VMware IT Academy

VMware Software India Pvt Ltd., has established VMWare IT Academy at New Horizon College of Engineering, Bangalore. The Lab was inaugurated on 17th Feb 2017 by Mr.Rajesh Namibiar, Regional Program Manager, VMware IT Academy-APJ along with Dr.Mohan Manghnani, Chariman New Horizon College of Engineering. The team of Experts talked at length to the entire student community of NHCE and shared their invaluable experience on a plethora of technologies which are migrating to cloud and how virtualization can be the most sought after and lucrative career for budding engineers.

As part of this collaboration, VMware IT Academy Program (vITA) is designed to introduce students to VMware technologies and equip them with technical skills needed for the modern IT world. As an IT Academy member, Faculty/ Students will gain access to technology and contents from VMware, which in turn prepare them for the new IT world.

Cancer Awareness Program
6K Walkathon

The BIOZONE and BIOBLOOMS clubs had organized a 6K Walkathon on 26th February, 2017 to spread awareness against cancer. A descent crowd from all walks of life and also a number of bikers participated in the event. Overall it was a very peaceful yet powerful rally, thanks to the committed participants and volunteers. It was indeed a much satisfying day for all of us in conducting this cancer awareness program through which we could provide proper awareness about the seriousness of the condition.

Achievements of Faculties

Prof. Vishwanath C R, Prof. M Govindaraj and Prof. Kavitha S N of MCA department have successfully cleared the "WIPRO Certified Faculty" Assessment. It was a part of TalentNext Assessment held at Wipro campus. Prof. Vishwanath C R has taken highest marks in the entire New Horizon Campus with a score of 89%.

SAP Next Gen Lab, a Centre of Excellence @ NHCE

SAP University Alliances program in collaboration with New Horizon College of Engineering has established Next-gen Lab at the college campus in Bangalore. The Lab was inaugurated by Mr. Rahul Sachdev, Head-University Alliances, SAARC-SAP along with Dr. Mohan Manghnani, Chairman, New Horizon College of Engineering on 13th Feb 2017.

"Students have got ample opportunities to explore SAP technologies and develop their skills to suit contemporary business requirements of SAP Customers & Partners", says Mr. Sachdev. Dr. Mohan Manghnani, opined that "every student of New Horizon will be skilled engineers when they graduate from the college. New Horizon is bringing industry relevant technologies, tools, and training for its students". SAP University Alliance is a global program with more than 2900 member institutions in over 100 countries that aims to shape the future of higher education. The program exposes students and faculty to the latest SAP technologies and enables universities and vocational schools to integrate SAP software into their teaching by partnering to build technology skills.

As a member of SAP University Alliance program – New Horizon College of Engineering (NHCE) has access to wealth of resources developed in collaboration with faculty, students and SAP partners and customers across the world.

National Science Day celebrations
& launch of E-Newsletter - Biopatrika

Bioblooms club hosted this year's National Science Day celebrations the theme being 'Science Day dedicated to specially abled persons' on Feb 28, 2017. The chief guest was hon'ble principal Dr Manjunatha. The highlight of the entire show was the launch of our E-Newsletter "BIOPATHRIKA" which was graced by Principal, HOD, Faculty coordinators, President and the Vice-President by lighting the lamp. This was followed by principal's speech which was very illuminating and impulsive. The celebration was set in motion by presentations from IV & VIII Sem students & faculty members of BT Department.

## Dept. EEE Workshop on "CIRCUIT DRAFTING USING ELECTRICAL AUTOCAD"

The Students of Electrical and Electronics Department of New Horizon College of Engineering received the privilege of attending the Workshop on "CIRCUIT DRAFTING USING ELECTRICAL AUTOCAD"by LIVE WIRE, Bangalore and E Soft Club on 01.02.2017,Organised by Dr.S.Sujitha, Coordinated by Prof.Mohan B.S&E Soft Club President Ms.Madhiha, III Year EEE and all Committee Membersand also Supported by Mr.Muniraj&Mr.Rajesh. The session was interactive and the involvement of our faculties added on to keep up the interest of the students, It rendered us knowledge regarding minimizing the use of pen and paper for circuit drawing .The session was followed by 1 hour test for recollecting and putting forth whatever we had learned which would upgrade us to the next upcoming levels. We would look forward for more such workshops in future to know more about the Industrial tools.

