether (Ethereum's currency) to give

Bob. Then the function subtracts that amount from Alice's wallet &add the same amount to Bob's wallet.

```
function transfer(address _to, uint256 _value) {
    require(balanceOf[msg.sender] >= _value && balanceOf[_to] + _value >= balanceOf[_to]);

balanceOf[msg.sender] -= _value;

balanceOf[_to] += _value;

}
```

**Delegated Proof of Stake (DPOS)** is believed to be the future of the blockchain. It maintains network security & allows for scalability. Initially conceived by Dan Larimer, instead of using hardware to solve hashes, he proposed that people in the network vote for "witnesses". These witnesses are responsible for keeping the network secure and each of these witnesses puts some amount of digital currency in escrow. The witnesses who put more funds in escrow have a greater chance of mining (or minting) the next block.

**Side Chain or State Channel Concept** in Blockchain is buzzing around with Plasma, a project by Eth-ereum .It encourages transactions to happen on side chains (or child chains). An authority governs each of the child chains. If the authority starts acting maliciously, anyone on the child chain can quit the child chain and take back their pegged assets on the main chain . It's in its early stages of development but shows a lot of promise in handling some of Ethereum's scalability issues.

Turing Completeness and Payment Channel in Blockchain, can be understood when we do a contrast study. Ethereum is "Turing Complete" which means that a fully featured programming language is available on the Ethereum blockchain. The code we wrote above is written in a language called Solidity, which is the specific smart contract language to Ethereum. By contrast, the Bitcoin blockchain is not Turing complete since it has little to no ability for data manipulation. It has no ability for a user to deploy if else or goto statements. The idea of payment channels in Blockchain becomes powerful when you have a rich network of participants. Every node can access every other node without being directly connected to them. The system is able to determine the quickest path between two nodes who want to connect.

These are few of the most advanced topics blockchain that you'll hear about. By understanding these concepts, you now have a firmer grasp on the fundamental tradeoffs and latest research in BCT. Blockchain is now being researched by the largest companies &organizations around the world. Millions of dollars are being spent to adapt and experiment with this technology. This is evident from recent actions taken by European Union where they have announced plan to increase funding for blockchain research to



# "Generations and Future Scope of Blockchain"

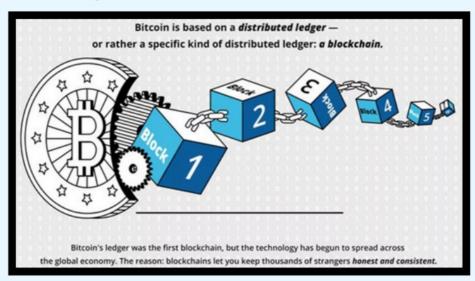


#### Shaifali Kalra B. Tech, IT-3rd Year, IMSEC, Ghaziabad

Over the past few years, you have consistently heard the term 'Blockchain Technology,' probably regarding cryptocurrencies like Bitcoin. It seems like Blockchain is a platitude, as there is no real meaning that any layman can understand easily. It is essential to learn Blockchain technology, how it works and its importance in the digital world.

People have higher expectations on Blockchain technology based on weaker perceptio--ns and report findings. Blockchain technology has real value &over time the scope of it will become wider and more user-friendly.

Blockchain is a technology where data is stored in blocks, where new data is added, new blocks are created, forming a chain of blocks.



#### **Generations of Blockchain**

#### The three Blockchain generations are:

- First Generation Bitcoin
- Second Generation Ethereum
- Third Generation Cardano

## <u>These three Generations of Blockchain Technology can be discussed</u> <u>as 3 States:</u>

#### Stage 1: Bitcoin as digital currencies

Bitcoin is one of the first digital currencies to use peer -to-peer technology to facilitate instant payments. Bitcoin is a cryptocurrency invented in 2008, Satoshi Nakamoto, who outlined the blockchain as we know it in the white paper for BTC. In this way, blockchain technology began with the Bitcoin network. It was designed especially for this digital currency and for advancing the goals of digital currencies Bitcoin network.

#### <u>Stage 2: Ethereum as smart contracts</u>

The major innovation brought about by Ethereum was the advent of smart contracts. Typically, contracts in the mainstream business world are managed b/w two separate entities, sometimes with other entities assisting in the oversight process. Smart contracts are those that are self-managing on a blockchain. They are triggered by an event like the passing of an expiration date or the achievement of a particular price goal; in response, the smart contract manages itself, adjusting as needed and without the input of outside entities.

#### <u>Stage 3: Cardano as DeFi</u>

One of the major issues facing blockchain is scaling. Bitcoin remains troubled by transaction processing times and bottlenecking. Many new digital currencies have attempted to revise their blockchains in order to accommodate these issues, but with varying degrees of success. In the future, one of the most important developments paving the way for blockchain technology going forward will likely have to do with scalability.

DeFi is an abbreviation of the phrase Decentralized Finance which generally refers to the digital assets & financial smart contracts, protocols, & Decentralized Applications (DApps) built on Ethereum. Cardano is a decentralized public blockchain & cryptocurrency project and is fully open source.

#### Working of Blockchain Technology

#### Blockchain is a combination of three leading technologies:

- i. Cryptographic keys
- ii. A peer-to-peer network containing a shared ledger
- iii. A means of computing, to store the transactions and records of the network

#### Features & Implications of Blockchain

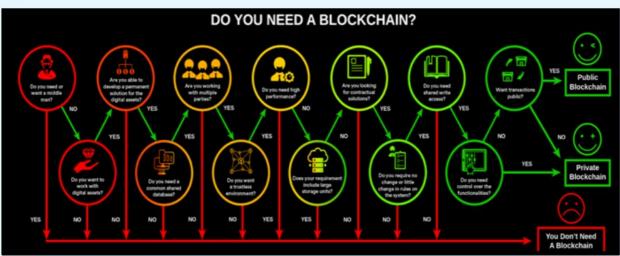
Blockchain is revolutionizing how we do finances, its works on the basic idea of having ownership of data on each & make platform centralize. By utilizing a decentralize way of operations, it's very difficult to compromise, data can't be forged or deleted as it is cryptographically verifiable & replicates itself on each node on the network.

