

# DELHI TECHNICAL CAMPUS

INFORMATICA  
[2021-22 EDITION 1]

COMPUTER SCIENCE ENGINEERING  
DEPARTMENT

## INTRODUCTION

The Department of Computer Science & Engineering is an excellent centre of learning providing in-depth technical knowledge and opportunities for innovation and research with up-to-date computing facilities. The Department's mission is to advance, evolve, and enhance computer science fundamentals to build researchers and students' intellectual capital. The Department has a lively and vibrant student body and many distinguished faculties with PhD/PhD pursuing. The Department also offers several attractive national/international exposures to students in terms of Industrial Internship, Minor Project and Major Project for UG Programs. The Department is cherished and nurtured by various student clubs and committees along with research groups. These clubs offer students the chance to gain experience in their interest areas and network with their peers. Each research group holds regular meetings and hold seminars to discuss current research topics and results. These research groups are specialized in various domains like Machine Learning, Databases, Artificial Intelligence, Design and Analysis of Algorithms, Compiler Design, Web Engineering, Cryptography, Network Security and Computer Networks. The Department's faculty members have published more than 30 research papers in reputed international and national journals and presented 50 research papers in various International and National Conferences.

## MANAGEMENT

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- Mrs. Kiran Sahni (Chairperson)
- Hon. Justice Bhanwar Singh (Director General)
- Mr. Aman Sahni (Vice Chairman)
- Prof. Ranjit Varma (Director)

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- Dr. Seema Verma(HEAD OF DEPARTMENT)

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- Ms. Shalaka Tyagi, Assistant Professor
- Ms. Medhavi Pandey, Assistant Professor
- Ms. Preeti Pandey, Assistant Professor

## STUDENT EDITORS

- Rithik Nirwan
- Nayan Tuteja
- Jashn Tyagi
- Ananya Singh
- Geetika Thakran

**"TECHNOLOGY WILL NEVER REPLACE GREAT TEACHERS BUT TECHNOLOGY IN HANDS OF GREAT TEACHERS IS TRANSFORMATIONAL"**

**"Let's go invent tomorrow rather than worrying about what happened yesterday."**

*-Steve Jobs*



## **EDITORIAL SECTION: PANDEMIC FORCED COMPANIES TO TRANSFORM THE BUSINESS FOREVER**

It is a new global wireless standard after 4G networks. 5G is the 5th generation mobile network. The difference between 4G and 5G is about 10 times in density-5g networks can handle 1 million devices per square kilometre whereas 4G networks currently allow 100,000 devices only. It is designed to meet the very large growth in data and connectivity. 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.

5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra-low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users. Higher performance and improved efficiency empower new user experiences and connects new industries.

5G will drive an unprecedented amount of data and this will, in turn, drive the backend technology to support these requirements and sustain the capabilities. Telecom companies will be at the centre of this revolution with requirements for Cloud on Core.

5G, with the good high-speed connectivity, higher bandwidth and lower latency will enable new business models with a wider range of services and immersive experiences across industries such as BFSI, Retail, healthcare, Manufacturing, Automotive, Education, Media & Entertainment etc. can be offered even on the mobile handheld devices.



# Delhi Technical Campus

Affiliated to GGSIP University, New Delhi • Approved by AICTE & Council of Architecture



## Orient Program

## ORIENTATION 2021- 2022

Monday December

Time: 10.00 am to



Meeting ID: 217 400 47

Passcode: 659193

28/1, Knowledge Park-III, Greater Noi  
+91-9958114525, +91-9311983179

**Orientation Programme of First Year B.Tech (CSE, ECE, Artificial Intelligence & Machine Learning), BCA, B.Arch, BHMCT, B.Com and MBA Session 2021-2022**

The orientation program for the new academic session of 2021-2022 was organized on December 20, 2021. Students of all the branches of first year were invited for orientation program and it was organized in online mode at Delhi Technical Campus. The objective of the online orientation program was to introduce the newly admitted students about the college and to make students experience a sense of connectedness with the college working environment, its facilities and faculties members.

### HOD MESSAGE:

The twenty-first century has seen a technological revolution. Several highly commercial and widely used technologies from the early 2000s have completely vanished, and other ones have replaced them.

