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Principal's Message

The MCA Department of Kristu Jayanti College is coming out with another issue of 'Technobytes' as part of the International Conference organized by the department. Let me compliment all the faculty members and students who worked towards this creative endeavor of applying your knowledge and translating it in to printed words, again harnessing the technology to record it in bits and bytes.

Every opportunity provided, created or explored during the controlled situation of an educational institution will take a long way in the making of a better career for you in a world of tremendous competition for plum jobs and opportunities. To have the creativity and talents of each of us harnessed and perfected is the key to stand out in the crowd. Creating our own niches and standing on a firm footing are long term goals we have to achieve through a concerted and planned career prospect. Hope the new issue of Technobyte is such a small step in the large canvass of your life.

Mobile Apps – A Game changer for Enterprises

The Mobile apps are the game changers for many companies.

We have seen it unfolding in front of our eyes -Business Mobile Apps are fast becoming a key strategy for companies looking to get more done with less. Companies of all sizes are using mobile apps now to stay competitive AND profitable AND likable.

But, a million dollar question for decision makers is - what justifies investment in a mobile strategy and what is the ROI that such an initiative can bring in? So, here goes.

Mr. Srinivas Bhopal
CEO,
Boston Technology
Corporation, USA

Your most important asset, your employees:
- Gives them anytime, anywhere access to information – Think Mobile catalogs, Mobile CRM, Mobile Inventory Lookup; the possibilities are many.
- Enhances Productivity – Think a location app that throws up relevant customer info when your salesperson is in their vicinity.
- Create a better work-life balance – For those times when an employee need not be tied to a desk to meet that 'all important deadlines'.

Your Customers:
- Client Engagement: You are where there are. Imagine a client that gets your sales and discount info as soon as he enters the store.
- Capture new data: With your mobile app in their hands, think of valuable buying pattern data that you can amass.

Your IT Team:
- Data Security: With BYOD all the rage now, your IT team will be glad you have a sound mobile strategy in place to manage and control all those un-owned devices.
- Streamline workflows: With apps easily integrating to your existing backend systems, what you will have is a simple flow of data throughout.

Finally, your brand:
- Stay competitive: Rules are changing fast in today's economy. Enterprise Mobility is key being agile, being aware and being where it matters.
- Enhance brand: In today's connected world, you need your brand out there where it matters. And mobile matters.

The time to start planning an enterprise mobile strategy, if you have not already, is NOW.

Current Event

Our Department is organizing an International Conference on Current Trends in Advanced Computing (ICCTAC) on February 20 - 21, 2014, in association with International Journal of Computer Applications (IJCA) and the Conference Proceedings will be published by IJCA. ICCTAC is a platform for exhibiting recent research and technical developments in the area of Computer Science, which includes Green, Grid, Cloud and Heterogeneous Computing. The Conference would provide an international forum for the presentation and discussion of the emerging technologies in the field of Computer Science and Information Technology.

Upcoming Events

Our Department is organizing a 2 day inter - collegiate National Level IT Fest "Shells 2014" which is an annual event. The objective of the fest is to shape our students into professionals processing actual work skills rather than having just academic qualification. It also provides a platform for students of other colleges to showcase their talents. This year the event is scheduled on March 20-21, 2014.

Dean's Message

We live in a world in which technology is omnipresent and technological innovations happen at an exponential rate. The volume, variety and velocity of digitized information circulating around the world are quite amazing. Digitization—the mass adoption of connected digital services by consumers, enterprises, and governments, has become a fundamental driver of economic growth and job creation the world over. The power of information technology to facilitate economic and social progress is limited by two challenges. Sustaining the pace of technological innovations and transforming this tremendous amount of information or data into meaningful and productive sources of knowledge are these challenges.

Being the students of technology, our responsibility is not just limited to becoming the early adopters of latest technologies, but to develop new technologies and redefine the existing ones to make life easy and better. While technological innovation continues at an exponential rate, human brain development remains steady in comparison. The more complex technology we produce, naturally, the more we need to simplify user experiences. The trend of 'simplexity' has evolved out of the increasing complexity of technology, which further creates the need to simplify the interfaces that can be used to improve the user experience. Sustaining the pace of technological development, developing new and better technologies and simplifying existing technologies require a culture of continuous creativity and innovation.