Blockchain technology is quite autonomous, it is programmable and &generate system-atic actions, events, and payments automatically when the criteria of the trigger are met. Bitcoin is the best application of it till date, since it's a decentralize digital money, its immune to external risks as other Fiat currencies are prone to. Let's take an example of Indian Rupee, Indian Rupee is a fiat currency which is Regulated by a central body of RBI (Reserve Bank of India), that is if any threat befalls to the RBI or nation itself, is

the Indian Rupee will lose its value against other currencies and assets like USD ,EURO, GOLD etc. Cryptocurrency is immune to this as they are not governed by any country and data replicated to thousands of nodes that exist all over the world.

#### Risks and Limitations of Blockchain

Blockchain's application is vast so there are lot of risks and threats also and they are: It requires significant technical knowledge to build & operates. Many efforts are under—way to resolve this. As its works on having replication of Data onto many nodes, after some time it is difficult to manage such bulk amount of data and proper manageme of data and machine is required. Malicious users of Cryptocurrencies also exploit secure, unregulated & anonymous platform for their malign interest, it makes it easier to indulge in illegal activities like operating in Black markets, Drugs cartels monetizations & other illegal stuff.



#### **Applications and Future Scope of Block Chain**

- 1) Blockchain opened up space for creating multiple decentralized platforms like crypt-currency, distributed markets, stand-alone escrows and much more.
- **2)** Immutability &verifiable validity of data available in Blockchain Technology can solve numerous problems in the field of Healthcare, Retail, Voting, Education, Banking and Cyber Security.
- **3)** In case of Blockchain Technology,creation of decentralized asset transfer system with integral responsibility of each participant.
- **4)** Blockchain Technology can be useful in Supply Chain, Real Estate, Media, Record Management etc.

Blockchains can be set up to operate in a variety of ways, using different mechanisms to secure a consensus on transactions, seen only by authorized users, & denied to everyone else. Bitcoin is most well known example that shows how huge Blockchain Technology has become . Blockchain founders are also trying out numerous other applications to expand Blockchain's level of technology and influence.

| <b>—</b> |  |
|----------|--|

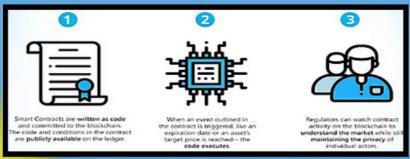
#### Blockchain for Smart Contracts: The future of Computing



# Mr. Shardul Singh Chauhan (Assistant Professor) IT Department, IMSEC, Ghaziabad

Like any new technology, blockchain has evolved from an idea, to a market buzzword, and now to a real solution with applications in real business environments. The evolution from an idea to successful application take time; though blockchain was unveiled as a concept in 1991, organizations are just now beginning to incorporate it into architected applications in their production technologies. As more and more organizations cultivate blockchain environments, one opportunity for innovation seems clear: smart contracts.

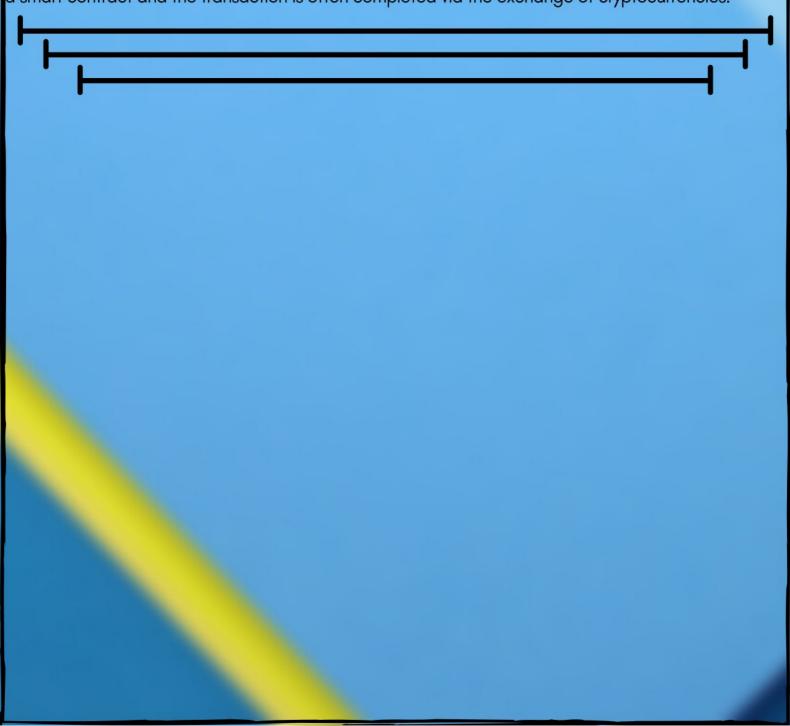
Smart contracts are the theoretical and technical rules & policies, coded within the blockchain environment, that govern transactional agreements hosted on a blockchain network. They are built inside blockchain applications or constructed as a stand-alone application that rides on a blockchain network. For a transaction on a blockchain network to take place, a smart contract ensures the policies to execute an exchange of information are satisfied. For example, if a car sales transaction system runs on a blockchain application, rules would be established to constitute a successful transaction involving customer credit checks, profitability threshold, etc. If these rules are not met, such that the customer's credit history does not meet the requirements, the application would trigger an alert & the transaction attempt would be automatically denied by the parties on the blockchain.



As one can imagine, a smart contract is a crucial enabler or disabler of a blockchain environment. It's imperative that stakeholder throughout the organization are engaged in constructing smart contracts &determining the proper rules to govern them. The problem that smart contract pose to organizations is chiefly a lack of involvement from high – level decision makers and stakeholders. Right now, smart contracts are primarily designed & built by the technical personnel and resources that have first-hand

experience developing the blockchain network. Therefore, smart contracts do not garner a lot of over-sight, legal sign-off or regulation. Due to their complexity, smart contracts require a great deal of maintenance in terms of engineering expertise. Despite the obstacles facing the widespread adoption of smart contracts, companies must also weigh the advantages when building out their strategic IT roadmap.

Similar to other blockchain applications, smart contracts are immutable, which ensures that your information is not lost, changed or stolen without proper permissions. This security is especially useful for guaranteeing the authenticity of copyrighted products, job certificates, titles, deeds and a myriad of other credentials and applications. Today, the advantages of smart contracts are helping drive new innovations in supply chain logistics and automation. Smart contracts are being used across many industries. In the Utilities industry, smart contracts are efficiently governing the distribution of energy in microgrids. Devices in a microgrid are linked by smart sensors enabled by the internet of things (IoT). These devices monitor energy usage & reduce unneeded energy distribution while generating smart contracts based on the consumer's real-time usage. Consumers in a microgrid often acquire their energy needs from a local prosumer through a digital transaction. This transaction is usually governed by a smart contract and the transaction is often completed via the exchange of cryptocurrencies.



