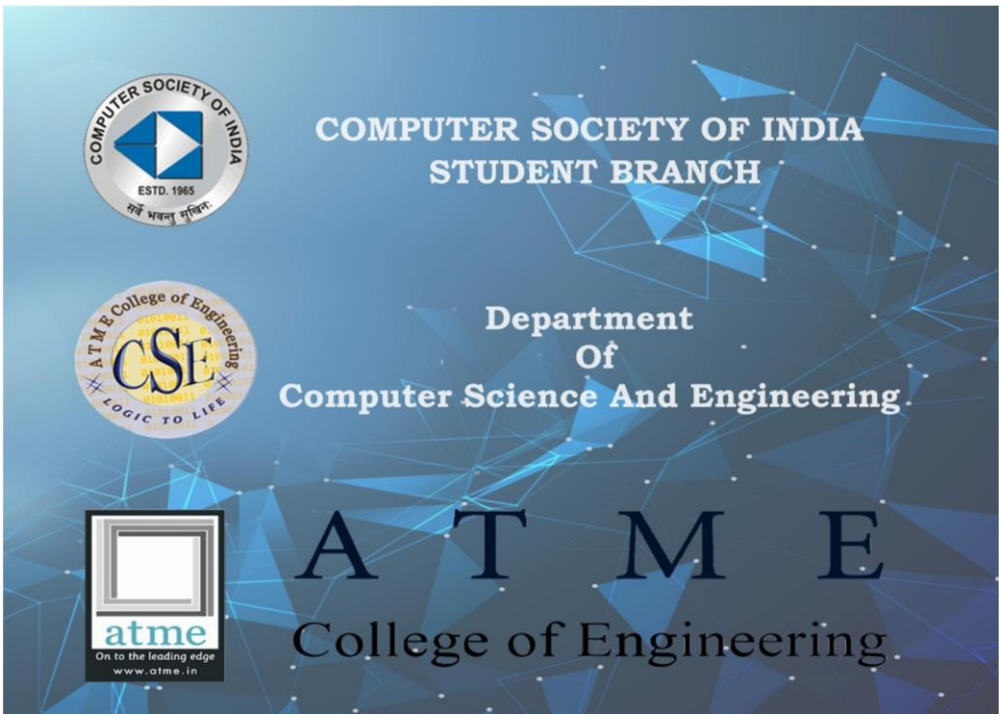


Tech Bits

CSI Newsletter

Volume 5
Issue 1
15th December 2020

In This Issue

Mr. Ratan Tata

*A member of a prominent family of Indian industrialists and philanthropists (*see *Tata family), he was educated at Cornell University, Ithaca, New York, where he earned a B.S. (1962) in architecture before returning to work in India. He gained experience in a number of Tata Group businesses and was named director in charge (1971) of one of them, the National Radio and Electronics Co. He became chairman of Tata Industries a decade later and in 1991 succeeded his uncle, J.R.D. Tata, as chairman of the Tata Group.Upon assuming leadership of the conglomerate, Tata aggressively sought to expand it, and increasingly he focused on globalizing its businesses. In 2000 the group acquired London-based Tetley Tea for $431.3 million, and in 2004 it purchased the truck-manufacturing operations of South Korea's Daewoo Motors for $102 million*

CSI Timeline 2020-2021

The Department of Computer Science and Engineering under Computer society of India Division one and Computer Society of India Student Branch had organized 'Technical Talk ' on "Amazon web services(AWS)" dated 30th October 2020.Webinar on "Unlock your Data with Data Science" through online on 20th July 2020 and Zonal level quiz Competition through online on 07th August 2020. Election for Executive members was conducted.

Student articles on recent trends in Technology

Find articles on Computer Networking, Oracle - The new face of cloud database, Amazon Web Services, Wipro submitted by our beloved CSI - SB members.

Message from the HOD

"I am very happy to know that our CSI- Student branch with more than 300 student members is bringing its ***4th edition*** *of the CSI newsletter-"Tech Bites" and also on behalf of* ***8th Anniversary of CSI****.*

Besides giving opportunities for various activities under CSI student branch, the CSI newsletter "Tech Bites" would provide the platform for the student community to bring out and enhance their writing skills and develop positive attitude in their life. I would like to congratulate and wish the very best to the students, Editorial team, CSI student counsellor and faculty members of the department in all their endeavours."

