SHRI SHANKRACHARYA INSTITUTE
OF PROFESSIONAL MANAGEMENT AND TECHNOLOGY
RAIPUR
COMPUTER SCIENCE & ENGINEERING

CYBER TRINITY

NEWSLETTER November 2018, Vol 3

CONTENTS

VISION

"To produce quality Engineers with the knowledge of latest trends and research technologies to meet the developing needs of industry and society"

MISSION

- To impart quality education in line with teaching-learning process.
- To provide a better environment to encourage and support innovative research and development.
- To develop linkage between industry-academia for overall improvement of students.

Shri Shankaracharya Institute of Professional Management and Technology is privileged as it had the opportunity to be fortuned by the hands of the people who were sanguine enough to accomplish their aims and aspirations. And this is the apt time to make our game plans resilient for the next coming years.

Even while grooving on the reap of foregoing successes we should constantly comprehend the need to exert ourselves towards innovation and development.

Many of us are dazed by our own achievements and fail to heed the winds of change . Rather, we should fasten up our seat belts to thrive on our skills and push our limits. We should develop a framework that helps to foster culture of innovation. Let us consecrate ourselves to the society and take an endeavor to spread our pristine and fresh ideas among people. I would like to opine you students to constantly seek to renovate yourselves and upgrade your knowledge so as to stay ahead of the curve.

At this juncture I am elated to congratulate all those benefactors whose contribution moulded the institution to its most beautiful form with their tireless dedication and bringing best results in past years. May Almighty shower his blessings on each one of us . I hope "Cyber Trinity " will uncover the milestones of SSIPMT in its prolific journey towards excellence.

Shri Nishant Tripathi
Chairman, SSIPMT

Program Specific Outcomes (PSO's)

PSO:1 Specify, design, develop, test and manage reliable and efficient application software systems as per user requirements.

PSO:2 Determine and optimize the performance of a given algorithm on a given platform.

PSO:3 Identify, design and develop software for intelligence systems.

Program Educational Objectives (PEO's)

PEO: 1 Specify, design, develop, test and maintain usable software systems that behave reliably and efficiently and satisfy all the requirements that customers have defined for them

PEO: 2 Develop software systems that would perform tasks related to Research, Education and Training and/or E-governance

PEO: 3 Work in a team using common tools and environment to achieve project objectives.

THE MEMORANDUMS

Editorial Board

I feel immense gratification that department of Computer Science and Engineeringhas manifested its third issue of the college newsletter "Cyber Trinity".I trust that the documentation will outline the curriculum conducted and recent progress made by the department and instill information about the newest leading technologies.

At Shri Shankracharya Institute of Professional Management and Technology, we aim to create quality engineers who can contribute towards the technological advancement of our country.

We are determined to achieve the vision of India bestowed upon four pillars by 2020 which are human development, social development, economic development and environmental development.

Dr. Alok Kumar Jain
Principal, SSIPMT

Dear students,

It is our colossal beatitude to launch CSE Department's third newsletter issue "Cyber Trinity" for the academic year 2018-19.

The objectives of the newsletter sheds light on:

a) Achievements of the students and faculty members from CSE department in curricular, co-curricular and extra-curricular activities.

b) The recent trends and scenario in the field of computer science and engineering and related areas. I congratulate all my team members for their efforts they have put on an even keel in launching this newsletter. We are very grateful to our management, chairperson, director and principal for their support and encouragement.

Dr. J.P. Patra
HoD, CSE Dept.

Blockchain Technique is the new era of technology which will give new dimensions to the technology market. Its a latest technology for protection against the threats of cybercrime and it provides a mechanism to internet users to create importance and authenticate digital information in various fields like Education, Public sector, Farmers, money Transactions, IT companies and many more.

Students can opt blockchain technology to make their minor/major project and also to undertake its certification course.

Anand Tamrakar
Asst. Prof. CSE Dept.

In the last few days our students have made us immensely proud and we congratulate them, whole heartedly, for excelling at various academic, sports and cultural events. Our efforts and energy are harnessed and chanellized by the students in the right direction. we always try to motivate them to be updated and conjure up new technologies according to the recent demands of the industry and by this we wish them all the luck for the future.

Taniya Jain
Asst. Prof. CSE Dept.

BLOCKCHAIN TECHNOLOGY

WHAT IS BLOCKCHAIN?

Block- is the authenticated entity that documents the time stamp and is encrypted. It is governed by an owner through a private key. In case, edits are introduced, all the distributed chains are updated on the real-time basis. It can be said as the most active part of the blockchain that records the previous transactions.