# Use of Cryptography in Blockchain



### Saumya Khare B. Tech, IT-3rd Year, IMSEC, Ghaziabad

#### INTRODUCTION

Blockchain technology is abstracted as the statistical outline security technology for the modifications in the databases & the highly intellectual machines. Blockchain can seem as a philosophy rather than a technology to solve the issue relating to the trust in any particular bond. It can also be said as an idea to transform the current state of the world rather than a specific country. It can be used for discerning the nugatory changes that took place in the system and informing every vital object about the changes that took place in the operation.

For example, in a railway management system where there might be a delay due to any, cause & the information might not be able to reach to the customers.

#### **BITCOIN**

Each Bitcoin is basically a computer file which is stored in a 'digital wallet' app on a smartphone or computer. People can send Bitcoins (or part of one) to your digital wallet, & you can send Bitcoins to other people. Every single transaction is recorded in a public list called the blockchain.

#### **CRYPTOGRAPHY**

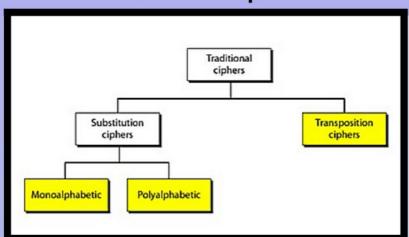
Cryptography is a method of protecting information & communications through the use of codes, so that only those for whom the information is intended can read & process it. The prefix "crypt-" means "hidden" or "vault" -- and the suffix "-graphy" stands for "writing."

#### Cryptography is of two types:-

- 1 Symmetric Key Cryptography (secret or personal key) =>Here, both receiver &the sender make use of a single key to encrypt and decrypt the message.
- 2 Asymmetric Key Cryptography (public key) => It follows a varied and protected method in the

transmission of information . Using a couple of keys , both the sender & receiver go with encryption & decryption processes. A private key is stored with each person and the public key is shared across the network so that a message can be transmitted through public keys.

#### **Traditional Cipher**



#### Mono-alphabetic Cipher -

In mono-alphabetic ciphers,each symbol in plain-text is mapped to one cipher-text symbol. No matter how many times a symbol occurs in the plain-text, it will correspond to the same cipher-text symbol.

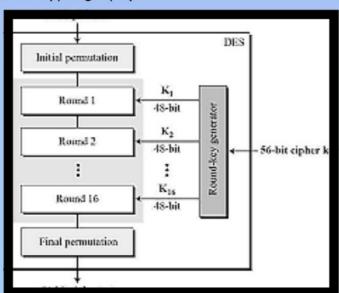
#### Poly-alphabetic Cipher -

In poly-alphabetic ciphers, every symbol in plain- text is mapped to a different cipher-text symbol re--gardless of its occurrence. Every different occurrence of a symbol has different mapping to a cipher text.

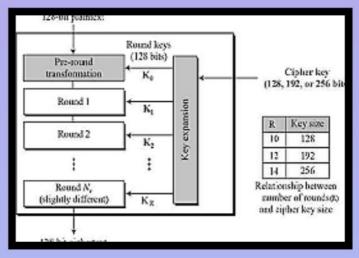
#### **Transposition Cipher:**

The transposition cipher does not deal with substitution of one symbol with another.It focuses on cha--nging the position of the symbol in the plain-text . A symbol in the first position in plaintext may occur in fifth position in cipher-text .

**DES -The Data Encryption Standard (DES)** is a symmetric-key algorithm for the encryption of digital data .Although its short key length of 56 bits makes it too insecure for applications , it has been highly influential in the advancement of cryptography .



**AES -The Advanced Encryption Standard (AES)** is a symmetric block cipher chosen by the U.S. go-vernment to protect classified information. It is implemented in software & hardwaret hroughout the world to encrypt sensitive data. It is essential for government computer security, cybersecurity & elect-ronic data protection.

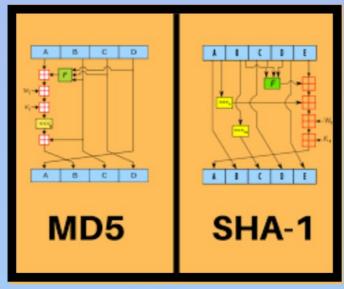


#### Hashing in Cryptography

A hash function is a mathematical function that convert a numerical input value into another compre--ssed numerical value.The input to the hash function is of arbitrary length but output is always of fixed length.

MD5 - MD5 is also known to suffer from extensive hash collision vulnerabilities, but it's still one of the most widely used algorithms in the world. An MD5 hash function encodes a string of information and encodes it into a 128-bit fingerprint. It is often used as a checksum to verify data integrity. However, due to its age, MD5 is also known to suffer from extensive hash collision vulnerabilities, but it's still one of the most widely used algorithms in the world.

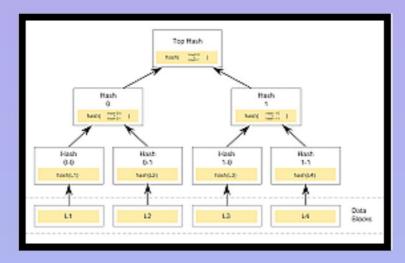
SHA-1 - In cryptography, SHA-1 (Secure Hash Algorithm 1) is a cryptographic hash function which takes an input and produces a 160-bit hash value known as a message digest - typically rendered as a hexadecimal number, 40 digits long. All major web browser vendors ceased acceptance of SHA-1 SSL certificates in 2017. SHA-1 works by feeding a message as a bit string of length less than 2 64 bits, and producing a 160-bit hash value known as a message digest.



#### Merkle tree

In cryptography and computer science, a hash tree or Merkle tree is a tree in which every leaf node is labelled with the cryptographic hash of a data block, & every non-leaf node is labelled with the cryptographic hash of the labels of its child nodes. Hash trees allow efficient & secure verification of the contents of large data structures. Hash trees are a generalization of hash lists and hash chains.

Demonstrating that a leaf node is a part of a given binary hash tree requires computing a number of hashes proportional to the logarithm of the number of leaf nodes of the tree; this contrasts with hash lists, where the number is proportional to the number of leaf nodes itself.