Dr. Puttegowda D
Head of the Department
Computer Science and Engineering
ATME College of Engineering

CSI Timeline 2020-2021

Good afternoon, everyone, I am Kusum I K Secretary of ATMECE CSI-SB, Mysore. I have the pleasure of introducing today's chief guest *Mr. Mohamed Minhaj, Chairmen of CSI Mysore chapter.*

He had taught at
St. Philomena's College, Mysore
International School of Information Management (ISiM)
University of Mysore, Mysore

Present visiting faculty at
Business Analytics Institute, France

Prof. Mohamed Minhaj has around 15 years of Teaching and Consulting Experience. His area of specialization is Information Management, Web Services and Business Analytics.

At SDMIMD, besides teaching courses related to Information Technology and Analytics, as Chairman of Campus Systems, he is involved in the management of IT infrastructure and services.

He has completed many consulting assignments related to Information Management, Digital Libraries, e-Learning and Web Services. He has handled corporate training programs related to IR, Data Analysis and Business Modeling with Excel and Essentials of Business Analytics.

Prior to joining SDM, he has served organizations like APTECH Limited, ECIT, St. Philomena's College and University of Mysore. He was also associated with Vidyanidhi Digital Library Project which was sponsored by Ford foundation and Microsoft. He was also the Lead Software Consultant for India - Educational Digital Library Project, undertaken by Educational Development Center which is an international non-profit organization head-quartered in US.

His research interests include Semantic Technologies and Text Analytics and is currently pursuing his Ph. D from University of Mysore in the same domain.

He has completed many courses related to Analytics, including FDP from Indian Institute of Management, Bangalore and is a visiting faculty at the Business Analytics Institute, France.

He is an active member of Computer Society of India (CSI) and is currently the Chairman of Mysore Chapter. He is also a Member of IT Panel, Confederation of Indian Industries (CII), Mysuru, and member of Analytics Society of India.

He has written various chapters in about 18 books.

He has published 1 paper in Journal and 2 papers in International Journals.
He has also presented a paper in the International Conference and 3 papers in National Conferences.
He has released 2 Newsletters on Designing and implementing library website (2010) and Engaging Library users on Social Media, is it really beneficial? (2014).

It is an honor to have you here with us Sir

Top Indian IT Companies

1.HCL Technologies Ltd

HCL Technologies Ltd was founded by Shiv Nadar (1976). Headquartered in Noida, India.

2. Infosys Ltd

Infosys Ltd was founded by N.R. Narayana Murthy (1981). Headquartered in Bangalore, Karnataka.

3. Larsen & Toubro Infotech Ltd

The company was established in the year 1997. Headquartered in Mumbai, Maharashtra.

4. MindTree Ltd

MindTree Ltd was founded by Subroto Bagchi, Ashok Soota, Namakkal Parthasarathy, Krishnakumar Natarajan (1999). Headquartered in Bengaluru, India and New Jersey, USA.

5. Mphasis Ltd

Mphasis Ltd was founded by Jerry Rao, Jeroen Tas (2000). Headquartered in Bangalore, India.

6. Oracle Financial Services Software Ltd

Oracle Financial Services Software Ltd was founded in the year 1990. It is a subsidiary of Oracle Corporation. Headquartered in Mumbai, India.

7. Quess Corp Ltd

Quess Corp Ltd was founded in the year 2007. Headquartered in Bengaluru, India. It is serving North America, Asia Pacific, Middle East.

8. Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services Ltd founded in the year 1968.It is an Indian MNC company which is a subsidiary of Tata Group. Headquartered in Mumbai, Maharashtra, India.

9. Tech Mahindra Ltd

Tech Mahindra Ltd was founded in the year 1986. Headquartered in Pune, India.

Computer Networking

By,

Mahesh Kumar H B ,

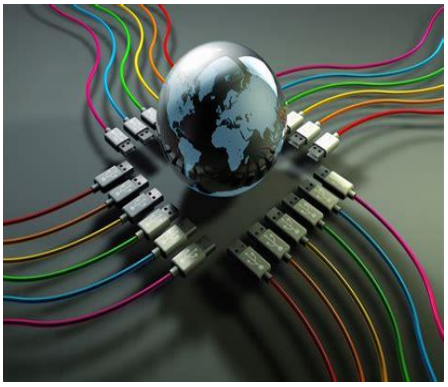
7th Sem

Source:Wikipedia

Computer networking refers to interconnected computing devices that can exchange data and share resources with each other. These networked devices use a system of rules, called communications protocols, to transmit information over physical or wireless technologies.

Nodes and links are the basic building blocks in computer networking. A network node may be data communication equipment (DCE) such as a modem, hub or, switch, or data terminal equipment (DTE) such as two or more computers and printers. A link refers to the transmission media connecting two nodes. Links may be physical, like cable wires or optical fibers, or free space used by wireless networks.