AVISHEK SINHA
II Year EEE- Sec 'A'
TREASURER-ESOFT CLUB

Tips to improve your Memory
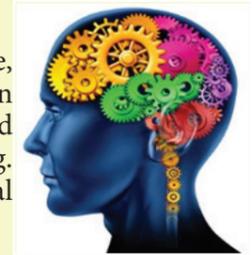
1. Stay mentally active
Just as physical activity helps keep your body in shape, mentally stimulating activities help keep your brain in shape — and might keep memory loss at bay. Do crossword puzzles. Play bridge. Take alternate routes when driving. Learn to play a musical instrument. Volunteer at a local school or community organization.

2. Socialize regularly
Social interaction helps ward off depression and stress, both of which can contribute to memory loss. Look for opportunities to get together with loved ones, friends and others — especially if you live alone.

3. Get organized
You're more likely to forget things if your home is cluttered and your notes are in disarray. Jot down tasks, appointments and other events in a special notebook, calendar or electronic planner. You might even repeat each entry out loud as you jot it down to help cement it in your memory. Keep to-do lists current and check off items you've completed. Set aside a place for your wallet, keys and other essentials. Limit distractions and don't do too many things at once. If you focus on the information that you're trying to retain, you'll be more likely to recall it later. It might also help to connect what you're trying to retain to a favorite song or another familiar concept.

4. Sleep well
Sleep plays an important role in helping you consolidate your memories, so you can recall them down the road. Make getting enough sleep a priority. Most adults need seven to nine hours of sleep a day.

5. Eat a healthy diet
A healthy diet might be as good for your brain as it is for your heart. Eat fruits, vegetables and whole grains. Choose low-fat protein sources, such as fish, lean meat and skinless poultry. What you drink counts, too. Too much alcohol can lead to confusion and memory loss.

6. Include physical activity in your daily routine
Physical activity increases blood flow to your whole body, including your brain. This might help keep your memory sharp.
For most healthy adults, the Department of Health and Human Services recommends at least 150 minutes a week of moderate aerobic activity, such as brisk walking, or 75 minutes a week of vigorous aerobic activity, such as jogging — preferably spread throughout the week. If you don't have time for a full workout, squeeze in a few 10-minute walks throughout the day.

7. Manage chronic conditions
Follow your doctor's treatment recommendations for any chronic conditions, such as depression, high blood pressure, high cholesterol, diabetes, and kidney or thyroid problems. The better you take care of yourself, the better your memory is likely to be. In addition, review your medications with your doctor regularly. Various medications can affect memory.

Ms. Reena M,
4th Semester MCA

A Note on the Industrial Visit

On the 10th of March 2017 the Department of Biotechnology had organized an industrial visit for the 6th and the 8th semester students accompanied by Dr Ananda Vardhan to Anthem Cellutions (I) Pvt Ltd, Hosur road, Bangalore. We had a visit through the department where we could see the gas chromatographs, chiral HPLC, chiral GC, HPLC and evaporative light scattering detectors. Also got an insight on the various spectroscopic analysis instruments like GCMS, LCMS, NMR with BBO probes. We were also informed about the polarimeters and coulometers that they use for various analytical techniques. It was a very enriching and informative experience for all the students. We thank the department for giving the opportunity for this enlightening industrial visit which helped us to enhance our knowledge.

Chronicle On: Proactive Learning From Minds to Souls
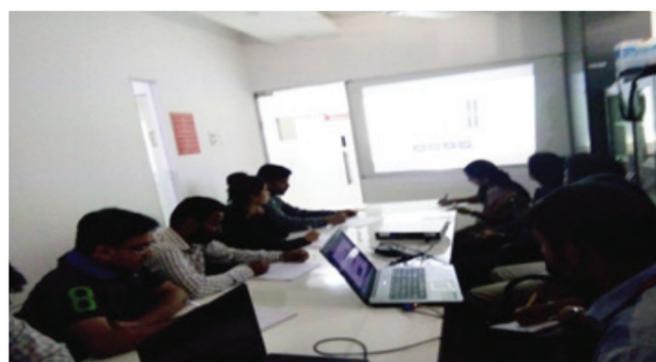
Vision: To set up a platform where in the students can go beyond the text books and learn the currently booming and blowing up Technological Concepts via Information and Communication Techniques [ICT], also to create a notion of hands on Learning and online Interaction with the industry Experts.