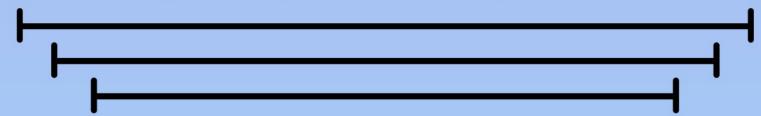


Hash trees can be used to verify any kind of data stored, handled & transferred in & b/w computers. They can help ensure that data blocks received from other peers in a peer-to-peer network are received undamaged & unaltered, & even to check that the other peers do not lie and send fake blocks. Git and Mercurial distributed revision control systems; the Tahoe-LAFS backup system; Zeronet; the Bitcoin and Ethereum peer-to-peer networks; the Certificate Transparency framework; and a number of NoSQL systems such as Apache Cassandra, Riak, & Dynamo. Suggestions have been made to use hash trees in trusted computing systems.

The initial Bitcoin implementation of Merkle trees by Satoshi Nakamoto applies the compression step of the hash function to an excessive degree, which is mitigated by using Fast Merkle Trees.

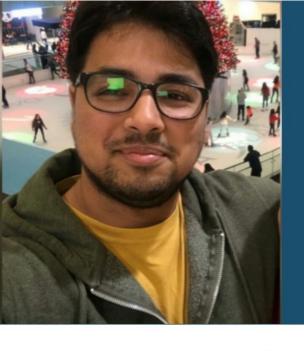
#### CONCLUSION

Blockchain is a widely scalable technology cannot be implemented all over the globe. As it becomes familiar to a greater number of people, its implementation can be easier to understand and can reach as many as people it can. There are many sectors where blockchain can be implemented but these sectors have demerits of their own. Firstly, we should try as many attempts to remove these demerits and then proceed to work with the blockchain technology, and after that blockchain can be a boom to any industry. The blockchain network can achieve every work.





# ALUMNISPEAKS



Shantanu Mukherjee IT (2008-2012) Batch, Team Lead & IT Consultant, Tata Consultancy Services Ltd, Dallas, Texas, USA

IMSEC gave me the opportunity to enhance in an all round fashion which helped me achieve my future endeavors. I had my four most happening and fabulous years of life there. I am able to scale in todays world and achieve my dreams because of IMSEC. IMSEC has transformed my personality and helped me connect with the modern world. College were time for Innumerable dreams friendship, I received great opportunities to gain knowledge and apply them in real life. I am very thankful to my Faculty members for making me a responsible and successful person today. Success is never permanent and it comes to only those people who try again and who do not wait and hesitate. It comes to those people who are ready to do anything. I hope good things happen for my juniors and don't dare give up. May all the dreams that your heart hold, dear, come true. And may each day of life bring the best for you. Good Luck to all of you for your bright future.



# Piyush Gupta, IT (2010-2014) Batch, Senior Quality Assurance Engineer at Axway Inc., Paris, France

It has been more than six years since I got out of IMSEC, but it seems as if it is only yesterday that I left the college.

All the memories are still so fresh in my mind. I must say that the 4 years that I spent in IMSEC are still one of the most important and memorable time of my life. I found some life long friends and I spent a great time with them in the IMSEC. At the college time I got a new perspective of my life, I focused my time on what I wanted from my life and then I worked hard to achieve it. Now I can say that I have achieved it.

It would be wrong if I don't mention the contribution of our IT faculty members who worked as hard with the same passion to help me to achieve my goal. And for this I will always be thankful to them.

I want to say my junior students that always work hard but at the same time do not forget to have some fun. Try to learn how to balance both of these in your student life. It will help you now and for sure gonna help you when you guys will take further challenges in your life. Good Luck for all your efforts, May you get what you truly deserve, My good wishes are always with you, Go for it!



Nigar Fatima
IT (2011-2015)
Batch,
Consultant,
Deloitte US,
Bangalore

'So much of who we are is where we have been!'- your homeland, your school, your college, it's everything that moulds you in creating your personality. Some students believe in studying a night before their examination but it is not a good practice. So you should always keep your concepts clear and you must know the reason behind the theories you read or write. Suggestion is not to mug up things blindfolded, it might earn some marks but won't make you outstand in IT industry. Things are changing very fast so you need to be Agile and Flexible. IMSEC as an institution makes its best to help you learn the concepts, which most of the engineering colleges don't do. Pay attention to what your Teachers say and teach because it is going to reduce your effort now and in the future. I had Teachers during my college time who would prepare "Lecture Notes" for us and I respect them for putting in so much of effort to make our lives easier. Thanks to the IT Department for promoting such a healthy environment to learn and grow. Make sure to do the best utilization of every resource and opportunity that are provided to you during this COVID-19 pandemic. Keep Believing in you and do the hard work!!



Sushant Ranjan,
IT (2012-2016) Batch,
Quality Associate &
UI Accessibility
Expert,
SAP Labs India Pvt.
Ltd., Bengaluru

While writing this, first of all I am missing my college life and it reminds me of entire four years that I spent in learning technical, personal, social and behavioral skills at IMSEC, Ghaziabad. We get only one chance to become an engineer and IMSEC provided me the best class learning environment where focus was on all round development of the students. The learnings and experiences I got from college played an important role behind my success at work as well as in personal life. The 4 years of transformation made me perfect and suitable for all kind of future opportunities and for that I am always thankful to all faculties, batchmates, seniors, juniors and all staffs who were part of my journey at IMSEC, specially the IT department. I wish good luck to all current students for their future endeavours. My suggestion for you all is to keep on learning, be focused & motivated, and enjoy each moment of life. There are lot of opportunities waiting for you ahead!



# "बस चलते रहो"

माना मंजिले कुछ धुंधला सी गई है, पथ कोई पास में नहीं है। चहुं ओर अंधेरा छाता है, उजाले का दृश्य कहीं समझ ना आता है। किन्तु स्मरण रहे हर अंधकार उजाला लाएगा, ये जीवन है यूहीं चलता जाएगा। मन दृढ़ निश्चय कर, तू हार मत ये आस रख, डर कर हार ना मानूंगा बस ऐसा खुद पर विश्वास रख। जो खोया है, यदि वो अच्छा था, तो जो पाएगा वो सर्वश्रेष्ठ होगा, जो उजाला अब आयेगा वो सबसे ज्येष्ठ होगा। ये ज़िन्दगी तुम्हे हर दृश्य दिखलाएगी, किन्तु मन को अडग गिरी बना, फिर ये ज़िन्दगी तुम्हे आगे लेकर जाएगी। उठो जागो खडे हो निश्दिन ये समय लौट के ना आयेगा, ये जीवन है राही यूं ही चलता जाएगा, यूं ही चलता जाएगा।।

# FEAR.!!

I must not fear. Fear is the mind-killer. Fear is the little-death that brings total obliteration. I will face my fear. I will permit it to pass over me and through me. And when it has gone past I will turn the inner eye to see its path. Where the fear has gone there will be nothing. Only I will remain!!!