Innovation is the process that applies the creative idea to the development of a useful product, service, process, business model or practice. Thus creativity is the starting point of innovation. Within every individual, creativity is a function of three components – Expertise, Creative thinking skills and Motivation. Education plays a very important role in fostering these three critical components of creativity.

The first component is expertise which is technical, procedural and intellectual knowledge –the know how that takes individuals years to accumulate. It is basically the process of looking at problems and possibilities from many angles. Curricular and co-curricular activities undertaken by Dept of MCA at Kristu Jayanti College are targeted at widening the perspectives of students on contemporary technology related issues and challenges.

The second component - Creative thinking skills are defined as how people approach problems. People will be more creative if they are comfortable disagreeing with others while explaining and justifying their perspectives. The third and most important component of creativity is motivation. Motivation could be intrinsic or extrinsic. People who get motivated from within can be categorised as intrinsicically motivated. But the fear of failure and lack of confidence may hamper intrinsic motivation. This could be compensated by providing support and encouragement from outside (extrinsic motivation). Educational institutions have a vital role to play in providing extrinsic motivation to aspiring innovators.

Providing various platforms for exchange of ideas and knowledge is the best way of supporting creative people in their intellectual endeavours. Connecting and communicating with people having similar ideas and interests would expand your horizons of knowledge. This networking and knowledge sharing will lead to convergence of ideas which will get translated into concrete research outcomes.

The Dept. Of MCA undertakes curricular and co curricular initiates to promote the culture of creativity and innovation among the students and faculty. This newsletter is such a novel initiative which would help the faculty and students of our department to initiate thought provoking ideas and discussions. The fusion and diffusion of ideas happening through this newsletter would definitely enrich and enhance our pursuit of innovative excellence. The newsletter also includes a snapshot of all the important events and initiatives undertaken by the MCA Department. The success of this newsletter depends on the extent of your active involvement and contribution to this knowledge sharing process. I take this opportunity to congratulate and thank all the faculty and students who worked tirelessly to make this endeavour a grand success.

Fr. Augustine George
Dean of Sciences

MCA Programme at a Glance

The MCA department of Kristu Jayanti College of Management and Technology was established in the year 2004 with the objective of imparting technical education to aspiring youth and also to mould them into professionally competent workforce. At present there are 110 students in the department. As part of enriching the faculty resources, the teachers are encouraged to pursue research in different technical areas. Currently 7 teachers are pursuing their Ph.D., in various universities.

The autonomous curriculum is designed so as to help students develop strong software competencies and analytical and problem solving abilities – the requisite skills to prepare them for successful careers as software professionals. The course structure and contents are regularly updated. The learning environment is intense and stimulating.

The regular academic programme is supplemented by seminars, workshops, self-development, attitudinal Work shop, Soft Skills Training, Tech-Talk Series, Student Seminar Series, Communication sessions and aptitude reinforcement modules. These sessions are conducted on a continuing basis by experts from industry. The students and the faculty are kept exposed to the latest developments in the industry. As part of knowledge sharing, peer to peer teaching is motivated amongst the students. The academic transactions are rigorous and innovative.

The special features of the department include the successful conduct of National Conference on Current Trends in Advanced Computing (CTAC) once in a year. The three editions of conferences were sponsored by ISRO. The department organized the International Conference on Current Trends in Advanced Technology (ICCTAC) in association with International Journal of Computer Applications (IJCA) during 15th-16th February 2013. This year the second edition of the ICCTAC is conducted during 20th-21st February 2014. The department is collaborated with Computer Society of India (CSI) for organizing seminar, workshops.

Intra and Inter-Collegiate Fests are conducted every year as a part of experiential learning. Industrial visits are also arranged every year. In the current academic year 2013-14, our students participated in eight Inter-collegiate IT Fests at National, State level competitions. They bagged seven Championship Trophies and one Runners-up Trophy.

The value added programs like CCNA, Dot Net, Web Designing and J2EE, are conducted to enhance the students' knowledge in par with the industry requirement. In this academic year students have been placed and got internship in various leading IT Companies.