In the coming years, many latest technologies will emerge, particularly in the fields of computer science and engineering. These latest technologies are only going to get better in the coming time, and they may even make it into the hands of the average individual

HOD

stands for

Head Of Department





DELHI TECHNICAL CAMPUS



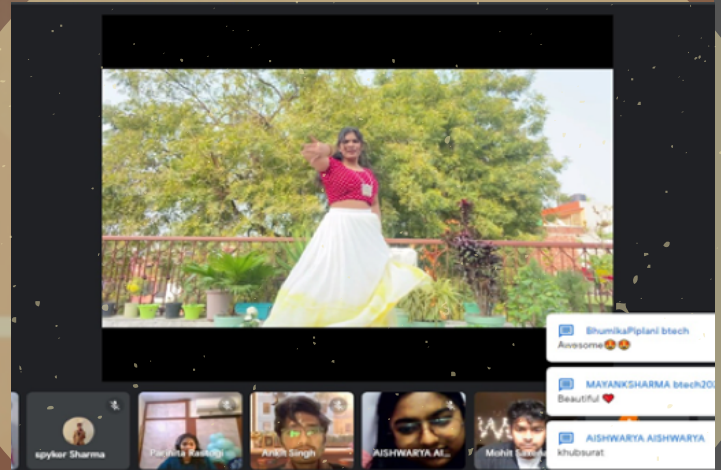
AMEYA: THE DANCE SOCIETY

EVENTS ORGANIZED

INVITES

ON THE OCCASION OF 73RD REPUBLIC DAY, CELEBRATING THE  
COLOURS AND CULTURE OF INDIA

BY  
CULTURAL SOCIETY



**REPUBLIC DAY EVENT CELEBRATION ORGANIZED BY AMEYA: THE  
DANCE SOCIETY, ON JANUARY 26, 2022**

**AMEYA: THE DANCE SOCIETY OF DELHI TECHNICAL CAMPUS ORGANIZED AN ONLINE  
EVENT 'DESH MERA RANGEELA' FOR CELEBRATING THE REPUBLIC DAY ON  
JANUARY 26, 2022.**

Amidst these tough times, as we all are facing this huge pandemic situation it has been a challenge for all to keep up the fire of motivation in our souls. Even if we all are somehow stuck at our homes, but that won't stop us from celebrating and enjoying such a pride full day of our country. The event 'DESH MERA RANGEELA' gave an opportunity to dance lovers to show their talent together with the feelings of patriotism and the viewers to experience the taste of republic day even at their homes. We received beautiful and graceful dance videos from a lot of students and even the core committee members presented the dance video in the event, which were uploaded on the Instagram page of Ameya dance society after the event. The event was hosted by Kanika Sharma, event coordinator and Gaurangi Goel, treasurer of the ameya society. The event was a big hit, and we received an amazing response.

We are proud to announce that we were able to spark the joy of happiness along with the feeling of patriotism in many souls through this cheerful event, 'JAI HIND'.



# GDSC-DTC MAKES STUDENTS CAREER-READY.

Google Developer Student Clubs are university based community groups for students interested in Google developer technologies. Students from all undergraduate or graduate programs with an interest in growing as a developer are welcomed. After an interview a GDSC lead is selected by Google to start a club in their campus. By joining a GDSC, students grow their knowledge in a peer-to-peer learning environment and build solutions for local businesses and their community.

WhatsApp group



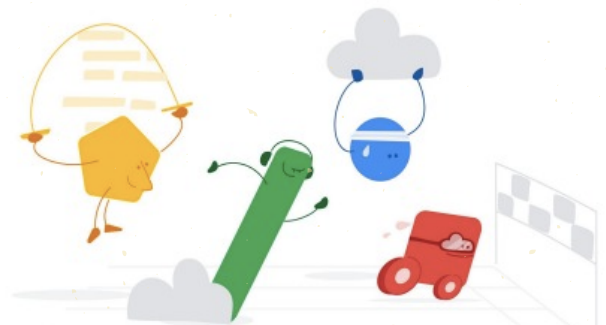
## 30 Days of Google Cloud Program

Prepare yourself for a cloud-first world

Learn about cloud computing and Data/ML techniques with our two tracks spread over a month. Learn, upgrade, and explore cloud opportunities to join the bandwagon of cloud experts.

