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DEPARTMENT OF
COMPUTER SCIENCE(UG)

Cyber crewS association
IT UNLIMITED MAGAZINE

CyberCrewS

A BIMONTHLY BONANZA

IT Unlimited

AUGUST-SEPTEMBER 2020

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🌐 www.kasc.ac.in

CONTENT

THOUGHTS OF THE ISSUE

REMEMBER

FREE ADVICE
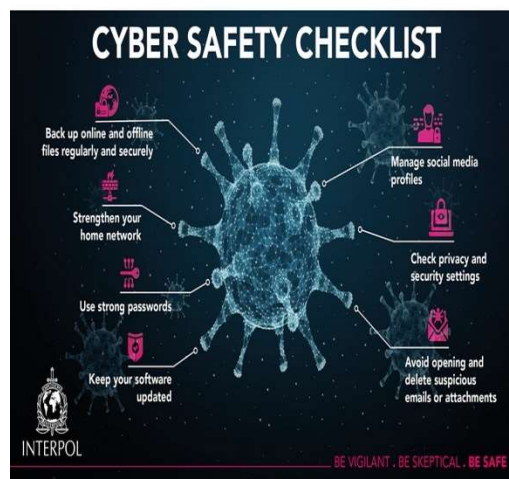
JUST FOR FUN
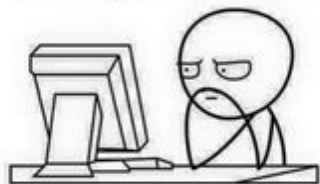
MESSAGE

3D Printing And Titanium Powder
-A Life changing combination

The advancements of modern day technology within the medical field are facinating. Still, the lack of individualization and on demand availability may cause negative side-effects for people in need of implants, prostheses or other medical devices. 3D printing combined with titanium, the metal of the future. Life-threatening ,vertebral damages, chronic osteopathic conditions and negative side-effects from medical treatment can all cause irreparable damage.

"Titanium is one of few metals accepted by the human body"

Medical implant technology had developed vastly over the years, and one technology is set to transform the way we treat people. The medical implant developer requires a manufacturing technology that delivers speeds individualization ad the ability to produce tailor made ad complex designs. 3D printing, paired with materials like titanium, demonstrates its potential as the medical industry's manufacturing technology of choice for life-changing solutions.

Titanium has excellent properties and is one of few metals accepted by the human body, while 3D printing can rapidly deliver results for an industry where acting quickly could be the difference between life and death, says

Dr. Harald Kissel, R&D manager at Sandvik Additive Manufacturing.

"3D printing vital for customized design"

Sandvik has leading capabilities across the entire additive manufacturing value chain an offers the widest alloy program on the market for 3D printing. The company has recently inaugurated one of the world's most cutting edge titanium powder plants in Sweden. Within the walls of the highly automated plant, well-renowned Osprey titanium powders are produced certified for use in the most advanced medical applications.

ONLY 4% OF ARAB WOMEN ACTUALLY MAKE USE OF AN INTERNET.

In addition to titanium's material benefits, additive manufacturing can help overcome some of the challenges when producing medical implants and prosthetics. Typically, thee process of getting a prosthesis involves several visits to create the device the fits the person and their needs. As the result, it can take a painstakingly long time.

"If a patient has a serious accident, one that destroys areas such as the skull or spine beyond repair, there is simply no time to ensure the reconstructive device fits correctly instead people are given solutions that work, but aren't tailor-made exactly to their bodies," Harald Kissel explains.

"Long waiting times and a lack of customization can really impact now a patient feels,"

Using computer tomography makes it possible to tailor-made the medical device directly form an individual's anatomical data. These customized designs cannot be produced using any other manufacturing method than additive manufacturing. Patients receive a device with a perfect, fit and in less time-3D printed in a high-performing, light weight material.