Purpose: To get adapted into the effective and content based learning through head to head interaction with the Content based Resource Persons and to get equipped with the latest technical concepts, this can create a positive impact in content understanding that will result in blooming up the concepts in depth from the root.**Insights:** Webinar was hosted by the Department of MCA with the intent to create a atmosphere where in the Students were allowed to have n peer to peer conversation and interaction with the industry experts over the Hot Concept "BIG DATA ANALYTICS".
Moments:

Build#01: The Event Was a "Webinar" Hosted over the MCA Department Library on 8th Feb 2017.
Build#02: The Session was Organized Based on the Topic "BIG DATA ANALYTICS".
Build#03: There were 15 Students who were part of the session along with 3 Faculties.
Build#04: The Duration of the Event Was 60-Minutes with the time from 9:00 AM to 10:00AM IST.
Build#05: The Students were allowed to post questions based on the concepts.
Build#06: Instant solutions to those questions were rendered by the resource person.
Build#07: All the Students over there had a positive vibe as they indulged in Conversation.
Upshot: The Webinar was a constructive attempt by the Department of MCA to develop ICT based learning strategy as the student had a new and creative learning experience. We do request the Department to host more sessions on the Latest Trends in near future.

Guest Lecture Report

Topic on "Web Development Using PHP"

On the 28th January 2017, a guest lecture was conducted for the final year BCA students and the IV semester BCA students who were interested in developing their academic projects in the area "Web development using PHP". The speaker for the session was Mr. Dipta Roya. Operations Executive, Infosys who introduced the students to the topic by first explaining how to develop web based application using PHP. He urged the students to develop their projects in their own creativity and logical thinking and shared his professional experiences in the area of cloud computing and data security. He addressed his dream project "Envelop Private Cloud" and shared the information of his recently launched websites. . He was also explaining his workshop exposure while presenting his paper on "Secure login from SQL injection using IP log to mitigate DDoS Impact". Overall the session gave benefits to the students to know the structure of PHP and web based applications to develop their final year projects.

Role of PHP in Web Development

Each topic had their sub-topics which were explained as well. Some of the sub-topics were Creating script code in PHP editor, Creating database in PHPAdmin, Configuring IP address, Running server and locating webpages etc.

Industrial Visit to India's apex space research institute, ISRO

On 17th February 2017, the Electronics and Communications department of our college arranged a trip to India's apex space research institute, ISRO. The trip started off from the college at 1 p.m. as a team of about 60 people along with 2 teachers.

Following were the highlights of the trip:

1. Introduction to the launching vehicles such as the ASLV, PSLV and GSLV and the model of first satellites: Aryabhatta, Rohini, Bhaskara the test satellites
2. Lecture on basic theory of satellite communication and their deployment for research purposes.
3. Demonstration on the satellites behavior in space after they are launched, battling temperature and pressure
4. The construction of Chandrayaan-II and its rover.

The students were encouraged to design their own satellite and were offered complete sponsorship for the launch.

The Art of Living

To Live a life and cherish every moment..each sentence in the following excerpt, is a piece of wisdom, which we should strive to live by..it is an ART, an ART OF LIVING.

Wisdom enriches one's higher intelligence. Intelligence is the spectrum of widened knowledge of unique experience, knowledge of experience strengthens our inner freedom. Freedom envisages and equips true empowerment. Self empowerment is the gateway to liberty. Liberty leads to eternal happiness. Happiness is derived from a mental status and becomes a super driving force. It ushers the spirit to enjoy the will to feel and nourish potential energy. This power of energy destroys all vices from our hearts and minds. Real bondage of vice lies in one's own weakness. Weakness kills the precious life. Life is the greatest gift given by God. Life becomes purposefully meaningful based on noble principles when it is shared and given out in the form of very best, and for a realistic transformation.

