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70th Independence Day Celebrations

The 70th Independance Day was celebrated with great fervor and enthusiasm in the New Horizon College of Engineering. On this occasion Dr.R. Bodhisatvan , Principal, NHC hoisted the National Flag . Dr.Manjunatha , Principal , NHCE delivered the 70th Independance Day Address to the gathering.

First Year Induction Programme

New Horizon College of Engineering conducted induction program for 1st year BE courses on 1st August 2016. Chief Guest for the morning session was Dr. Nandan Nilekani , Ex- Chairman, UIDAI. The program was presided over by Dr. Mohan Manghnani, Chairman, NHEI.

Overview of Internet of Things (IoT)

The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiersand the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. The Internet of Things (IoT) world may be exciting, but there are serious technical challenges that need to be addressed, especially by developers. In this handbook, learn how to meet the security, analytics, and testing requirements for IoT applications. A thing, in the Internet of Things, can be a person with a heart monitor implant, a farm animal with a biochip transponder, an automobile that has built-in sensors to alert the driver when tire pressure is low -- or any other natural or man-made object that can be assigned an IP address and provided with the ability to transfer data over a network. IoT has evolved from the convergence of wireless technologies, micro-electromechanical systems (MEMS), microservices and the internet. The convergence has helped tear down the silo walls between operational technology (OT) and information technology (IT), allowing unstructured machine-generated data to be analyzed for insights that will drive improvements. Kevin Ashton, cofounder and executive director of the Auto-ID Center at MIT, first mentioned the Internet of Things in a presentation he made to Procter & Gamble in 1999. Here's how Ashton explains the potential of the Internet of Things:

Today computers -- and, therefore, the internet -- are almost wholly dependent on human beings for information. Nearly all of the roughly 50 petabytes (a petabyte is 1,024 terabytes) of data available on the internet were first captured and created by human beings by typing, pressing a record button, taking a digital picture or scanning a bar code. The problem is, people have limited time, attention and accuracy -- all of which means they are not very good at capturing data about things in the real world. If we had computers that knew everything there was to know about things -- using data they gathered without any help from us -- we would be able to track and count everything and greatly reduce waste, loss and cost. We would know when things needed replacing, repairing or recalling and whether they were fresh or past their best."

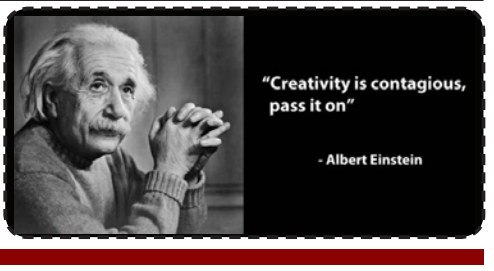
IPv6's huge increase in address space is an important factor in the development of the Internet of Things. According to Steve Leibson, who identifies himself as "occasional docent at the Computer History Museum," the address space expansion means that we could "assign an IPV6 address to every atom on the surface of the earth, and still have enough addresses left to do another 100+ earths." In other words, humans could easily assign an IP address to every "thing" on the planet. An increase in the number of smart nodes, as well as the amount of upstream data the nodes generate, is expected to raise new concerns about data privacy, data sovereignty and security.

Practical applications of IoT technology can be found in many industries today, including precision agriculture, building management, healthcare, energy andtransportation. Connectivity options for electronics engineers and application developers working on products and systems for the Internet of Things include: Although the concept wasn't named until 1999, the Internet of Things has been in development for decades. The first internet appliance, for example, was a Coke machine at Carnegie Melon University in the early 1980s. The programmers could connect to the machine over the internet, check the status of the machine and determine whether or not there would be a cold drink awaiting them, should they decide to make the trip down to the machine.

Open Forum

Anything that makes weak - physically, intellectually and spiritually, reject it as poison."
Swami Vivekananda

Mail your valuable thoughts within 200 words to: nhbytes@gmail.com



Investiture Ceremony @ NHC-M

The investiture ceremony was held at Chanakya Seminar Hall on 6th of August 2016 where the student club members were badged according to their respective titles. The alumni were also present on the occasion. The event started with a small video that highlighted major events held in the previous year. After invoking this reminiscence, the investiture ceremony was carried forth evoking a sense of responsibility towards the New Horizon fraternity. The oath was taken by all the student club members promising to serve this esteemed institution to their fullest potential as well as abiding by the rules. The president and vice president were pinned by Dr. R Bodhisatvan the other members of the student council were badged by their respective teacher in-charge.