# Life of engineering students!!!

- 1. Dressing sense: Engineering students lack the ability to dress up everyday to college.
- 2. Understanding the importance of pockets: Manage to survive with 100 Rupees for 2 Weeks with mess' food.
- 3. Endless hours in the lab: Only God knows the secret of these practicals but engineering students feel proud of their experiments and take pride in the work they do in the labs.
- 4. Studying overnight: A day before the exam; They are a pro in preparing for an exam in twenty-four hours before the exam, no matter the difficulty level of the exam and Still pass the Exam with higher grades.
- 5. Masters of deadlines: They just know how to work under pressure and complete the task and submit the assignment before the deadline.
- 6. More exams than holidays: Sessional, Pre University Test, Internal Viva, Semester Exam, External Exam (Apart from Semester break).
- 7. Knowing something about everything: Engineering students are Creative, Innovative, Initiative and Adjustable in any situation.
- 8. Viva tougher than interviews: Engineering students are pro in dealing with such conditions.
- 9. Source of entertainment: music, and movies on laptops; Engineering students get only a limited time to enjoy and they use movies and music on a laptop as a way of entertainment.
- 10. Making friends for life: Friends, we make in engineering college, are for life. Enjoying four years together in high workload degree, engineering taught us how to make BEST FRIENDS:)



# CURRENT AFFAIRS

## DEFENCE MINISTER UNVEILS DEFENCE ACQUISITION PROCEDURE 2020

The Defence Acquisition Procedure 2020 incorporates several measures to boost domestic Defence industry and Make in India. Defence Minister Rajnath Singh unveiled the Defence Acquisition Procedure (DAP) – 2020 in New Delhi on September 28, 2020.

PM MODI INAUGURATED 6 MEGA PROJECTS IN UTTARAKHAND UNDER NAMAMI GANGE PROJECT ON SEPTEMBER 29

PM Modi also inaugurated 'Ganga Avalokan', the first museum on Ganga which has been dedicated to showcase the biodiversity, culture, and rejuvenation activities done in the Ganga river. Prime Minister Narendra Modi on September 29, 2020, inaugurated 6 mega projects in Uttarakhand under the Namami Gange Mission through video conference at 11 am.



# HEALTH MINISTER HARSH VARDHAN LAUNCHES ICMR'S VACCINE WEB PORTAL AND NATIONAL CLINICAL REGISTRY FOR COVID-19



The vaccine portal of ICMR will provide information related to the Coronavirus vaccine development in India as well as abroad. The Union Health and Family Welfare Minister Dr. Harsh Vardhan on September 28, 2020, launched the ICMRs (Indian Council of Medical Research) vaccine web portal and the National Clinical Registry for COVID-19.

## UNITED STATES JUDGE HALTS DONALD TRUMP'S BAN ON TIK TOK DOWNLOADS

The district judge issued a temporary injunction at the request of Tik Tok, which earlier the White House had called national security threat claiming that its Chinese parent firm is tied to the Beijing government.

# News & Politics

## Unlock 5 guidelines: More relaxation outside containment zones from October 1

MHA has issued new guidelines for opening up of more activities outside containment zones from October 1, 2020.Social/academic/sports/religious and other congregations have already been permitted with a ceiling of 100 persons, outside containment zones. Now States/UTs have given the flexibility to permit such gatherings beyond the ceiling of 100 persons from Oct 15, 2020.



## Bengaluru hotels join together to launch sponsored meal programme from October 2



About 100 restaurants in Bengaluru have come together to launch a sponsored meal programme for the hungry from October 2, the Gandhi Jayanti Day. They have named the programme "Sanchigondu" in Kannada, which translates to 'one for the box.'The hoteliers were inspired by "one for the wall" that some restaurants have introduced in parts of the United States.

## 'VAIBHAV Summit' celebrates science and innovation from India and the world

Prime Minister Narendra Modi on Friday 2nd October 2020 inaugurated Vaishwik Bharatiya Vaigyanik (VAIBHAV) Summit, organised for the overseas and resident Indian Researchers and Academicians. The global virtual summit is being organized from October 2 to October 31 with the aim of bringing Indian origin luminaries in academic institutes and research and development (R&D) organizations across the world and resident counterparts on a single platform.



#### UP govt's efforts to promote filmmaking



Uttar Pradesh Chief Minister Yogi Adityanath announced that his government will establish the country's 'biggest' film city in Gautam Buddh Nagar. With several films and web series now being shot in the state, the dedicated film city is likely to bring employment while providing a haven for filmmakers.

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# SCIENCE & TECHNOLOGY

#### NEW MEASUREMENTS SHOW MOON HAS HAZARDOUS RADIATION LEVELS



China's lander on the far side of the moon is providing the first full measurements of radiation exposure from the lunar surface, vital information for NASA and others aiming to send astronauts to the moon, the study noted. Future moon explorers will be bombarded with two to three times more radiation than astronauts aboard the International Space Station, a health hazard that will require thick-walled shelters for protection, scientists reported on Friday.

#### SCIENTISTS DISCOVER AN EARTH-LIKE PLANET CALLED 'PI-PLANET'

As per the group of astronomers the signal of the planet orbiting around the star were first found in 2017 through NASA's Kelper space telescope K2 mission by syncing data from ground-based telescopes. Astronomers at MIT have claimed to find a new look-alike planet similar to the Earth. In a riveting combination of inferences that these astronomers have drawn from their telescopic observation, the planet has been called as 'Pi-Planet' pertaining to the fact that it takes exactly 3.14 days to revolve around its star.