**Get a chance to win exciting Google Cloud Goodies and digital badges from Google.**

To learn, Enrol in the program here - [bit.ly/gccc-site](https://bit.ly/gccc-site)



### \*30 Days of Google Cloud Platform\*

Our club GDSC-DTC successfully organised a campaign on Cloud Computing called as "30 Days of Google Cloud". This event was open for all and the objective was to help students learn about cloud technology that too free of cost. We witnessed a very diverse participation among students. From DTC students from second, third, and fourth year of B.Tech, and BCA showed their interest towards cloud computing. Students from other colleges like Jamia Milia Islamia, VIT (Vellore), and few colleges of DU participated in this campaign through our club. Few of our alumni and working professionals found a spot for themselves in our training sessions and the self paced course. This helped them in enhancing their career. The campaign was one month long and took place in the month of October. Due to pandemic all the training sessions took place in online mode. Our campaign had training sessions as well as a self paced course which was to be completed in one month and on successfully completing it students received certificate from Google and Goodies like Bag, T-shirts, Water Bottle as a token of appreciation. This campaign was facilitated by our club Lead- Chaitanya Chawla, third year B.Tech student.

This event marks the beginning of our GDSC-DTC journey.

# ANDROID STUDY JAM 2021

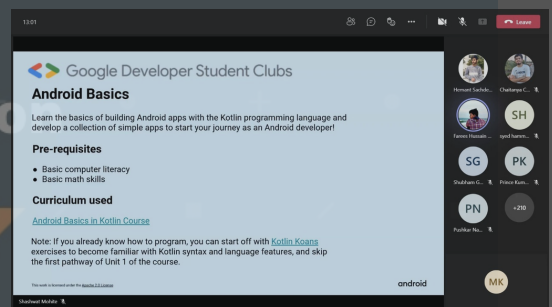
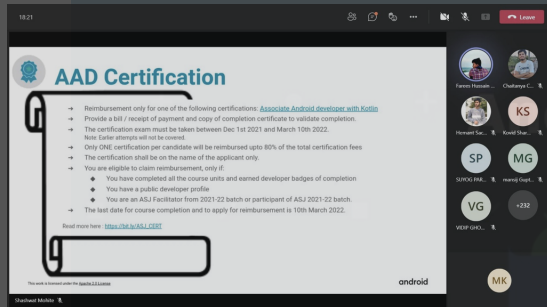


Google Developer Student Club  
Delhi Technical Campus, Greater Noida



## Android Study Jams

Learn to build  
Android Applications



Android Study Jams are community events where developers come together to learn, create, and collaborate. Participants followed guided code-labs designed to improve their development skills.

Our first session took place on 1st December 2021 in which program was introduced and students got to know about this opportunity to learn how to build Android apps in the Kotlin programming language, using the curriculum provided by Google. During this campaign, Facilitator provided an Android Basics in Kotlin course which was tracked by him from students' Google Developer profiles, after completing the course students had to develop and submit an android application either in a team or individually that solved a real life problem.

Students learnt about Android Fundamentals in a way that blends theory and practice to help them build great apps the right way, the best practices of mobile application development and so on. For second session that took place on 6th December 2021, GDSC-DTC collaborated with the other 7 colleges GDSC. The session was about Gradle building in Android Application Development. The session was hosted by our lead Chaitanya Chawla and other college facilitators who taught the attendees these core concepts. We witnessed a highly enthusiastic audience of 700 students from all over India.

The third session that took place on 11th December 2021 was all about making a career as an Android Development expert. Mr Hardik Srivastava was the guest speaker for this session of Android Study Jams. He covered some fundamental concepts and shared his journey of becoming a full-time Android Developer. He discussed topics like RecyclerView and gave some helpful tips.

From DTC, there were more than 200 students participated and more than 15 android applications were developed on Android Studio using Kotlin and submitted to Google.

# FACULTY PUBLICATIONS & ACHIEVEMENTS @ CSE



PS

Dr. Pushpa Singh was invited to serve as a session chair "Impact of AI & IoT in Healthcare Industry". She also got 8 papers published in international journals and conference and have got 1 patent.



NS

Ms. Nidhi Sharma have published a book chapter on Blockchain Architecture And Policy For Transforming Healthcare. She also published 2 papers in International Journal and Conferences. She enrolled herself for the PhD program 2021 in a reputed university.



MK

Ms. Megha Kumar has published 1 paper with the students in international journals and conferences and have published a book chapter on Applications of Artificial Intelligence, Digital Marketing.



UJ

Ms. Upasna Joshi is an Oracle Certified Trainer and has published 3 papers. She has also written a book Chapter on The future of AI, IoT, Big Data and Block chain Technology in Healthcare Industry.