Ground-breaking research project:

Another innovator within the medical sector is OssDsign-a Swedish medtech company dedicated to creating cranial implants for improved healing of bone defects. They provide neurosurgeons and reconstructive plastic surgeons around the world with an expanding range of innovative implant solutions, in part made from a 3D printed titanium mesh, for improved outcome.

Sandvik's powder plant in Sweden has received the ISO 13485:2016 quality certification for the production of titanium powder for use in medical applications.

Bring able to combine additive manufacturing of a reinforcing structures with our own proprietary ceramic material is really defines OssDsign.

paisabazaar.com develops Digital Stack with Microsoft Azure

Paisabazaar.com has developed 'Paisa bazaar' – a digital lending solution using Microsoft Azure technologies and Azure AI to optimize loan disbursals and credit card insurance. Built on the Azure platform, the Stack is integrated with Paisa bazaar's partner banks and NBFCs to enable consumers to access credit products through end-to-end presence-less and contactless processes. In addition to help consumers stay safe, the Stack is also enabling banks and non-banking financial corporation's (NBFCs) to disburse unsecured loans in a presence-less, completely digital manner, within 3 to 5 hours as compared to 3 to 7 days earlier. Traditionally, a loan application requires in-person meetings between the applicant and back representative to fill up forms, collection of supporting documents and verification of identity. This is followed by an additional manual verification by bank officials before a loan is granted or declined, and a final in-person signing of the agreement. During the COVID-19 lockdowns, there was a breakdown in these steps and processes. With the launch of the Digital Stack, the process has been restored digitally and the time required for loan disbursal been significantly reduced.

According to Mukesh Sharma, Chief Technology Officer, Paisabazaar.com, "The Stack is actually a tectonic shift in the industry. Most large lenders and Fin techs were unprepared due to the lack of digital processes and infrastructure. We all had to wake up to a new reality and adapt to it. Everybody was impacted and our focus was to ensure that consumers could have access to the loans they needed, through completely paperless and presence-less processes.

GOVT OFFERS 2GB DATA ON DAILY BASIS TO ALL GOVERNMENT AND GOVERNMENT AIDED COLLEGE STUDENTS FROM JANUARY TO APRIL.

We recognized the potential of AI and Cognitive Services to make end-to-end digital loan disbursals a reality with our Digital Stack. As the market leader with partnerships with most large banks and new-age lenders - and a culture of innovation since inception - we are well placed to accelerate this critical shift towards the much-needed digitization of the entire ecosystem."

To ensure continuity and minimize difficulties for customers, the start-up embraced a culture of innovation, which according to a study by IDC commission by Microsoft, identifies the synergy between technology, process, data, and people, that allows organizations to drive sustained innovation. Sharma also adds that the lockdown accelerated the process," We were trying to create this stack before the pandemic hit us. We wanted to create paperless digital programs, but things were not moving because the industry was not ready. But when the lockdown happened, we were the first to launch this digital stack."

The Paisa bazaar Stack is providing flexibility, scalability, security, and efficiencies to its lending partners. End users can access credit much quicker, from the comfort of their homes, with zero physical interaction. Each physical step in the lending process has now been built digitally:

KYC Verification – the Digital KYC Module in the Paisabazaar Stack includes offline KYC verification(O-KYC) and Video KYC that uses Azure Cognitive Services. Applicants can verify their identity and also their location and liveliness—ensuring they were real people and not bots. Income & Employment Validation – The Stack accelerates income validation and employment verification of consumers. An applicant's bank statements are analyzed digitally using AI to determine his/ her financial health and provide results to Paisabazaar's lending partners, which enables quicker decision-making.
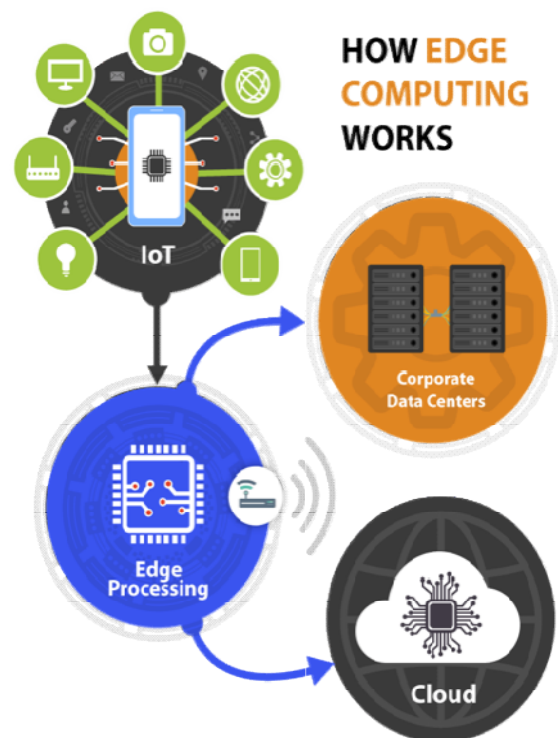
EDGE COMPUTING