In a working computer network, nodes follow a set of rules or protocols that define how to send and receive electronic data via the links. The computer network architecture defines the design of



these physical and logical components. It provides the specifications for the network's physical components, functional organization, protocols, and procedures.

Computer networks were first created in the late 1950s for use in the military and Défense. They were initially used to transmit data over telephone lines and had limited commercial and scientific applications. With the advent of internet technologies, a computer network has become indispensable for enterprises.

Modern-day network solutions deliver more than connectivity. They are critical for the digital transformation and success of businesses today. Underlying network capabilities have become more programmable, automated, and secure.

1.Client-server architecture

In this type of computer network, nodes may be servers or clients. Server nodes provide resources like memory, processing power, or data to client nodes. Server nodes may also manage client node behaviour. Clients may communicate with each other, but they do not share resources. For example, some computer devices in enterprise networks store data and configuration settings. These devices are the servers in the network. Clients may access this data by making a request to the server machine.

2.Peer-to-peer architecture

In Peer-to-Peer (P2P) architecture, connected computers have equal powers and privileges. There is no central server for coordination. Each device in the computer network can act as either client or server. Each peer may share some of its resources, like memory and processing power, with the entire computer network. For example, some companies use P2P architecture to host memory-consuming applications, such as 3-D graphic rendering, across multiple digital devices.

Oracle – Being the new face of Cloud Database.

By,
Rahul Prasad K R,
7th Sem, CSE

Source: Innovative Blogs

What if organizations were able to shift the responsibilities of IT from maintenance tasks to higher-value mission critical assignments for business end users? To that end, what if IT organizations were able to use their skills for solving problems at the front-end of the organization

This is a new reality with autonomous technology.

Today's IT professionals need automation. According to an Oracle survey, we found a staggering 95% of IT professionals are still creating or upgrading databases manually. The workloads for DBAs are increasing with 39% of DBAs handling 50 or more databases. With Oracle autonomous, organizations can redefine how their business runs to drive real innovation and real change for their business.

Autonomous technology represents the next great leap in the evolution of enterprise IT technology. Combining the power of artificial intelligence and machine learning, autonomous technology delivers self-driving, self-securing, and self-repairing capabilities across a wide range of IT functions and applications. With Oracle Autonomous, organizations are able to run smarter, more efficiently, and more securely.

Move from Operations to Innovation

For IT professionals, autonomous technology means moving beyond the operational procedural work of keeping an IT system functioning. It enables them to use their skills and knowledge for solving more mission critical problems. Organizations will be able to consider and design new processes and practices with autonomous technologies. They can shift IT responsibilities from managing backend systems to focus on frontend applications and services that matter most to employees and customers.

As Timothy Miller, from Drop Tank, a loyalty and rewards company focused on fuel and convenience said, "Simply put, with cloud and autonomous we can focus on our business and not the backend of technology. It promises a future where we don't have to rely on an army of people. Autonomous gives us the tools to do amazing things quickly and at a low cost."

Autonomous technology represents a fundamental shift in IT - where it becomes a hub for innovation. It provides organizations with the necessary speed, and flexibility to deliver cost savings and value.

When applied for example in a database, autonomous automates database operations ensures patches are applied and the data is secured. For integration, autonomous technology simplifies integration spanning Oracle and non-Oracle apps, both on-premise and in the cloud. And when applied in a data warehouse, autonomous technology can provision a data warehouse in seconds accelerating time to innovation and time to market. And it can do all of this with minimal human intervention.

As Clark Kho, Senior Technology Architect, at Accenture said, "In today's intelligent enterprise era, having a self-driving database is a natural next step. Freeing DBAs from the basic operational nuances of running a database is of tremendous value- and from a security standpoint, the autonomous capabilities get us closer to the holy grail of being automatic, predictive and self-healing."

Autonomous drives efficiency in existing systems management, freeing up human resources and generating quick wins that can be reinvested in further implementations. With Autonomous, the IT function can become a true partner to the organization. Ultimately, autonomous technology can lead to a future where there is no discernible difference between IT and the business - they are converged.

Amazon Cloud (Web) Services

Pravin Kumar D, 7th Sem, CSE

Cloud computing is a term referred to storing and accessing data over the internet. It doesn't store any data on the hard disk of your personal computer. In cloud computing, you can access data from a remote server. The full form of AWS is Amazon Web Services. It is a platform that offers flexible, reliable, scalable, easy-to-use and, cost-effective cloud computing solutions.

AWS is a comprehensive, easy to use computing platform offered Amazon. The platform is developed with a combination of infrastructure as a service (IaaS), platform as a service (PaaS) and packaged software as a service (SaaS) offerings.