So, adopt a simple gesture of the Art of Living…….Let it be……an attitude with a spirit of gratitude towards others and yourself…

Ms. SWETHA NAGARAJ
2nd Semester MCA

Quantitative Aptitude #14

1. In a 100 m race, A can give B 10 m and C 28 m. In the same race B can give C:
   - **A.** 18 m
   - **B.** 20 m
   - **C.** 27 m
   - **D.** 9 m

   Answer: Option **B**
   Explanation:
   A : B = 100 : 90.
   A : C = 100 : 72.
   $B : C = \frac{B}{A} \times \frac{A}{C} = \frac{90}{100} \times \frac{100}{72} = \frac{90}{72}$.
   When B runs 90 m, C runs 72 m.
   When B runs 100 m, C runs $\left(\frac{72}{90} \times 100\right)_m$ = 80 m.
   ∴ B can give C 20 m.

2. A and B take part in 100 m race. A runs at 5 kmph. A gives B a start of 8 m and still beats him by 8 seconds. The speed of B is:
   - **A.** 5.15 kmph
   - **B.** 4.14 kmph
   - **C.** 4.25 kmph
   - **D.** 4.4 kmph

   Answer: Option B
   Explanation:
   A's speed = $\left(5 \times \frac{5}{18}\right)_{m/sec}$ = $\frac{25}{18}$ m/sec.
   Time taken by A to cover 100 m = $\left(100 \times \frac{18}{25}\right)_{sec}$ = 72 sec.
   ∴ Time taken by B to cover 92 m = (72 + 8) = 80 sec.
   ∴ B's speed = $\left(\frac{92}{80} \times \frac{18}{5}\right)_{kmph}$ = 4.14 kmph.

3. In a 500 m race, the ratio of the speeds of two contestants A and B is 3 : 4. A has a start of 140 m. Then, A wins by:
   - **A.** 60 m
   - **B.** 40 m
   - **C.** 20 m
   - **D.** 10 m

   Answer: Option **C**
   Explanation:
   To reach the winning post A will have to cover a distance of (500 - 140)m, *i.e.,* 360 m.
   While A covers 3 m, B covers 4 m.
   While A covers 360 m, B covers $\left(\frac{4}{3} \times 360\right)_m$ = 480 m.
   Thus, when A reaches the winning post, B covers 480 m and therefore remains 20 m behind.
   ∴ A wins by 20 m.

4. In a 100 m race, A beats B by 10 m and C by 13 m. In a race of 180 m, B will beat C by:
   - **A.** 5.4 m
   - **B.** 4.5 m
   - **C.** 5 m
   - **D.** 6 m

   Answer: Option D
   Explanation:
   A : B = 100 : 90.
   A : C = 100 : 87.
   $\frac{B}{C} = \frac{B}{A} \times \frac{A}{C} = \frac{90}{100} \times \frac{100}{87} = \frac{30}{29}$.
   When B runs 30 m, C runs 29 m.
   When B runs 180 m, C runs $\left(\frac{29}{30} \times 180\right)_m$ = 174 m.
   ∴ B beats C by (180 - 174) m = 6 m.
   ∴

5. At a game of billiards, A can give B 15 points in 60 and A can give C to 20 points in 60. many points can B give C in a game of 90?
   - **A.** 30 points
   - **B.** 20 points
   - **C.** 10 points
   - **D.** 12 points

   Answer: Option C
   Explanation:
   A : B = 60 : 45.
   A : C = 60 : 40.
   ∴ $\frac{B}{C} = \left(\frac{B}{A} \times \frac{A}{C}\right) = \left(\frac{45}{60} \times \frac{60}{40}\right) = \frac{45}{40} = \frac{90}{80}$ = 90 : 80.
   ∴ B can give C 10 points in a game of 90.

Dr.R.Chinnaiyan, Professor /MCA-NHCE

AUTONOMOUS VEHICLES

An Autonomous Vehicle (self-driving vehicle) is a vehicle that is capable of sensing the environment, processing it and navigating all by itself, without any human input.

Many such vehicles are being developed, but as of February 2017 automated cars permitted on public roads are not yet fully autonomous. They all require a human driver at the wheel who is ready at a moment's notice to take control of the vehicle.