Edge computing is a distributed computing paradigm that brings computation and data storage closer to the location where it is needed, to improve response times and save bandwidth.

The origins of edge computing lie in content delivery networks that were created in the late 1990s to serve web and video content from edge servers that were deployed close to users. In the early 2000s, these networks evolved to host applications and application components at the edge servers, resulting in the first commercial edge computing services that hosted applications such as dealer locators, shopping carts, real-time data aggregators, and ad insertion engines.

Modern edge computing significantly extends this approach through virtualization technology that makes it easier to deploy and run a wider range of applications on the edge servers. Edge computing brings analytical computational resources close to the end users and therefore helps to speed up the communication speed. A well designed edge platform would significantly outperform a traditional cloud-based system. Some applications rely on short response times making edge computing a significantly more feasible option than cloud computing. Examples are applications involving human perception such as facial recognition, which typically takes a human between 370-620ms to perform. Edge computing is more likely to be able to mimic the same perception speed as humans, which is useful in applications such as augmented reality where the headset should preferably recognize who a person is at the same time as the wearer does.

HOW EDGE COMPUTING WORKS

Advantages Of Using Edge Computing

Cost-effective Data Processing Solution: When you think to develop IoT product, the cost is always the concern due to its network bandwidth, data storage, and

WHATSAPP'S RECLAIMED ITS PRIVACY POLICY AFTER SEVERE OPPOSITION FROM THE PUBLIC.

computational power. But, edge computing can lower the IT cost by processing and analyzing the important data locally. When data is stored and processed at the edge, you don't need more cloud storage. As smaller operations are involved and less data management expenses of the local devices, it will reduce the data transaction costs.
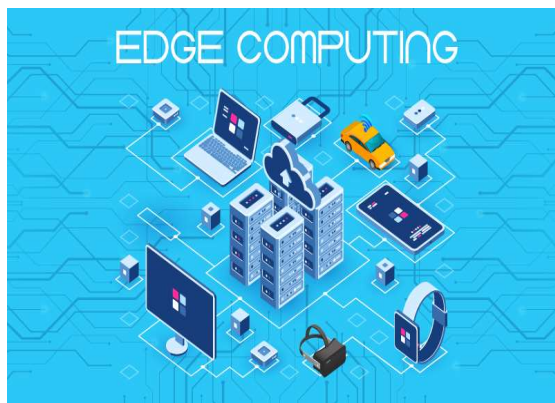
Security At The Highest Level

When the number of devices is connected, it increases the chance of an overall attack on the networks. Traditional cloud computing is centralized so it is vulnerable to DDoS attacks and power outages. But, edge computing distributes processing, storage across device and data centers which make it difficult for any single disruption to take down the networks. Moreover, edge computing filters out sensitive information and transfers only non-sensitive data for further processing to adhere to strict security and compliance. As there are fewer data intercepted during transit, it is easier to implement security protocols.