Prof. R. Kumar
Head, Dept. of MCA

Can cloud computing be secure? Six ways to reduce risk and protect data

Ms. Mokshalakshmi, Lecturer, Dept of CS

As traditional perimeters disappear, organizations need to adopt new measures to ensure data and devices are safe in the cloud. One observation about those clouds – they were constantly morphing. They had no fixed edge as they billowed and blew across the sky. That lack of an edge that clearly defines the cloud environment your organization may be considering sending your data to can make it seemingly difficult to protect. In fact, security is cited in numerous studies as the number one inhibitor to cloud adoption. Think about possible points of entry for an attacker in a cloud environment. A customer uses an insecure mobile phone to access your network, you can be attacked. A contractor on your network uses a web application that has an embedded vulnerability, a back door that is not protected, you can be attacked. A database administrator at the cloud provider shares a password with someone your data can be breached. These represent just some of the scenarios that keep the chief information security officer awake at night.

Securing the security perimeter of the traditional data center was made relatively straightforward with the help of firewalls and intrusion detection systems. When we traded terminals for PCs, anti-virus software helped keep those devices safe.

With employees, customers, business partners, suppliers and contractors increasingly accessing corporate applications and data with mobile devices from the cloud, protecting the edge of the network is no longer enough. As the traditional perimeter disappears, here are six things to do to help ensure security in the cloud.

1. Know who's accessing what : People within your organization who are privileged users, – such as database administrators and employees with access to highly valuable intellectual property – should receive a higher level of scrutiny, receive training on securely handling data, and stronger access control.

2. Limit data access based on user context: Change the level of access to data in the cloud depending on where the user is and what device they are using. For example, a doctor at the hospital during regular working hours may have full access to patient records. When she's using her mobile phone from the neighborhood coffee shop, she has to go through additional sign-on steps and has more limited access to the data.

3. Take a risk-based approach to securing assets used in the cloud: Identify databases with highly sensitive or valuable data and provides extra protection, encryption and monitoring around them.

4. Extend security to the device: Ensure that corporate data is isolated from personal data on the mobile device. Install a patch management agent on the device so that it is always running the latest level of software. Scan mobile applications to check for vulnerabilities.

5. Add intelligence to network protection: The network still needs to be protected – never more so than in the cloud. Network protection devices need to have the ability to provide extra control with analytics and insight into which users are accessing what content and applications.

6. Build in the ability to see through the cloud: Security devices, such as those validating user IDs and passwords, capture security data to create the audit trail needed for regulatory compliance and forensic investigation. The trick is to find meaningful signals about a potential attack or security risk in the sea of data points.

Adding a layer of advanced analytics – a security intelligence layer : brings all of this security data together to provide real-time visibility into the both the data center and the cloud infrastructure.

In the same way that clouds in the sky have an ever-evolving perimeter, so does cloud computing. Security is an important factor in cloud deployments and by building in the security capabilities described in these six steps, organizations can better manage and protect people, data and their devices in the cloud.

Wireless Sensor Network for Data Center Cooling implementing GENOMOTES

Mr Prathap.G, Lecturer, Dept of CS

"Our system faces several challenges for reliable data collection. Low power wireless radios like IEEE 802.15.4 are known to have high bit-error rates compared to other wireless technologies. At the same time, data centers impose a tough RF environment due to the high metal contents of servers, racks, cables, railings, and so on. Furthermore, the high density of wireless nodes in RACNet — several dozen within the same communication hop increases the likelihood of packet collisions".

Genomotes are sensor modes we specifically developed for the DC Genome project. To meet the requirements of low cost of ownership, we chose IEEE 802.15.4 wireless technology over wired and Wi-Fi. Wireless nodes give the advantage of easy installation and ammunition to network administrative boundaries. Compared to WiFi, 802.15.4 radio is lower power, has a simpler network stack, and requires fewer processing cycles. Thus we are able to reduce total cost by using simpler microcontrollers. Although other similar wireless sensor designs are available on the market (such as SUNSPOT, Tmote, and SynapSense nodes), Genomotes are customized to simplify the installation process and reduce the number of wireless nodes in the network without sacrificing flexibility and scalability. Specifically, design of two classes of Genomotes, master motes and slave sensors. A Genomote master has a CC2420 802.15.4 radio, 1 MB flash memory, and a rechargeable battery. It is typically installed at the top of a rack. In addition to the radio, it has a RS232 socket. Each slave Node has two serial ports, which are used to connect multiple slaves to the same head, forming a daisy chain that spans the height of a rack. Slave sensors are equipped with various sensors, such as temperature, humidity, and so on. Since they share the same serial communication protocol, different kinds of sensors can be mixed and matched on the same chain. Without a radio, external memory, nor battery, slaves are about half the cost of the master motes. The master periodically collects the slaves' measurements using a simple polling protocol and stores them in its local flash. DC Genome gateways then periodically retrieve stored measurements from each master using a reliable Data Collection Protocol (rDCP). A chain of four nodes can be powered at any mote via a single server's USB port and the low power circuit design. This hierarchical design has several benefits. First, separating data acquisition and forwarding means that the master can work with slaves covering different sensing modalities. Second, because the ratio of slaves to masters is high, simplifying the slave's design minimizes the overall deployment cost, especially for large-scale networks. Finally, the design reduces the number of wireless nodes in the network that compete for limited bandwidth, while allowing individual racks to be moved without tangling wires.