The end of the ceremony marked the beginning of a new journey to shape the personality of every student member

Guest Talk on "Social Awareness Amongst Today's Youth"

A guest lecture was organized by the NSS team for the students of I semester BBA, B.Com

and BCA on 12th and 19th July 2016 at Chanakya Seminar Hall, NHC-M. The resource person, Mr.Jacob Chacko, an architect and social activist, the founder of Save Lives, an NGO and trustee of Karunya, Bangalore touched upon various social issues and his service in these fields. Time and again he reiterated the responsibility of the students in reaching out to the needy through volunteering. The talk was very insightful and inspiring. It made the gathering aware of their social responsibilities and made them understand how the joy derived from selfless service is unmatched and fulfilling. The session concluded with many students offering their time and services as volunteers towards activities aimed at social upliftment.

Guest Lecture

On the 21st of July 2016, a guest lecture was conducted for the final semester B. Com students in Chanakya Seminar Hall at the NHC, Marathalli campus on the topic "Bridging the gap between corporate and academia with respect to non-IT companies". The speaker, Mr. Harish G. Kashyap, Lead Technical Consultant – Oil & Gas / Refineries, introduced the students to the topic through a motivational video and stressed on choosing a career out of true passion and to never chase after jobs. He urged the students to take up a profession which made them happy, which the world accepted and benefitted them and through which they could earn a living. He asked the students to choose unconventional jobs and careers which are blooming up in today's world scenario. Mr. Kashyap concluded by telling the various opportunities available in the oil and gas industry/sector like analytics, main stream, upstream, core services, accounting etc

Common sense is the crown of all talents.

Common sense is not so common as commonly beleived.it is a commodity that is in short supply. Common sense in an un common sense degree is what is one calls "WISDOM".

People who wish to succeed in life should have common sense. Although every man or woman has some sort of knowledge in a particular subject, nothing can be achieved without common sense.

it is enough to do the right thing ,it should be done at right time and at right place.in the battle of life ,knowledge, is power but common sense is the skill.it is only with skill ,you can make use of the power.in fact, knowledge tells us what to do, common sense shows us how to do it.in fact that plays a vital role education is very important for a success in life. But to say that only persons who get distinction in their studies will achieve success in life is not true.

it is common sense that leads to success in life.

Common sense is the knack of seeing things as they are and doing things as they should be done".

Education alone will not help people to solve their problems. What they need is common sense to grasp things that help them to solve problems.

In fact kindness, integrity and patience without commonsense are fertile grounds for cunning people to take advantage of people who possess such good qualities.

One should always remember that "common sense is the crown of all talents".

Kamal
2nd yr MCA

Report on Guest LecturePayment Network Transaction

Our department has organized a Guest Lecture on 27th August 2016 at 9.00 AM for final year (5th semester) MCA students. The speaker was Mr. Kumar Piyush, System Engineer from FIME India Pvt. Ltd. His lecture emphasized on Payment Network Transaction and E-Commerce Applications.

Topics Covered:

- E-Commerce
- Payment Gateway
- 3D Secure
- Mode of Payment
- 3D Secure Transaction Process Flow

Payment Gateway is a merchant service provided by an E-Commerce application which authorizes online payments in secure way from different banks. E-Commerce is an online business in which customer and sellers meet and do buy and sell operation through internet. Mr. Piyush focused on explaining about real time examples with respect to these concepts. He explained in detail about the payment transaction process. He demonstrated on how to find the check digit value of an ATM card and elucidated about 3D Secure in payment transaction process. He explained in detail about the verification process flow by various cards like Visa, RuPay and Master Card secure code. The various steps and security checks involved in payment transactions were explained by him with the detailed flow diagram. The sequence of actions to be performed during the first time usage of any ATM card was clearly mentioned in the process flow diagram. He briefed about different modes of Payments like COD, DBC, CC, IB and online wallets with examples.

During this session Mr. Piyush discussed about several new interesting facts and he conferred about the importance of finger print based security incorporation and Aadhar card linkup with all ATMs in near future. He summarized about various job opportunities in banking domain and patiently answered for all the queries raised by our students.

Mr. Kumar Piyush
Falconry Seminar Hall

Guest Lecture Report

The Guest Lecture has been organized by the Department of MCA, to the students of 3rd semester MCA on the topic "Basics of Computer Networks". The seminar session was conducted on 25th August 2016 at MBA seminar hall from 9:30 Am to 11:00 AM The seminar was held by Mr. Parthiban Ponnuswamy, Network servise deleivery Manager from At & T. The session started with the formal introduction about the speaker. The seminar was given on topics like Gateway of computer networks, routers, switches. Etc.