Edge computing is more of a complement to cloud computing; it can't replace the cloud computing because there will always be the need for central processing. It needs a cloud to configure, deploy and manage IoT devices for analyzing large datasets from different data sources. It makes a sense to perform IoT analysis at the edge when instant action is needed and for faster data processing, but the data will likely need to be collected and centrally stored. Ultimately cloud computing will remain an integral part of any edge computing environment.

Due to the proximity of the analytical resources to the end users, sophisticated analytical tools and Artificial Intelligence tools can run on the edge of the system. This placement at the edge helps to increase operational efficiency and contributes many advantages to the system. Additionally, the usage of edge computing as an intermediate stage between client devices and the wider internet results in efficiency savings that can be demonstrated in the following example: A client device requires computationally intensive processing on video files to be performed on external servers. By using servers located on a local edge network to perform those computations, the video files only need to be transmitted in the local network. Avoiding transmission over the internet results in significant bandwidth savings and therefore increases efficiency.

Kaspersky appoints Rohit Sood as Biz manager for govt segment, smart cities.

Cyber security company Kaspersky on Saturday announced to appoint Rohit Sood as its Business Manager for the government and smart cities verticals in India.

According to the company, the growing number of complex threats targeted at the government institutions and personnel has made cyber defence an important move for India.

The need and demand for cybersecurity in the country today is more than ever witnessed, it said in a statement.

Sood will report to Dipesh Kaura, General Manager, Kaspersky (South Asia) and will be based in Delhi.

"My main focus will be to attract new business from the government sector and smart cities and create a strong partnership/association between Kaspersky and our customers," Sood said.

The government bodies and institutions have become a popular target for APT groups targeting them with ransomware, state sponsored attacks, DDoS attacks, and zero-day attacks, to name a few. In his new role, Sood will focus on the needs of the government sector, aiding it in deploying the accurate security solutions.

"With the current situation where the need and demand for cybersecurity by companies and government institutions has massively increased, we aim to achieve cybersecurity awareness among the people and organisations," said Kaura.

SPECTRUM AUCTION: AIRTEL, RELIANCE, JIO MAY SPEND MORE ON AIRWAYS.

"My main focus will be to attract new business from the government sector and smart cities and create a strong partnership/association between Kaspersky and our customers," Sood said.

Kaspersky, the world's largest privately held vendor of endpoint cybersecurity solutions, has announced the appointment of Rohit Sood as its Business Manager for the government and smart cities verticals in India.

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Commenting on the appointment, Rohit Sood, said, "My main focus will be to attract new business from

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Global cyber security firm Kaspersky on Saturday announced the appointment of Rohit Sood as its Business Manager for the government segment and smart cities for India region.

The new hiring is a part of Kaspersky's strategy to strengthen its hold over the government sector in the country by trying to get new business from the sector, the company said in a statement

WhatsApp Update

WhatsApp

WhatsApp Messenger, or simply WhatsApp, is an American freeware, cross-platform messaging and Voice over IP service owned by Facebook, Inc. It allows users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other media.

There are many reasons why WhatsApp, an instant messaging platform, is popular worldwide. One of these reasons being that the app is continuously working towards new WhatsApp updates for users. Speaking of which, you'll soon get to see these features that will ramp up your user experience on the app.

WhatsApp Pay Feature

For long the social messaging app was working towards a payment feature, called 'Pay' on its platform. The feature has made its way to the app, but currently, it is available to selected WhatsApp beta users. With Whatsapp Pay feature, users can send money to their contacts via UPI (Unified Payments Interface) without actually leaving the app. WhatsApp will make its payment mode available to all users very soon.

Always Mute

Most of us have WhatsApp chats that we wish we could mute forever. To that end, the instant messaging platform recently rolled out the 'Always Mute' option for its beta users on Android and iOS that will let users mute chat indefinitely. The option replaces "1 year" with 'Always Mute' when muting a chat. The feature was first spotted two months back in Android beta 2.20.197.3 update. Currently, if you want to mute a chat, you can do so for up to a year, but with the new feature, you can put the chats on mute permanently!