Apache Hadoop Steers Real-time at Facebook: A Close Collaboration in Cloud-era & Operational experience with Big Data

Mr.Rajesh
Lecturer, Dept of CS

Facebook recently deployed Facebook Messages, its first ever user-facing application built on the Apache Hadoop platform. Apache HBase is a database-like layer built on Hadoop designed to support billions of messages per day. Hadoop is an open-source project administered by the Apache Software Foundation. Hadoop's contributors work for some of the world's biggest technology companies. That diverse, motivated community has produced a genuinely innovative platform for consolidating, combining and understanding data. Enterprises today collect and generate more data than ever before. Relational and data warehouse products excel at OLAP and OLTP workloads over structured data.
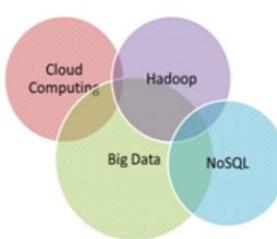
Recently, a new generation of applications has arisen at Facebook that require very high write throughput and cheap and elastic storage, while simultaneously requiring low latency and disk efficient sequential and random read performance. MySQL storage engines are proven and have very good random read performance, but typically suffer from low random write throughput. It is difficult to scale up our MySQL clusters rapidly while maintaining good load balancing and high uptime. Administration of MySQL clusters requires a relatively high management overhead and they typically use more expensive hardware.

You can add or remove servers in a Hadoop cluster at will; th e system detects and compensates for hardware or system problems on any server. Hadoop, in other words, is self-healing. It can deliver data and can run large-scale, high-performance processing jobs in spite of system changes or failures.

Hadoop, however, was designed to solve a different problem: the scalable, reliable storage and analysis of both structured and complex data. As a result, many enterprises deploy Hadoop alongside their legacy IT systems, allowing them to combine old and new data sets in powerful new ways. Technically, Hadoop consists of two key services: reliable data storage using the Hadoop Distributed File System (HDFS) and high-performance parallel data processing using a technique called Map Reduce. Hadoop runs on a collection of commodity, shared-nothing servers.

Apache Hadoop is a top-level Apache project that includes open source implementations of a distributed file system and MapReduce that were inspired by Google.'s GFS and MapReduce projects. The Hadoop ecosystem also includes projects like Apache HBase which is inspired by Google's BigTable, Apache Hive, a data warehouse built on top of Hadoop, and Apache ZooKeeper, a coordination service for distributed systems.

At Facebook, Hadoop has traditionally been used in conjunction with Hive for storage and analysis of large data sets. Most of this analysis occurs in offline batch jobs and the emphasis has been on maximizing throughput and efficiency. These workloads typically read and write large amounts of data from disk sequentially. As such, there has been less emphasis on making Hadoop performant for random access workloads by providing low latency access to HDFS. Instead, we have used a combination of large clusters of MySQL

databases and caching tiers built using memcached. In many cases, results from Hadoop are uploaded into MySQL or memcached for consumption by the web tier.

Given our high confidence in the reliability and scalability of HDFS, we began to explore Hadoop and HBase for such applications. HDFS and HBase to enable them to scale to Facebook.'s workload and operational considerations and best practices around using these systems in production.

WHY HADOOP AND HBASE

The requirements for the storage system from the workloads are:
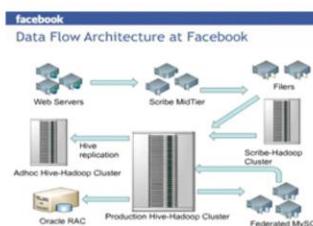
1. Elasticity

2. High write throughput

3. Efficient and low-latency strong consistency semantics within a data center

4. Efficient random reads from disk

5. High Availability and Disaster Recovery

6. Fault Isolation

7. Atomic read-modify-write primitives

8. Range Scans

It is also worth pointing out non-requirements:
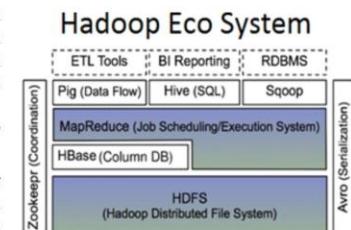
1. Tolerance of network partitions within a single data center

2. Zero Downtime in case of individual data center failure compromise that we are willing to make given the low occurrence rate of such events.