#### UBER WINS BACK LONDON LICENCE DESPITE 'HISTORICAL FAILINGS'



Transport for London (TfL) refused to grant the Silicon Valley-based company a new licence in 2019 due to what it called a "pattern of failures". Uber wins back London licence despite 'historical failings'. Uber has won a legal bid to restore its London operating licence which was taken away by the city's transport regulator over safety concerns, after a judge decided on Monday that it was a fit and proper operator.

# VODAFONE IDEA JOINS JIO, AIRTEL IN NAMING NON-CHINESE VENDORS AS PRIORITY PARTNERS FOR 5G TRIALS

Vodafone Idea plans 5G trials with Nokia in Gandhinagar and Pethapur in Gujarat, and with Ericsson in Sharda Centre and Nanekarwadi in Pune. Vodafone Idea joins Jio, Airtel in naming non-Chinese vendors as priority partners for 5G trials Vodafone Idea has joined Reliance Jio Infocomm, Bharti Airtel and state-run Bharat Sanchar Nigam Ltd (BSNL) in naming European and US equipment makers as preferred partners for 5G trials, effectively shutting Chinese companies Huawei and ZTE out.









A-C=

# SPORTS

IPL 2020: No Opening Ceremony For IPL This Year

The much-awaited Indian Premier League commences on the 19th of September with the opening match being played between Defending champions Mumbai Indians and last year's runner-up Chennai Super Kings at the Sheikh Zayed Stadium. Just like last year, there will be no opening ceremony for IPL this year either.



# IND Vs ENG: Want Home Series On Indian Grounds But Monitoring

**COVID Situation: Sourav Ganguly** 



BCCI President Sourav Ganguly on Monday said the Board will do all it can to ensure that India's home series against England remains in the country and domestic tournaments kick off at some point despite the "fluid" COVID-19 situation.India's COVID-19 case load has gone past 60 lakh and the death toll has surged beyond 95,000. England are scheduled to tour India next year between January and March for five Tests, three ODIs and three T20 Internationals.

## Confirmed! No comeback for Suresh Raina as Chennai Super

Kings remove his name from official website
Suresh Raina shocked the cricket fraternity when
he pulled out of the Indian Premier League (IPL)
2020 due to personal reasons. The former India
batsman was all geared up for the tournament
and had also joined team's one week camp in
Chennai. He flew to UAE with other members of
the team but 13 COVID-19 positive cases in the
CSK camp saw him return to India.



# Goa to host ISL, first big sporting spectacle in times of pandemic



In the first mega sporting event in the country since the pandemic struck, Goa will play host to India's premier football tournament Indian Super League from November to March 2021. All 95 matches of the next edition will be played behind closed doors.



Department Of Information Technology

# ORIENTATION PROGRAM

**ACADEMIC SESSION 2020-21** 

IMS ENGINEERING COLLEGE



ivya Agnihotri (Alumni 2008-12) CGI Sverige AB, Gothenburg, Sweden



Nigar Fatima (Alumni 2011-15) Deloitte US, Banglore



Divya Garg (Alumni 2011-15) Alcor Solution, Noida



Dr Poornima Ahuja, TV & AIR Anchor, Corporate Motivator

August 7, 2020 • 10 am



In the beginning of the new acad -emic session 2020-21 departme -nt of Information Technology organized Orientation Program for the newly promoted students of 2nd year, 3rd year & 4th year. The Alumni of the department Divya Agnihotri (2008-12 Batch, CGI Sverige AB, Gothenburg, Sw eden), Nigar Fatima (2011-15 Batch, Deloitte US, Bangalore), Divya Garg (2011-15 Batch, Alcor Solution, Noida) and Dr Poornima Ahuja, a renowned anchor of AIR & TV were the main speakers. The event under the banner of Inforcorp Society was organized on 7th August 2020.



Orientation Program 2020-21
Department of Information Technology
IMS Engineering College
07-08-2020



Orientation Program 2020-21
Department of Information Technology
IMS Engineering College



Orientation Program 2020-21
Department of Information Technology
IMS Engineering College

07-08-2020







Department of Information Technology organized online Mock Interview for their Final Year Students, preparing for different Placement Drives. Many Alumni of IT Department, working in various MNCs, took Technical & HR Interview rounds, gave their suggestions and guided the new batch of 4th Year students to improve their preparation. The event was held during 8-12 August 2020. The Alumni of IT Department who joined the event and guided the students were:

- 1) Keshav Maheshwari, (2011-15) Batch, TCS, Pune
- 2) Anirvan Samajdwar, (2011-15) Batch, PWC LLP, kolkata
- 3)Shruti Agarwal,(2011-15) Batch, Wipro, Gurugram
- 4) Shudha Singh, (2011-15) Batch, Infosys, Pune
- 5) Nigar Fatima, (2011-15) Batch, Deloitte US, Bangalore
- 6) Saurabh Dey, (2011-15) Batch, Icertis solutions private limited, Pune
- 7) Akhand Pratap Singh, (2012-16) Batch, Verizon, Hyderabad
- 8) Kunwar Raghvendra Singh,(2012-16) Batch, TCS, Hyderabad
- 9) Vedansh Sharma, (2013-17) Batch, Mindfire Solutions, Noida
- 10)Deepanshu Agarwal,(2014-18) Batch, SAMSUNG Research Institute, Noida.



Anirvan Samajdwar, (Alumni 2011-15), PWC LLP, Kolkata



Nigar Fatima (Alumni 2011-15), Deloitte US, Bangalore



Shruti Agarwal, (Alumni 2011-15), Wipro, Gurugram



Saurabh Dey, (Alumni 2011-15) , Icertis solutions private limited, Pune



# PLACEMENT MOCK

Alumni Initiative



IMS ENGINEERING COLLEGE



Shudha Singh, (Alumni 2011-15), Infosys, Pune



Keshav Maheshwari, (Alumni 2011-15), TCS, Pune



(Alumni 2013-17), Mindfire

Solutions, Noida

Kunwar Raghvendra Singh, (Alumni 2012-16), TCS, Hyderabad



Akhand Pratap Singh, (Alumni 2012-16), Verizon, Hyderabad



Deepanshu Agarwal, (Alumni 2014-18), SAMSUNG Research Institute, Noida



Placement Mock Interview
Department of Information Technology
IMS Engineering College
8-14 August 2020



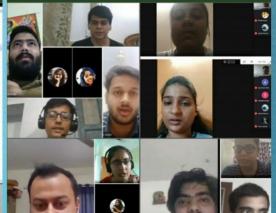
Placement Mock Interview
Department of Information Technology
IMS Engineering College
8-14 August 2020







Placement Mock Interview
Department of Information Technology
IMS Engineering College
8-14 August 2020



# EXPERT TALKS ALUMNI INITIATIVE



PREM VIR SINGH

IT (2009-2013) BATCH, Sr. Cloud DevOps Engineer, NIIT Technologies, Gr.