Redesigned Storage Usage Section

One of the features on WhatsApp that's good to keep tabs on from time to time is the storage usage section that lets you know the amount of storage you've used. And a newly designed Storage Usage section was recently spotted in the Android Beta version numbered v2.20.201.9. The new UI

improvement offers more visual cues to make the job of managing storage easier than before.

Expiring Media

Another feature that's expected to arrive soon on WhatsApp is the 'expiring media' feature which is basically an extended version of the 'expiring messages' feature. So when a user sends an 'expiring' media message' - meaning a message with images, videos, or GIFs, the media will instantly get deleted in the recipient's phone once he/she leaves the chat. Also, the expiring media messages unlike regular messages won't leave a message saying 'the message is deleted' or 'media is expired' after deletion. These messages will simply disappear from the chat.

Multi-Device Support

Another feature that a lot of users have long been waiting for is the multi-device support that will add support for multiple devices on the app. It was spotted in the development phase in the Android Beta update 2.20.143. For those of you who are unaware, the feature would basically allow users to operate the same WhatsApp account on different devices at the same

time. So, you can use the same account on your Android device as well as a tablet.

New Wallpaper Feature

Lastly, a new wallpaper feature was spotted in WhatsApp beta for Android 2.20.199.5 which would allow users to choose a different wallpaper based on the
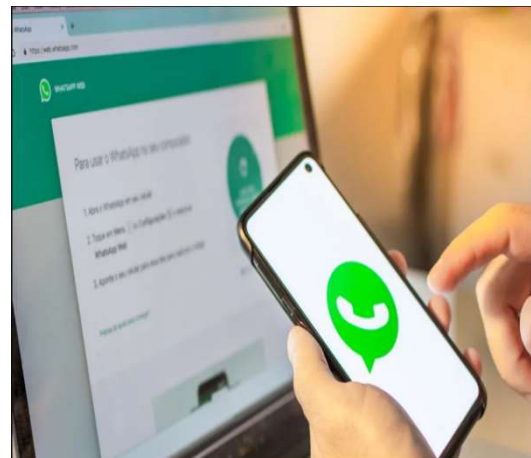
theme used in the app. According to WABetaInfo, "when you want to choose a default wallpaper, the app will ask if you want to download the WhatsApp Wallpaper app, an official application that provides Wallpapers". The app has also been working towards these new wallpaper improvements for its iOS app.

Flying Underground

By integrating one of the world's most advanced autonomous aerial vehicles with its own global-leading digital mining operation and information systems, Sandvik is helping customers map areas of their mines that were previously unreachable. As well as improving mines safety and profitability, this new partnership is a key step toward a future where mines can operate safely with no personnel physically underground.

Optmine is a comprehensive suite of digital tools for analyzing and optimizing mining production and processes. It includes 3D mine visualization, location, tracking, scheduling, task management and equipment monitoring and analytics all of which help identify bottlenecks, describe what's actually going on in the mine and predict what is likely to happen in the future.

Reducing human exposure:

Optimize enables mining operation and information management by integrating all relevant data into one source and providing the tools and analytics to really help our customers optimize their mining process. Both of these digital solution operate by interacting with equipment and other assets as well as the data they collect, It pulls the data together and visualizes it in various ways that people in the mine operations center and those working underground with tablets can make use of in order to operate more efficiently, both form a planning perspective and in real-time execution.

A unique proposition:

Planning and execution and both of major importance, especially in terms of accessing tricky areas of mines. In face, there is one area of a typical mine that has, until now, been particularly difficulty to extract data form. And because sandvik's solutions operate more effectively with more data, like all digital tools, sandvik has entered into a partnership with the Philadelphia-

based robotics company Exyn Technologies to solve that specific data extraction problems.

Productivity and safety:

Our fully autonomous aerial vehicle can fly itself through these cavities, where there is no GPS, no line of sight or communications and using a laser scanning sensor, the stopes to create a rich 3D point cloud.