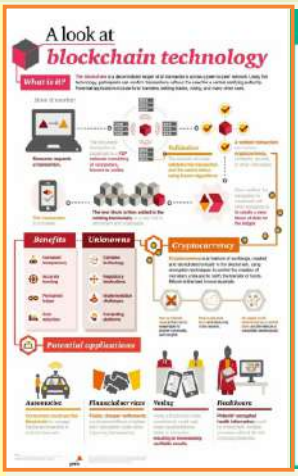
Chain- is open and distributed that can be accessed by anyone, making the transaction.

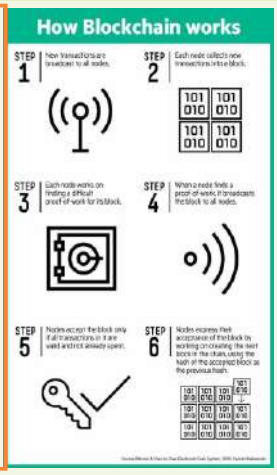
Use of Blockchain in different spheres

Healthcare: Blockchain data allows digital signatures only with the permission of several people and full compliance with keys, to regulate the availability and maintain the confidentiality of medical records.

Protection: Prevents Unauthorized access or modification of critical infrastructures, such as operating systems and network firmware and has provision for improving the confidentiality and integrity of data.

Government & Law: The Blockchain technology can improve transparency, speed up work and check corruption in governments .A smart contract digitally facilitates, verify or enforce the negotiation or performance of a contract and allow to have the performance of credible transactions without third parties.





The blockchain can be described as an incorruptible ledger.**This can be ensured through a single centralized body or decentralization of power.** A common protocol serves as a guideline for each entity that carries a copy of this information. Participants work on it independently and the consensus reached through these conclusions helps in updation of information. This forms the basis of blockchain technology.

Blockchain contains information, like a ledger and completely open to all,. This information is time-stamped which prevents it from being backdated or tampered. Data to be stored inside a block is predicated on the type of blockchain.

Each block in a blockchain points to the previous block, and the first block is known as the genesis block.

Any information once is recorded is unchangeable. Each block of a blockchain has three constituents:

- Information to be stored.
- Hash of the previous block.
- Hash of the current block.

Hash uniquely identifies a block. For each block created, its hash will be calculated and distributed to all the participants in that system. Therefore, even if a minute change occurs inside the block, the hash of the block changes, which causes the hash of the following block to change and so on, thus, mimicking a domino effect. This invalidates the change and the integrity of the blocks is preserved.

Another method to provide even more security along with the hash is known as proof of work, which slows down the creation of new blocks as tampering one block will lead to recalculation of proof of work for all the blocks.

Therefore, to successfully tamper with a block in the blockchain, one must tamper with all the blocks instead of just one, changing the proof of work for each block, the computation power currently available means that this would be nigh on impossible.

By - Ninaad Shukla (CSE 7th sem), Sourabh Makhija (IT 7th sem)

Career in Blockchain Technology

Blockchain Generalist- if you understand the basic concepts and you do not have a taechnical background, Blockchain Generalist is the role that you should be aiming at.

Smart Contract Developer- If you already are a UI developer or want to learn UI stack, Smart Contract Developer is the role that you should be aiming at.

Blockchain Developer- you understand the concepts of nodes and consensus and can build a bridge between UI and Smart Contracts. If you are good at server side programming and have good analytical skills, Blockchain Developer is the role

Blockchain Expert- If you are able to write your own network, design its rules and protocols as per the need of your company/team and have a deep understanding of programming, Blockchain, and cryptography then this is the role for you.

Student Arena Aiges of Blockchain

```
pragma solidity ^0.4.20;
//save the progam with a .sol extension
contract SSIPMTToken{
   mapping(address => unit 256)public balanceOf;
   constructor(unit256 initialSupply) public{
       balanceOf[msg.sender] = initialSupply;
   }
 function transfer(address_to, unit256_value
)public returns(bool success){
      require(balanceOf[msg.sender] >= _value);
      require(balanceOf[_to]+ _value >=
      balanceOf[_to]);
      balanceOf[msg.sender]-= _value;
      balanceOf[_to] += _value;
      return true;
    }
}
```

Potential of Blockchain Technology

"Foundational"- one that is information based, to one that is value based.

"Blockchain, or distributed ledger technology, could soon give rise to a new era of the Internet even more disruptive and transformative than the current one.

Blockchain's ability to generate unprecedented opportunities to create and trade value in society will lead to a generational shift in the Internet's evolution, from an Internet of Information to a new generation Internet of Value. "

What Skills do you need?

Polyglot software engineers
Knowledge of Java and C++

Who is Hiring?