History of AWS

- 2002- AWS services launched
- 2006- Launched its cloud products
- 2012- Holds first customer event
- 2015- Reveals revenues achieved of $4.6 billion
- 2016- Surpassed $10 billon revenue target
- 2016- Release snowball and snowmobile
- 2019- Offers nearly 100 cloud services
- 2021- AWS comprises over 200 products and services

Important AWS Services

Amazon Web Services offers a wide range of different business purpose global cloud-based products. The products include storage, databases, analytics, networking, mobile, development tools, enterprise applications, with a pay-as-you-go pricing model.

AWS Compute Services

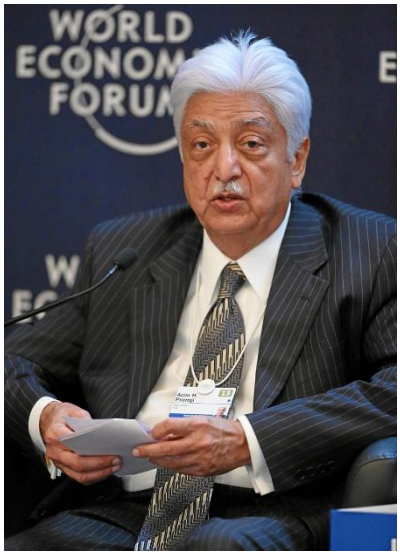
1. EC2(Elastic Compute Cloud)- EC2 is a virtual machine in the cloud on which you have OS level control. You can run this cloud server whenever you want.
2. LightSail- This cloud computing tool automatically deploys and manages the computer, storage, and networking capabilities required to run your applications.
3. Elastic Beanstalk- The tool offers automated deployment and provisioning of resources like a highly scalable production website.

Storage

1. Amazon Glacier- It is an extremely low-cost storage service. It offers secure and fast storage for data archiving and backup.
2. Amazon Elastic Block Store (EBS)- It provides block-level storage to use with Amazon EC2 instances. Amazon Elastic Block Store volumes are network-attached and remain independent from the life of an instance software.

Azim Hashim Premji -Wipro

By,
Kusmitha H D,
7th Sem, CSE



Azim Hashim Premji (born 24 July 1945) is an Indian businessman, investor, engineer, and philanthropist, who was the chairman of Wipro Limited. Premji remains a non-executive member of the board and founder chairman. He is informally known as the Czar of the Indian IT Industry. He was responsible for guiding Wipro through four decades of diversification and growth, to finally emerge as one of the global leaders in the software industry. In 2010, he was voted among the 20 most powerful men in the world by **Asia week**. He has twice been listed among the 100 most influential people by **Time magazine**, once in 2004 and more recently in 2011. For years, he has been regularly listed one among the 500 most influential Muslims. He also serves as the Chancellor of **Azim Premji University Bangalore**. Premji is awarded **Padma Vibhushan**, India's second highest civilian award, by the Government of India.

He is one of the richest people in India with an estimated net worth of US$32.8 billion according to **Bloomberg Billionaires Index**. In 2013, he agreed to give away at least half of his wealth by signing the Giving Pledge. Premji started with a $2.2 billion donation to the Azim Premji Foundation, focused on education in India. He topped the **EdelGive Hurun India Philanthropy** list for 2020. In 2019, he dropped from the 2nd position in the Forbes India Rich list to 17th position after giving away a huge amount to charity.

Achievements

- Premji has been recognised by Business Week as one of the "Greatest Entrepreneurs" for being responsible for Wipro emerging as one of the world's fastest growing companies.
- In 2000, he was conferred an honorary doctorate by the Manipal Academy of Higher Education. In 2006, Azim Premji was awarded Lakshya Business Visionary by National Institute of Industrial Engineering, Mumbai.
- In 2005, the Government of India honoured him with the title of Padma Bhushan for his outstanding work in trade and commerce.
- In 2009, he was awarded an honorary doctorate from Wesleyan University in Middletown, Connecticut for his outstanding philanthropic work. In 2015, Mysore University conferred an honorary doctorate on him.
- In 2011, he has been awarded Padma Vibhushan, the second-highest civilian award by the Government of India.
- In April 2017, India Today magazine ranked him 9th in India's 50 Most powerful people of 2017 list.
- In 2018, Premji was conferred with Chevalier de la Legion d'Honneur (Knight of the Legion of Honour) – the highest French civilian distinction by the French Government.
- In December 2019, Premji was cited by Forbes magazine as one of the "Heroes of Philanthropy list of 30 altruists" in the Asia-Pacific region.