There is existing technology for mapping stopes but it is far less efficient and more dangerous than Exyn's fully autonomous solution. A comparison, for example of the volumetric calculations of a stope between an exyn map and other technologies reveal a 20 percent volume difference. "The has safety and productivity implications across many different activities in the mine"

"There are massive productivity gains"

That is turn informs drilling and blasting decisions for next round.

Working together smoothly:

Global business development in digital and autonomous solutions, agrees. "We have been monitoring what various players are doing in this field, and we can see that Exyn is a company that really has pioneering solutions for autonomous aerial robotics". Sandvik and Exyn is their integration of their solutions. Development is currently underway at Sandvik's test mine in Tampere, finland to ensure that the workflow and the transfer of days between Exyn's robot and sankvik's Automine systems is smooth and seamless.

Future joint research:

"Safety is top of mind for everyone" says Elm. "And one of the things that really attracted us to the industry is the interest in human safety. That is something that we cab directly impact straight away with what we gave today, by reducing the risks for surveyors and by showing where significant hazards are in the mines. Removing people form activities that put them at risk of harm goes right to the heart of what we do".

LEARN A TOOL-ECLIPSE

History

Eclipse was inspired by the small talk based Visual Age family of integrated development environment (IDE) products. Instead, all code for a project was held in a compressed lump (somewhat like a zip file but in a proprietary format called .dat). Individual classes could not be easily accessed, certainly not outside the tool

What is Eclipse?

In the context of computing, Eclipse is an integrated development environment (IDE) for developing applications using the Java programming language and other programming languages such as C/C++, Python, PERL, Ruby etc.

The Eclipse platform which provides the foundation for the Eclipse IDE is composed of plug-ins and is designed to be extensible using additional plug-ins.

Developed using Java, the Eclipse platform can be used to develop rich client applications, integrated development environments and other tools. Eclipse can be used as an IDE for any programming language for which a plug-in is available.

The Java Development Tools (JDT) project provides a plug-in that allows Eclipse to be used as a Java IDE, PyDev is a plug-in that allows Eclipse to be used as a Python IDE, C/C++ Development Tools (CDT) is a plug-in that allows Eclipse to be used for developing application using C/C++, the Eclipse Scala plug-in allows Eclipse to be used an IDE to develop Scala applications and PHP eclipse.

Create your first Java program using ECLIPSE

The following section describes how to create a minimal Java application using the Eclipse IDE.

Create project:

Select **File New Java project** from menu Enter com.vogella.eclipse.ide. first as the project name and press the Finish button to create the project. A new project is created and displayed as a folder.

AMAZON ALGORITHMS PROMOTE VACCINE MISINFOR-MATION, STUDY FINDS

the com.vogella.eclipse.ide.first fold er and explore the content of this folder has been opened.

Create packages:

Create the com.vogella.eclipse.ide.first pac kage by selecting the src folder, right-click on it and select **New Package**. Click Right mouse button to create a packages. Press the Finish button.

Create JAVA Class:

Right-click on your package and select New Class to create a Java class. Enter MyFirstClass as the class name and select the public static void main (String[] args) checkbox. You could also directly create new packages via this dialog. If you enter a new package in this dialog, it is created automatically

Run your application code from the IDE:

Now run your code. Either right-click on your Java class in the Package Explorer or right-click in the Java class and select Run-as Java application. Eclipse will run your Java program. You should see the output in the Console view. Congratulations! You created your first Java project, a package, a Java class and you ran this program inside Eclipse.

Spike brings your entire workspace into your Inbox: email, chat, calendar, calls, team collaboration, tasks to one modern Inbox. Spikes conversational email fuses traditional email with instant messaging eliminating cluttered email threads. With real-time conversations and live collaboration, Spike allows for better interactions and a more human communication experience. Spike works on top of your existing email and is available on iOS, Android, Mac, Windows& Web.