VM

Mr. Vivek Misra got himself enrolled in Ph.d program 2021 in a reputed university.



MP

Ms. Medhavi Pandey have published a book chapter on Blockchain Architecture And Policy For Transforming Healthcare. She also got 1 paper published in International Journal and Conferences and have attended many FDP's in 2021.



NS

Mr. Nitesh Singh Bhati has published 1 paper in reputed journals and got best paper award in 2021. He also got book chapter published on Federated Machine Learning with Data Mining in Healthcare and attended FDP's from AICTE, NITTTR & ICT.



# STUDENT ACHIEVEMENTS @CSE

ACHIEVEMENTS ARE THE BUILDING BLOCKS THAT ENABLE SOMEONE TO CONSTRUCT A SENSE OF THEMSELVES AS A SUCCESS. SOME OF THE TECHNICAL ACHIEVEMENTS OF 2021 ARE STATED HERE:



Anand Sinhna and Sarthak Duggal represented our college and won Streamr Data Challenge, Global Level Hackathon.

Harsh Pandey won a technical event: Just pay hiring challenge in the current semester.



Pankaj Kumar was a winner at ETHODYSSEY Hackathon and Technovation Hackathon-3.



Chaitanya Chawla got certification from Gurugram Police in cyber security Summer Internship.



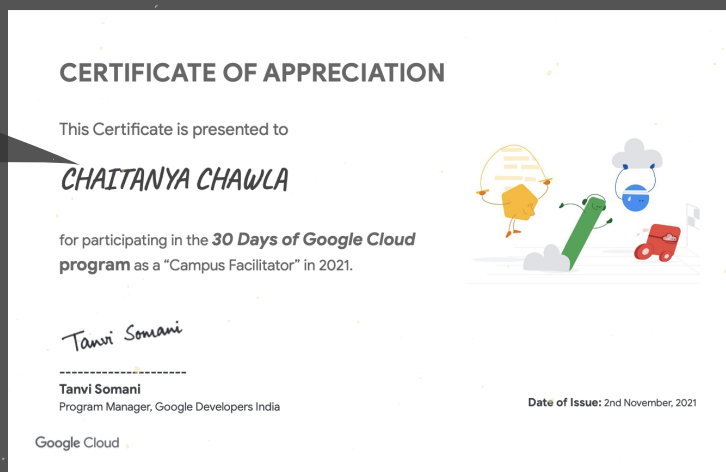
Ravi Tyagi got certification from CISCO in cyber security.

Madan kumar shah won technical competition Nuralhack 2021 S-5 at Virtusa.



Gaurav Kushwaha complete her training in Javascript and got certified by linkedIn.

Chaitanya Chawla got certification of Appreciation for participating in the "30 days of Google Cloud program"



An illustration at the top of the page shows a large hand holding a magnifying glass. The magnifying glass is focused on a woman in the center of a group of seven business professionals (four men and three women) standing in a line. The woman in the center has her arms raised in a celebratory gesture. The background is a solid blue color with a subtle pattern of small white dots.

# PLACEMENT DRIVES

Placement drives organized by big giants of Computer Science such as Infosys, HCL, Cognizant, TCS, Wipro, Deloitte and many more. Approx. 70% of our students have already started working with these big brands. Students actively participate in hackathon, conferences, research activity and have brought many laurels to the department. They have also exhibited their leadership skills by organizing various technical and non-technical events on the campus.

In the recent on-campus and off-campus drives conducted by various companies, our students have performed exceptionally well. Our students participated in Placement training (technical, aptitude, logical reasoning, soft skills and GD etc.,) and our institution is autonomous, we have the leverage to offer placement-oriented courses in addition to academics. We offer weekly Soft Skill training course starting from the third year to final year. Some of the latest placements highlights of CSE Department are :