Cloud DevOps Applications Database Design & Administration SHIVA PANWAR

IT (2013-2017) Batch, SENIOR CONSULTANT, PINNAXIS, NOIDA.



Department of Information Technology organized Alumni Talk on Cloud **DevOps Applications and** Database Design & Admi -nistration. The talk was held on 29th August 2020 in Virtual Webinar Mode for the 3rd year & Final Year of students. The alumni of IT Department Mr Prem Vir Singh (2009-13 batch, NIIT Technologies) and Ms Shiva Panwar (2013-17 batch, PINNAXIS) took the sessions. Faculty members of the department also attended the webinar.



DEPARTMENT OF INFORMATION TECHNOLOGY
IMS ENGINEERING COLLEGE



## **Expert Talks - Alumni Initiative**

Department of Information Technology IMS Engineering College

29 August, 2020





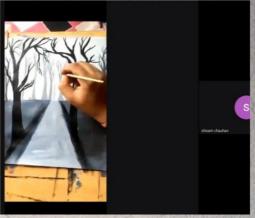
# **Expert Talks - Alumni Initiative**

Department of Information Technology IMS Engineering College

29 August, 2020

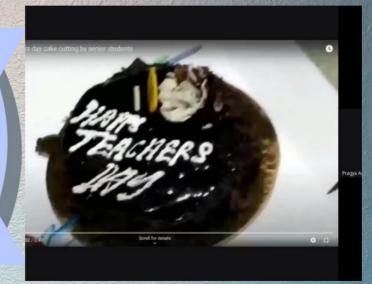




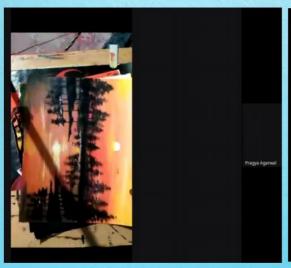




# Virtual Cultural Meet: Teacher's Day Celebration



Second year students organized online cultural event on 5th September 2020, under the banner of InfoCorp Society of IT Department. The event was also celebrated as Teacher's Day. Mainly the second year students took the lead in which Ms. Deeksha Srivastava Sang a song, Mr. Vinay Kumar presented his colorful paintings, Mr. Vansh Tyagi and Mr. Malay Dwivedi Recited poem & Ghazal. Mr. Deepak Vishwakarma, Asstt Profess -or, Department of IT, also sang a song.









On 06 September 2020, Department of Information Technology organized Alumni Expert Talk for CodeVita Qualified candidates of IT Department. Alumni of IT department Mr Aditya Varshney (2015-19), Codevita & TCS Qualified, presently working with Samsung Research Lab, guided the students for their final round of interview preparation.





On 12 September 2020, Department of Information Technology alumni Ms Srija Srivastava, working with ZS Associates, New Jersey, USA had Career Guidance Talk & Interaction with B.Tech(IT) 3rd Year & 4th Year students. After doing B.Tech (IT) from IMS Engineering College (2010-14) Ms Srija did her Master's Degree (Project Management) from University of California USA. She delivered her talk through webinar joining from New Jersey, USA. All the students & faculty members had a very fruitful interaction with her.





On 19th September 2020, Department of Information Technology organized Alumni Talk & interview Guidance for the TCS-Codevita qualified candidates. The alumni Ms Harshita Srivastava (TCS-Digital Round Qualified, 2019) guided the students.

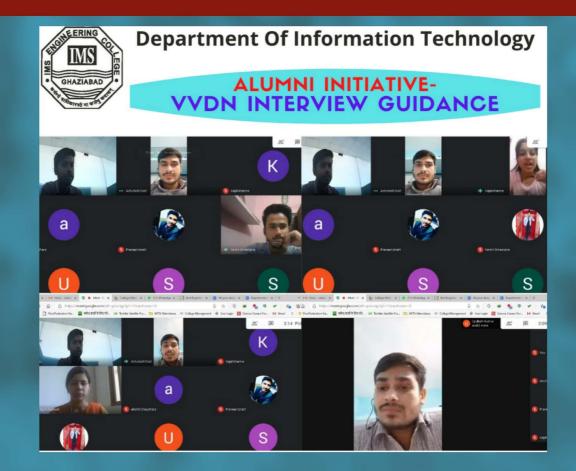






ON 24TH SEPTEMBER 2020, DEPARTMENT ORGANIZED ALUMNI GUIDANCE FOR THE FINAL YEAR STUDENTS WHO QUALIFIED VVDN WRITTEN EXAM. THE IT DEPARTMENT ALUMNI MR ASHUTOSH DIXIT (2016-2020), WORKING WITH VVDN,

**GUIDED THE STUDENTS FOR THEIR INTERVIEW ROUND.** 





ON 28TH SEPTEMBER 2020, DEPARTMENT ORGANIZED ALUMNI GUIDANCE FOR THE FINAL YEAR STUDENTS WHO QUALIFIED MOBILIZEON WRITTEN EXAM. THE IT DEPARTMENT ALUMNI MS POORNIMA RAI (2016–2020), WORKING WITH MOBILIZEON, GUIDED THE STUDENTS FOR THEIR INTERVIEW ROUND.



# "Ph.D Awarded"



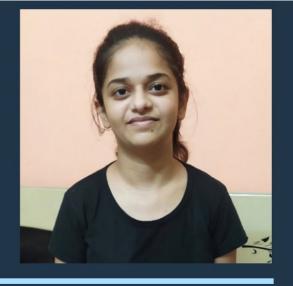
Dr. Ajay Kumar Sahu, Asstt. Professor, Department of IT, has been awarded Ph.D Degree in Computer Science and Engineering from IFTM University, Moradabad. His topic of research is "A Study of Remote User Password Authentication Schemes Using Smart Card". His final viva took place on 30th September 2020.