How it works?

There are a plenty of techniques where an autonomous vehicle can be developed to detect its surroundings.

Basically, the Vehicle consists of a variety of Sensors such as Radar, GPS, Lasers, LIDAR, and of course Cameras. One of the most important one being the IMU.

IMU, in short for Inertial Measurement Unit, is a device consisting of accelerometers and gyroscopes. It measures the G-Force and keeps track of the vehicle.

The vehicle has Advanced Control Systems built into it that interprets all the aforementioned sensory information. This helps the car to identify appropriate path to navigate, as well as detects obstacles and reads and processes Traffic signs such as STOP signs, Speed limits etc.

Why Autonomous Vehicles?

An autonomous vehicle, as the name suggests, does not depend on human input, it drives itself. What this does is it potentially eliminates human error, preventing accidents that could occur otherwise. Since they are capable of detecting other cars around them and communicate with them, collisions can be potentially avoided. Other advantages are

- Eliminates the need for a driver
- Possible reduction Traffic Congestion
- Smoother and Safer Rides
- Improve fuel efficiency

The Negatives!

The immediate cause of concern is reliability. Depending completely on a bunch of sensors isn't possible yet. Failure of a small sensor could lead to a catastrophic event.

- Jobs! Adopting Autonomous Vehicles means most drivers will end up Jobless. Hits economy, partially.
- Risks of getting hacked.
- Possible increase in Traffic congestion.
- Software Reliability.

The Development

The first self-sufficient car came from Carnegie Mellon University's Navlab and ALV projects in 1984.

Google has its own Autonomous cars in testing and these cars are tested primarily in suburban neighborhoods at slow speeds and run automatically less than 80% of their time. The test driver takes over 20% of the time.

Tesla – although capable of fully autonomous travel on highways and many urban situations, the manufacturer requires the human driver to remain alert and ready to take over at any moment.

Verdict

Autonomous Vehicles are very much in their early stages of development and testing. Auto-Pilot, Lane Assist, Parking Assist which have already been implemented on production cars are a sign that we have come a very long way in Artificial Intelligence. Autonomous Vehicles will definitely be a thing of the future but whether people accept fully autonomous vehicles is something only time will tell.

Nishanth Reddy K
EC DEPT
4TH Sem

Technical articles under Technology sharing club

Transparent Smartphone:

Many smartphones look the same from afar. I bet most of you own one that's thin, rectangular, and features a big screen. Boooring! A fully transparent conceptual smartphone, developed by Taiwanese company Polytron Technologies, gives me hope for a future full of fancy smartphones far different from the common designs seen today. As evidenced in the above image, several internal items such as the SIM card, SD card, and microphone can be clearly seen. As Polytron moves toward a more complete device, the company plans to shift many of those visible components to an opaquely shaded area at the bottom while hiding other items, such as the camera, with darker glass. That's not the complete story, though. Due to Polytron's Switchable Glass technology , the entire phone may appear opaque when not in use, and clear when powered on.
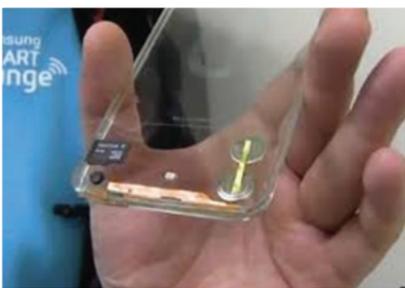
Polytron perhaps explains the now-you-see-it/now-you-don't display technology best: "When the power is off, the liquid crystal molecules are randomly oriented [way] that scatters incident light and the screen becomes opaque. When electricity is applied, the liquid crystal molecules line up, the incident light passes through, and the screen looks clear."

Rigil Gracious
Ec Dept
6Th Sem

"Quote Hanger"
indiatoday EDUCATION

"At each increase of knowledge, as well as on the contrivance of every new tool, human labour becomes abridged."
— Charles Babbage

'New Horizon Bytes' is for you and by you. Write-ups, photographs, illustrations and feedback are welcome from students and faculty of NHC-K, NHPUC, NHC-M, NHCE and NH B.Ed. Please make them brief (maximum 300 words) and e-mail to nhbytes@gmail.com