Blockchain Startups and Consortiums: From companies providing the foundation technology, such as **Ethereum and Eris** to specialising in business applications including **Everledger**.

Large Tech firms: **IBM** and **Microsoft** support blockchain development with blockchain as a service tools built into their existing cloud portfolios.Companies such as **Intel** and **Fujitsu** have joined the open source **Hyperledger** project.

Banks and other private sector firms: **Barclays** has been particularly active in the Blockchain space, alongside **UBS**, **Santander** and **BBVA**. Worldwide Accommodation Leader such as **Airbnb**, **Visa** and **Thomson Reuters** are enquiring about blockchain specialists.

Professional Services firms: **Deloitte** acquired Blockchain startup Rubix, PwC recruited a team from Bitnet and is continuing to expand, **Capgemini** and **KPMG** has been hiring too.

Events Organized by CSE

Computer Science Association organized events this year that embraced "Crack The Code",a coding competition that provoked all the netheads to participate. The winners were awarded with cash prices. Another thrilling event that adds to our chills was the PUBG contest, PUBG being very popular among youngsters now a days, it was a major attraction for the students to participate in .Winners were awarded with medals titled "Chicken Dinner" and cash prices.

Workshops on block chain, automation and arduino were also arranged to upgrade and boost the knowledge with upcoming technologies. Students of our department are enthusiastic enough to extend and push their potentials to supervenient fests and competitions to exhibit their talents, where their victories give them valuable exposure.

Placements


Pranjal Chawda TEKSystem, TCS


Neha Sharma TEKSystem


Ali Akbar Faiz TCS


Jatinder Singh Sandhu Capgemini


Rekha Jajodia Capgemini


Anuj Jain Capgemini


Shubham Lal Shrivastav Capgemini


Ninaad Shukla Capgemini, TCS


Prerika Sanghvi Capgimini, TCS


Prachi Agrawal Capgimini


P. Aishwarya Capgemini


Shubham Khanna Capgimini,TCS, Nucleus Software


Varkha Shivhare Capgemini


Nikita Matlani Capgemini


Devashish Dewangan Nucleus Software


Diksha Gupta TCS, Nucleus Software


Supriya Sharma Capgemini


Himanshu Naidu TCS


Shreya Sarkar TCS


Apoorva Ojha TCS, Nucleus Software


Rashmi Patel TCS


Dipti Pritwani TCS


Ambuj Sahu TCS


Deepak Anant Nucleus Software


Sourabh Singh Thakur Nucleus Software


Sagar Agrawal Nucleus Software

Achievement

Event	Participant	Position
Football	Shubhanshu Markam - 5th Sem Shimeer Hablani - 5th Sem Nikhil Dhir - 5th Sem	1st
Cricket	Ayush Thakur - 5th Sem Shubham Shrivastav - 7th Sem	1st
Relay Race	Surbhi Tripathy - 3rd Sem Priyanka Sahu - 5th Sem Yogita Sahu - 5th Sem Garima Chandrakar - 7th Sem	1st
Long Jump	Priyanka Sahu - 5th Sem	1st
Table Tennis	Mini Biswas - 5th Sem	1st
Chess	Garima Chandrakar - 7th Sem	1st
Kho Kho	Shipra Kanth - 5th Sem Priyanka Sahu - 5th Sem Yogita Sahu - 5th Sem	1st
Handball	Rishita Rathore - 3rd Sem Anjali Giri - 3rd Sem Surbhi Tripathy - 3rd Sem Riya Tamrakar - 3rd Sem Nileena R - 3rd Sem Manjri Sharma - 3rd Sem Supriya Sharma - 7th Sem Varkha Shivhare - 7th Sem	1st
Group Song	Anusha Lunia - 5th Sem Mayank Chowdhury - 5th Sem Simarpreet Singh - 5th Sem Pranjal Chawda - 7th Sem Rishika Gupta - 7th Sem	1st
Solo Song	Pranjal Chawda - 5th Sem	1st
Extempore	Kuldeep Thakur - 3rd Sem	1st

Upcoming cover theme for May 2019 issue is Artificial Intelligence. Students may submit their articles in categories such as: Technical Trends, Interesting Facts, Small Technical Game. Please send your contributions by 5th March,2019.

Please note that Cyber Trinity is a Newsletter for members for large and not a journal for publishing full-fledged research papers. Therefore, we expect articles written at the level of general audience. Please send your article in MS-Word format to Editor in Chief, **Asst. Prof. Taniya Jain** in the email id **cse.newsletter@ssipmt.com** with the details of the sender(name, semester, branch).

Issued on the behalf of Computer Science Department,

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