# STUDENTS' OPINION

# **SHRISTI SINGH**

B.TECH, IT-4th year

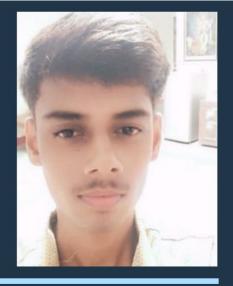


### SELF-RELIANCE

Self reliance is the new catchphrase for the Indian economy.It sounds new but is actually the earliest initiative of economic policy makers after the country attained independence. It flowed from the motto of swadeshi and boycott of colonial foreign goods that won integral part of the freedom movement. The general public thus had no problem in accepting the idea of self-reliance. It is with a sense of trepidation that one views the lastest clarion call to achieve the goal of "Atmnirbharta". The last stimulate package was even described as the "Atmanirbhar Bharat Abhivan". These pronouncement needs to be seen in the context of the gradul increases in tariffs on a wide array of products in the last budgets as well as dismissive comments made by ministers about investors like amazon even as they were announcing proposals for a billion dollar worth of investments. The theme of "Made in India" is another positive concept can only be relevant if these local industries are able to produce high quality products efficiently. While the creation of a local supply chain is a idea and should be pursued vigorously, self-reliance has to be put in the contemporary context of globlisation. Due to COVID-19 pandemic it is advantage for India to develop it in a most developed country of the world. With this lockdown it is an opportunity for many sector in India who can come forward and contribute in country's economy.

# **MALAY DWIVEDI**

B.TECH, IT-2nd year



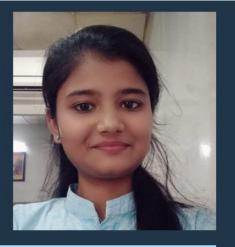
# ONLINE CLASSES

I really enjoyed the online course. I thought it was well planned and layed out, easy for me to follow. The work load(h.w. & test)was just enough, so i could finish everything with enough time, learn about the topics and not feel over loaded and rushed.

Overall I really like the online class because all lectures, assignments, and tests are straight forward. I also liked the assignments that required us to get online. Sometimes articles aside from the reading book gave me a better idea and understanding of the subject. I really enjoyed the class and the format it was presented in. For me, I learn and retain much more through an online class due to the fact you can do the course as an open book." This really makes me search for the answer and in return, I retain more information. I found it relaxing to be able to turn the work on the assignments and test at my leisure and when I had the time. I liked the fact you were very clear that more internet research may be necessary for some assignments To be honest, there is nothing that I disliked about the online classes.

# **YASHI THAKUR**

B.TECH, IT-3rd year



# How To Stop Worrying About Whether People Like You Or Not

There's nothing inherently wrong with wanting to be liked by people. In fact, everyone seeks some sort of validation from others. The problem arises when this validation starts to become a necessity. The course of your life shouldn't be dictated by the approval of others, nor should you lose sleep over their opinions. If you struggle with a need to be liked, there's a few things you can do to dispel those feelings and get back to focusing on more important matters.

### Stay Busy:

Remaining idle for extended periods of time allows our thoughts to wander to some unpleasant places, such as worrying too much about what other people think. Fortunately, our brains have a limited capacity when it comes to processing thoughts. This makes it possible to divert our attention away from ideas that don't serve our best interests and replace them with more productive ruminations.

### Practice Self-Acceptance:

To fully put an end to the constant search for external validation, you will need to find confidence through self-acceptance. When at peace with yourself, the need to be liked ceases to be a burden. Finding inner peace may sound like an unattainable goal, but it can be achieved by taking pride in your strengths and learning to forgive your weaknesses.

#### Socialize More:

This probably sounds intimidating to someone who already puts too much stock in what other people think. More social interaction means more room for worry, right? Surprisingly, this isn't always the case. Putting yourself out there can be an excellent form of exposure therapy. For the unfamiliar, exposure therapy is when someone exposes themselves to the source of their fear in hopes of desensitizing themselves from similar occurrences in the future.

#### Be Realistic:

Above all, it's imperative that you stay grounded in reality. The fact is that no matter how hard you try, there will always be people who don't like you. The world's population is far too nuanced for any one person to appease everyone. Despite sounding like a harsh truth, this can be somewhat comforting to those struggling with acceptance issues. Once you realize that someone's opinion of you is largely out of your control, a lot of the pressure you feel to be liked by them can be removed from the equation. Since the responsibility no longer rests solely on your shoulders, it becomes easier to let go of these worries. If we attempt to please everyone, we're only setting ourselves up for failure. Luckily, this way of thinking can be overcome with a little effort and some self-assurance. By having the right mindset, ignoring the critics can feel like second nature.



# UPCOMING EVENTS

# E-BOOTATHON 05

Bootathon is a combination of Bootcamp & Hackathon. We will have specialized training program for the enthusiastic Instructors and the curious student programmers. Develop a skill set and put them into practice, test them through a challenge and prove what you have learned! The winners become a trendsetter in transforming the lab education.

Date:-10 October, 2020

# AI-MASTERCLASS

Pantech Solutions Conducting free Artificial Intelligence (AI) Master Class Series. The training is to facilitate the participants to get cognizance of the concepts dealt with for substantial utilization of the same into studying, teaching, Research work, and Upgrading.

Registration Link: https://forms.gle/YHJcoQqmyZdoAhTZ9

DATE: 05-10-2020 to 04-11-2020

Time ISTE (8:00 PM to 45:00PM)



# QUESTIONS

- 1. Who invented Compact Disc?
- 2. Which day is celebrated as world Computer Literacy Day?
- 3. Who invented Java?
- 4. Longhorn was the code name of?
- 5. Who is known as the Human Computer of India?
- 6. What is mean by Liveware?
- 7. Which computer engineer got Nobel Prize for literature in 2003?
- 8. 'Weaving The Web' was written by.....
- 9. Rediff.com was founded by.....
- 10. Mows is a type of mouse for \_\_\_\_\_ people.
- 11. Expand RDBMS?
- 12. Difference engine was developed by.....
- 13. Orkut.com is now owned by ......
- 14. World's first microprocessor is .....
- 15. What is the expansion of SMS?

# ANSWERS

- 1. James T Russel
- 2. December 2
- 3. James A Gosling
- 4. Windows Vista
- 5. Shakunthala Devi
- 6. People who work with the compute
- 7. Coetzee
- 8. Tim Burners Lee
- 9. Ajith Balakrishnan and Manish
- 9. Agarwal
- 10. Physically handicapped people
- 11. Relational Data Base Management
- 11. System
- 12. Charles Babbage
- 13. Google
- 14. Intel 4004
- 15. Short Message Service