PROS :

If you're a Google Inbox user who is looking for a substitute especially if you tend to use email for long discussions and Gmail just doesn't do it for you, Spike could be a good alternative. Spike doesn't lose the asynchronous quality of communication via email, meaning that both people don't need to be online in order for the communication to work. It does, however, combine the benefits of snappier, instant-messaging style communication with the spaciousness of emailing.

Spike also has some glitches.

CONS:

The mobile app can be very laggy, especially when you're sending or archiving emails. The interface makes it easy to delete either a single email or all of the emails from a sender, but I couldn't figure out how to delete only some of the emails. And while the conversational mode was interesting, it did sometimes get in the way.

The overall experience has been great. One of the very few email clients available for mac which comes with a conversation like email threat.

IMPORTANT FEATURES:

- Priority Inbox
- Groups: File sharing in a group email has never been smooth
- Improved Search Function
- Powerful Encryption
- File Manager
- Calendar
- Dark Mode
- Mobile Office
- Audio and Video Calls
- Snooze
- Spike is available for free, and as a paid option

! Mind Punch

1. Bill Gates wrote his first program for which paper & pencil game popular among the students?
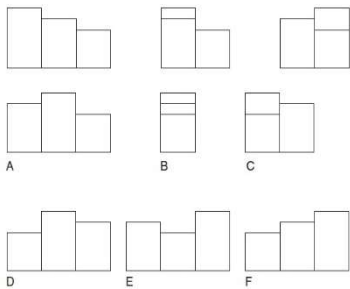
Hint : T__T__T

2. At each stage the black dot moves three corners clockwise and the white dot moves four corners anticlockwise. After how many stages will both dots be together in the same corner?
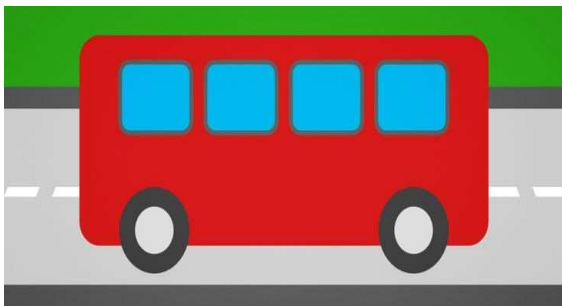

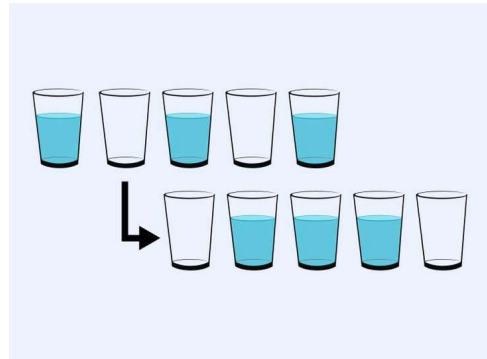3. Using the four letters below only, create a seven letter word. **UMNI**
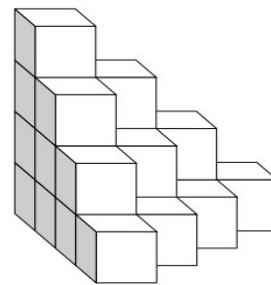
4. What comes next?

5.Which way this bus is driving?

6. Move one cup to get this order.

7. Rearrange the letters to spell just one word. ODOEUSWJTNR

Hint: In the question

8. How many cubes are in the stack below?

9. Two men tried to cross a river in a boat that was able to transport only one person. However, both successfully crossed the river. How is this possible?