# CSE PLACED STUDENTS DETAILS 2018-2022

S.NO	Name of the student	Company name	Designation
1	Awwab Sidqui	Planet Spark	Business Development Trainee
2	Nitish Kumar Jha	DXC	Associate Professional
3	Anand Sinha	DXC	Associate Professional
4	Aditya Chauhan	DXC	Associate Professional
5	Mayank Sharma	DXC	Associate Professional
6	Vaibhav Aggarwal	DWAO	Analyst Trainee
7	Ayushmaan Awasthi	DWAO	Analyst Trainee
8	Sharvee Sirohi	DWAO	Analyst Trainee
9	Muskan	Cognizant	Analyst Trainee
10	Vinay Kasna	Pepcoding	HR
11	Kritika Jain	Credx Technology	Analyst
12	Awwab Siddiqui	Credx Technology	Analyst
13	Sachin Sharma	Zoxima	Graduate Trainee
14	Saumya Vats	Zoxima	Graduate Trainee
15	Bhavya Ratra	Zoxima	Graduate Trainee
16	Sourabh Singh	Bureau Veritas consumer products services India pvt.ltd	Office Assistant
17	Muskan Choudhary	TCS	Assistant System Engineer
18	Muskan Choudhary	Cognizant	Programmer Analyst
19	Muskan Choudhary	Capgemini	Analyst
20	Shubham Singh	TCS	Assistant System Engineer
21	Kritika jain	Upgrad	Trainee

22	Kritika jain	Teksun	Trainee
23	Nikhil Mishra	Wipro	Graduate Trainee
24	Dilip Singh Dangwal	Wipro	Graduate Trainee
25	Anubhav Bhansal	Wipro	Graduate Trainee
26	Anand Sinha	Wipro	Graduate Trainee
27	Sarthak Duggal	Wipro	Graduate Trainee
28	Md Arif	Wipro	Graduate Trainee
29	Piyush Mishra	Wipro	Graduate Trainee
30	Priyanka Jain	Wipro	Graduate Trainee
31	Vibhor Aggarwal	Wipro	Graduate Trainee
32	Saumya Vats	Wipro	Graduate Trainee
33	Vipul Dev	Wipro	Graduate Trainee
34	Muskan Choudhary	Wipro	Graduate Trainee
35	Saumya Vats	TCS	Graduate Trainee
36	Sadanad	Mireka	Graduate Trainee
37	Vibhor Aggarwal	HCL	Graduate Trainee
38	Ashish Kumar	HCL	Graduate Trainee
39	Pranjal Tiwari	HCL	Graduate Trainee
40	Vidhi Maheshwari	HCL	Graduate Trainee
41	Kritika Jain	HCL	Graduate Trainee
42	Vaibhav Verma	Decimal	Graduate Engineer
43	Jyota Saha	Decimal	Graduate Engineer
44	Nisha Mehra	Decimal	Graduate Engineer
45	Shubham Singh	Decimal	Graduate Engineer
46	Vidhi Maheshwari	Perceptivi	Sales Executive

47	Naman Jain	HyperVerge	Intern
48	Sarthak Duggal	1st Main	Full stack Engineer
49	Gaurav Khushwaha	Blue stacks	as Member Technical Staff,
50	Pranjal Tiwai	TCS	Assistant System Engineer
51	Aditya Chauhan	TCS	Assistant System Engineer
52	Tanishq Goyal	TCS	Assistant System Engineer
53	Nisha Mehra	TCS	Assistant System Engineer
54	Piyush Mishra	Pentagon Space Pvt Ltd	Java Full stack
55	Bhumika Prasad	Pentagon Space Pvt Ltd	Java Full stack
56	Kritika Singh	Byju's	Academic Specialist
57	Sadanad	Symphony	Associate Data Analyst
58	Sadanad	Merkle	Associate Data Analyst
59	Jyota Saha	Trueminds	Software Devolper
60	Prakhar Katiyar	TCS	Assistant System Engineer
61	Tanishq Sharma	Hexaware	Trainee
62	Tanishq Sharma	OutLeap	Sales Executive
63	Sachin Sharma	TCS	Assistant System Engineer
64	Vivek Kumar	Coding Ninja	TA
64	Vivek Kumar Gaur	Yojak	Intern
65	Abhishek Kumar	Delhivery	Intern
66	Shrey Jain	Naggaro	Software Devolper
67	Rinkaj Solanki	Naggaro	Software Devolper
68	Vaibhav Verma	Naggaro	Software Devolper
69	Gajendra Singh	cloudnine	Internship
70	Harshit Srivastava	cloudnine	Internship
71	Himani Prajapati	iFortis	Intern