Mainly the seminar was based on physical layers of computer networks where different transmission mediums like MAN, LAN and WAN plays a major role. A brief introduction was given on types of topologies with diagrammatical explanation, many real world examples was also given for the better understanding. The topic IP address and its contents was also explained with its specific features.

The modern technologies in the field of wireless networks was also enhanced with an detailed description. He covered the several topics like

- Servers and its types.
- link between the machine and the network
- Gateway is the entry point for the network.
- DHCP (Dynamic Host Configuration Protocol)
- Firewall – Security over a network, that act as an barrier providing protections to a machine.

The Guest Lecture was co-ordinated successfully by Binoj Sir. Mr. Parthiban was thanked by the department with small token gift at the end of session on behalf of Management and HOD. It was very interesting topic which is useful for career purpose.

MBA – Bharathiyar University First Year Batch Induction Programme

Induction Programme for First Year MBA of Bharathiyar University , held at New Horizon College of Engineering during the month of August 2016.

Quantitative Aptitude #8

Problems on Probability

1. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

A. $\frac{1}{2}$

B. $\frac{2}{5}$

C. $\frac{8}{15}$

D. $\frac{9}{20}$

Answer: Option **D**
Explanation:
Here, S = {1, 2, 3, 4, ..., 19, 20}.
Let E = event of getting a multiple of 3 or 5 = {3, 6 , 9, 12, 15, 18, 5, 10, 20}.
$\therefore P(E) = \frac{n(E)}{n(S)} = \frac{9}{20}$

2. A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?

A. $\frac{10}{21}$

B. $\frac{11}{21}$

C. $\frac{2}{7}$

D. $\frac{5}{7}$

Answer: Option **A**
Explanation:
Total number of balls = (2 + 3 + 2) = 7.
Let S be the sample space.
Then, $n(S)$ = Number of ways of drawing 2 balls out of 7

$= {}^7C_2$

$= \frac{(7 \times 6)}{(2 \times 1)}$

$= 21.$

Let E = Event of drawing 2 balls, none of which is blue.
$\therefore n(E)$ = Number of ways of drawing 2 balls out of (2 + 3) balls

$= {}^5C_2$

$= \frac{(5 \times 4)}{(2 \times 1)}$

$= 10.$

$\therefore P(E) = \frac{n(E)}{n(S)} = \frac{10}{21}$

3. In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither red nor green?

A. $\frac{1}{3}$

B. $\frac{3}{4}$

C. $\frac{7}{19}$

D. $\frac{8}{21}$

E. $\frac{9}{21}$

Answer: Option A
Explanation:
Total number of balls = (8 + 7 + 6) = 21.
Let E = event that the ball drawn is neither red nor green

= event that the ball drawn is blue.

$\therefore n(E) = 7.$
$\therefore P(E) = \frac{n(E)}{n(S)} = \frac{7}{21} = \frac{1}{3}.$

4. What is the probability of getting a sum 9 from two throws of a dice?

A. $\frac{1}{6}$

B. $\frac{1}{8}$

C. $\frac{1}{9}$

D. $\frac{1}{12}$

Answer: Option **C**
Explanation:
In two throws of a dice, $n(S) = (6 \times 6) = 36.$
Let E = event of getting a sum = {(3, 6), (4, 5), (5, 4), (6, 3)}.
$\therefore P(E) = \frac{n(E)}{n(S)} = \frac{4}{36} = \frac{1}{9}$

Three unbiased coins are tossed. What is the probability of getting at most two heads?

A. $\frac{3}{4}$

B. $\frac{1}{4}$

C. $\frac{3}{8}$

D. $\frac{7}{8}$

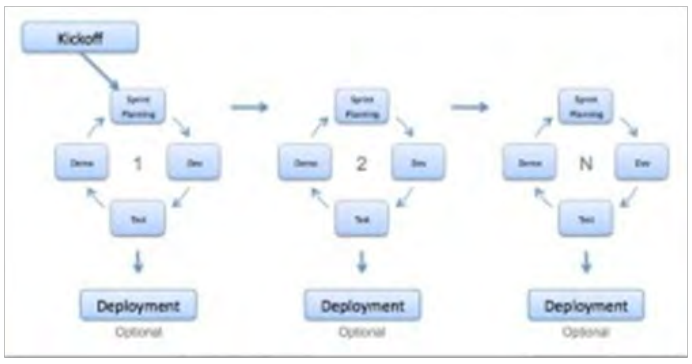
Answer: Option D
Explanation:
Here S = {TTT, TTH, THT, HTT, THH, HTH, HHT, HHH} Let E = event of getting at most two heads.
Then E = {TTT, TTH, THT, HTT, THH, HTH, HHT}.
$\therefore P(E) = \frac{n(E)}{n(S)} = \frac{7}{8}$

Dr.R.Chinnaiyan, Professor /MCA-NHCE

Agile Development Model

Agile development model is also a type of Incremental model. Software is developed in incremental, rapid cycles. This results in small incremental releases with each release building on previous functionality. Each release is thoroughly tested to ensure software quality is maintained. It is used for time critical applications. Extreme Programming (XP) is currently one of the most well known agile development life cycle model.