10. When I was 4 years old, my brother was half my age. Now, I'm 18. How old is my brother?

IT VITA+

1. In which year was the @ chosen for its use in email address ?

2. Who developed fortran language?

3. What was the name of first computer on which the bug was found?

4. Zenbo is a companion robot produced by which taiwan based company?

5. Who is known as the Human Computer of India?

6. When was the first smart phone launched?

7. What is the standard protocol ofInternet?

8. The first virus to infect Linux is?

9. Which device is called as Sillico Sapiens?

10. Who was the inventor and founder of www?

11. FAT stands for

12. What is the first process launched by the Linux kernel?

13. How many bits are there in the Ethernet address?

14. What is the conversion of a analog waves to a digital format called ?

15. Junk e–mail is also known as

DEEP LEARNING-BASED ASSESSMENT OF STUDENT ENGAGEMENT COULD AID CLASSROOM RESEARCH

$ FAMOUS AND FAVOURITE

John knoll is an American visual effects supervisor and chief creative officer (CCO) at Industrial Light & Magic (ILM). One of the original creators of Adobe Photoshop (along with his brother, Thomas Knoll), he has also worked as visual effects supervisor on the Star Wars prequels and the 1997 special editions of the original trilogy. He also served as ILM's visual effects supervisor for Star Trek Generations and Star Trek: First Contact, as well as the Pirates of the Caribbean series. Along with Hal Hickel, Charles Gibson and Allen Hall, Knoll and the trio's work on Pirates of the Caribbean: Dead Man's Chest earned them the Academy Award for Best Visual Effects. Del Toro, who worked with Knoll for the first time on Pacific Rim, stated "He basically has the heart of a kid and the mind of a scientist, and that's a great combination.
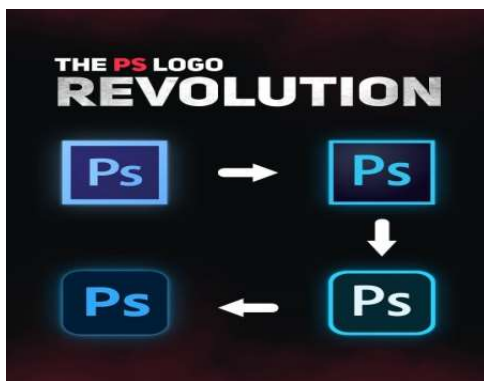
Knoll is also the inventoral of Knoll Light Factory, a lens flare generating software inspired by his work at Industrial Light and Magic. He was the Computer Graphics Project Designer on The Abyss, an achievement which earned ILM its tenth Oscar, and worked on two Star Trek episodes.

Knoll had a cameo appearance in Star Wars Episode I: The Phantom Menace as a fighter pilot.

Born	October 6, 1962 (age 58)
Nationality	American
Education	USC School of Cinematic Arts
Occupation	visual effects supervisor and chief creative officer

At the 2019 Oscars, John and his brother Thomas were awarded a Scientific and Engineering Award for the original architecture, design and development of Photoshop.

SOLUTIONS

!Mind Punch

1. 1972

2. John Backus and IBM

3. Harvard mark II

4. Asus

5. Shakunthala Devi

6. 1992 (IBM Simon)

7. TCP/IP

8. Staog

9. Computer

10. Tim Berners Lee

11. File Allocation Table

12. init process

13. 48 bits

14. Sound forge

15. Spam

IT VITA+

1. Tic Tac Toe

2. They will never appear together in the same corner as in a heptagon three corners clockwise is the same as four corners anticlockwise.

3. E.The rectangle starting on the left is moving from left to right one place at a time at each stage.

4. MINIMUM.

5. 20

6. Towards left

7.
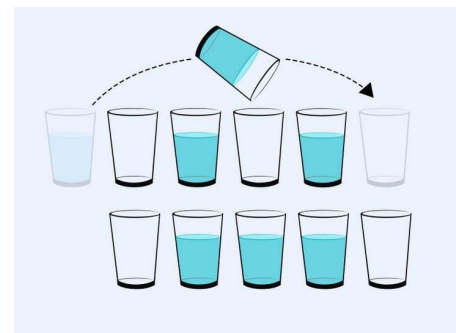
8. Just One Word

9. They were on different banks

10. He is 16

DEPARTMENT OF COMPUTER SCIENCE(UG)
CYBER CREWS ASSOCIATION

The Editorial Board expresses its sincere gratitude to all those who are responsible,either by being on the stage or behind the screen for the successdul launch of the magazine.....!!