72	Bhumika Prasad	QSpiders	Intern-Trainee
73	Prachi Verma	QSpiders	Intern-Trainee
74	Himanshi Singh	QSpiders	Intern-Trainee
75	Himanshi Yadav	QSpiders	Intern-Trainee
76	Piyush Mishra	QSpiders	Intern-Trainee
77	Ashish Kumar	QSpiders	Intern-Trainee
78	Ashish Kumar	Mothersons	Graduate Engineer
79	Shashank dhoundiyal	Value First	Engineering-Management
80	Md. Shehreyar Arif	Genpact	Software Engineer
81	Md. Shehreyar Arif	Oneit	Intern
82	Lakshya Gola	Ennoble IP	Trainee
83	Akanksha Srivastava	Ennoble IP	Trainee
84	Prachi Verma	Gyansys	Graduate Engineer
85	Aman Ahmed	Gyansys	Graduate Engineer
86	Himanshu Maithani	TCS	Assistant System Engineer
87	Anshul Raj	TCS	Assistant System Engineer



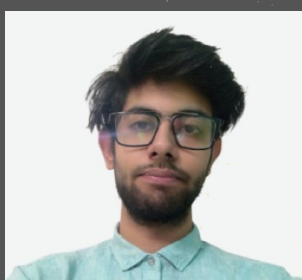
**Madan Kumar Shah**



**Gaurav Kushwaha**



**Harsh Pandey**



**Sarthak Duggal**



**Anand Sinha**

# STUDENT SPEAK @CSE

by Department of Computer Science & Engineering



## HAPPINESS

Happiness is subjective. There is no one way in which the term can be defined. For different people, Happiness holds different connotations. For some, it implies a state of mind; for others, it might mean a standard of lifestyle. Each human being is an independent, free-thinking individual. Everyone has an outlook on life that is different from the other.

Economic theory endorsed the view that money makes you happier. Therefore, those with higher income are happier than those with less. Consequently, one can improve its life satisfaction by getting more money. Moreover, if public policy measures aim to increase the society income as a whole, then, there will be an increase in wellbeing. The social factors deeply affect people's wellbeing and happiness. The factors that can be considered as sources of happiness and show the quality of life are: health, education, unemployment and marital status.

Since long decades, many analyses have presented the interaction between health and happiness. A good health will make people feel more cheerful and cause a greater contentment in their daily life. However, having a bad physical or mental health leads to more restrictions in people's daily activities and causes a pessimistic view of life. Emotional health is also one of the strongest factors of happiness and welfare. Therefore, developing the ability to cope with feelings of anxiety and depression is crucial.



-NAMAN JAIN (B.TECH CSE)

# CRYPTOCURRENCY

A cryptocurrency is a digital currency that is created and managed through the use of advanced encryption techniques known as cryptography. Cryptocurrency made the leap from being an academic concept to (virtual) reality with the creation of Bitcoin in 2009. While Bitcoin attracted a growing following in subsequent years, it captured significant investor and media attention in April 2013 when it peaked at a record \$266 per bitcoin after surging 10-fold in the preceding two months. Bitcoin sported a market value of over \$2 billion at its peak, but a 50% plunge shortly thereafter sparked a raging debate about the future of cryptocurrencies in general and Bitcoin in particular.

## The Future of Cryptocurrency

Some economic analysts predict a big change in crypto is forthcoming as institutional money enters the market. Moreover, there is the possibility that crypto will be floated on the Nasdaq, which would further add credibility to blockchain and its uses as an alternative to conventional currencies. Some predict that all that crypto needs is a verified exchange traded fund (ETF). An ETF would definitely make it easier for people to invest in Bitcoin.

Bitcoin is a decentralized currency that uses peer-to-peer technology, which enables all functions such as currency issuance, transaction processing and verification to be carried out collectively by the network. While this decentralization renders Bitcoin free from government manipulation or interference, the flipside is that there is no central authority to ensure that things run smoothly or to back the value of a Bitcoin. Bitcoins are created digitally through a "mining" process that requires powerful computers to solve complex algorithms and crunch numbers. They are currently created at the rate of 25 Bitcoins every 10 minutes and will be capped at 21 million, a level that is expected to be reached in 2140. These characteristics make Bitcoin fundamentally different from a fiat currency, which is backed by the full faith and credit of its government. Despite Bitcoin's recent issues, its success since its 2009 launch has inspired the creation of alternative cryptocurrencies such as Ethereum, Litecoin, and Ripple. A cryptocurrency that aspires to become part of the mainstream financial system would have to satisfy very divergent criteria. While that possibility looks remote, there is little doubt that Bitcoin's success or failure in dealing with the challenges it faces may determine the fortunes of other cryptocurrencies in the years ahead.



-Vibhor Agarwal (B.Tech CSE)