Diagram of Agile model:



Advantages of Agile model:

- Customer satisfaction by rapid, continuous delivery of useful software.
- People and interactions are emphasized rather than process and tools. Customers, developers and testers constantly interact with each other.
- Working software is delivered frequently (weeks rather than months).
- Face-to-face conversation is the best form of communication.
- Close, daily cooperation between business people and developers.
- Continuous attention to technical excellence and good design.
- Regular adaptation to changing circumstances.
- Even late changes in requirements are welcomed

Disadvantages of Agile model:

- In case of some software deliverables, especially the large ones, it is difficult to assess the effort required at the beginning of the software development life cycle.
- There is lack of emphasis on necessary designing and documentation.
- The project can easily get taken off track if the customer representative is not clear what final outcome that they want.
- Only senior programmers are capable of taking the kind of decisions required during the development process. Hence it has no place for newbie programmers, unless combined with experienced resources.

When to use Agile model:

- When new changes are needed to be implemented. The freedom agile gives to change is very important. New changes can be implemented at very little cost because of the frequency of new increments that are produced.
- To implement a new feature the developers need to lose only the work of a few days, or even only hours, to roll back and implement it.
- Unlike the waterfall model in agile model very limited planning is required to get started with the project. Agile assumes that the end users' needs are ever changing in a dynamic business and IT world. Changes can be discussed and features can be newly effected or removed based on feedback. This effectively gives the customer the finished system they want or need.
- Both system developers and stakeholders alike, find they also get more freedom of time and options than if the software was developed in a more rigid sequential way. Having options gives them the ability to leave important decisions until more or better data or even entire hosting programs are available; meaning the project can continue to move forward without fear of reaching a sudden standstill.

Twelve principles underlie the Agile Manifesto, including:

- Customer satisfaction by rapid delivery of useful software
- Welcome changing requirements, even late in development
- Working software is delivered frequently (weeks rather than months)
- Working software is the principal measure of progress
- Sustainable development, able to maintain a constant pace
- Close, daily co-operation between business people and developers
- Face-to-face conversation is the best form of communication (co-location)
- Projects are built around motivated individuals, who should be trusted
- Continuous attention to technical excellence and good design
- Simplicity
- Self-organizing teams
- Regular adaptation to changing circumstances

Anju P Chacko
5th Sem MCA

What is Virtual Reality

Virtual reality (VR) typically refers to computer technologies that use software to generate realistic images, sounds and other sensations that replicate a real environment (or create an imaginary setting), and simulate a user's physical presence in this environment, by enabling the user to interact with this space and any objects depicted therein using specialized display screensor projectors and other devices. VR has been defined as "...a realistic and immersive simulation of a three-dimensionalenvironment, created using interactive software and hardware, and experienced or controlled by movement of the body"[1] or as an "immersive, interactive experience generated by a computer".[2] A person using virtual reality equipment is typically able to "look around" the artificial world, move about in it and interact with features or items that are depicted on a screen or in googles. Virtual realities artificially create sensory experiences, which can include sight, touch, hearing, and, less commonly, smell. Most 2016-era virtual realities are displayed either on a computer monitor, a projector screen, or with a virtual reality headset (also called head-mounted display or HMD). HMDs typically take the form of head-mounted goggles with a screen in front of the eyes. Some simulations include additional sensory information and provide sounds through speakers or headphones.
Some advanced haptic systems in the 2010s now include tactile information, generally known as force feedback in medical, video gaming and military training applications. Some VR systems used in video games can transmit vibrations and other sensations to the user via the game controller. Virtual reality also refers to remote communication environments which provide a virtual presence of users with through telepresence and telexistence or the use of a virtual artifact (VA), either through the use of standard input devices such as a keyboard and mouse, or through multimodal devices such as a wired glove or omnidirectional treadmills. The immersive environment can be similar to the real world in order to create a lifelike experience—for example, in simulations for pilot or combat training, which depict realistic images and sounds of the world, where the normal laws of physics apply (e.g., in flight simulators), or it can differ significantly from reality, such as in VR video games that take place in fantasy settings, where gamers can use fictional magic and telekinesis powers.

Gopi Krishna
5th Sem MCA

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