3. Active-active serving capability across different data centers

Conclusion

After considerable research and experimentation, Hadoop and HBase has been chosen as the foundational storage technology for these next generation applications. The decision was based on the state of HBase at the point of evaluation as well as our confidence in addressing the features that were lacking at that point via in-house engineering. HBase already provided a highly consistent, high write-throughput key-value store. HBase is massively scalable and delivers fast random writes as well as random and streaming reads. It also provides row-level atomicity guarantees, but no native cross-row transactional support. From a data model perspective, column-orientation gives extreme flexibility in storing data and wide rows allow the creation of billions of indexed values within a single table. HBase is ideal for workloads that are write-intensive, need to maintain a large amount of data, large indices, and maintain the flexibility to scale out quickly.

Nature Inspired Computing

Ms.Vani Chakraborty
Lectur, Dept of CS

Ature inspired computing is a new and emerging area in technology. Many techniques have been developed in this area and there are profound applications too. Man has always been inspired by nature. Nature behaves in many different ways in various situations to solve complex problems. Nature inspired computing aims to develop new computing techniques and ideas after looking at how nature behaves and what can be learnt from it.

Nature inspired computing can be divided into three main branches.

1. Computing inspired by nature: It makes use of nature as an inspiration for problem solving in computing. This area involves in developing algorithms for solving complex problems deriving inspiration from nature.
2. Simulation of nature by means of computing: This process aims at creating something which mimics the natural phenomena. Using this we can understand nature and its working better.
3. Computing with natural materials: It makes use of natural materials to perform computation.

There are many fields of research that compose these three branches. Some of them are artificial neural network, swarm intelligence, artificial immune system, evolutionary computation, DNA computing and so on.

The advancement of computer science and the remarkable growth of computing power have made the emergence of Nature inspired computing possible. NIC techniques are applied in many different fields like physics, management, engineering, economy etc. Algorithms inspired by ant colonies that exhibit swarm intelligence and find optimal paths to food sources have already been developed. DNA, the most popular biological model, has inspired researchers to work on DNA computing. Whether the models are swarm, colonies or any other natural metaphors, software agents are suitable for modeling extremely complex and dynamic systems. A software agent is a piece of software that acts for a user or other program. These software agents are capable of taking independent action in open, unpredictable environment. Autonomous software intelligent agents work on behalf of users to accomplish any particular work.

Software agents differ from traditional programs in many ways. Software agents are personalized, social, continuously running and semi-autonomous. Software agents must possess the following characteristics.

- Reactivity: the ability to selectively sense and act.
- Autonomy: goal-directedness, proactive and self-starting behavior.
- Collaborative behavior: can work in collaboration with other agent to achieve a common goal.
- "Knowledge-level" communication ability: the ability to communicate with human and other agents with language more resembling human-like speech than symbol-level protocols.
- Inferential capability: can act on abstract task specification using prior knowledge of general goals and preferred methods to achieve flexibility.
- Temporal continuity: persistence of identity and state over long periods of time.
- Personality: the capability of manifesting the attributes of a believable character such as emotion.
- Adaptivity: being able to learn and improve with experience.

In general autonomous entities of NIC have what is called ADEAS(Autonomous, Distributed, Emergent, Adaptive, Self-organized)characteristics. One who expects solutions from nature has to first observe it carefully. List the behaviors observed so far and try to develop a working model based on it.

Nature inspired techniques can be applied to solve wide range of problems. They are so adaptable that they can deal with unseen data. They are capable of learning. They can handle incomplete data and work in a decentralized fashion. Nature inspired computing has taught us to think 'naturally' about computing and computationally about nature.

MPEG – 7

Ms. Aishwarya
Lecturer, Dept of CS

The Moving Pictures Experts Group shortened MPEG is part of the International Standards Organization (ISO), and defines standards for digital video and digital audio. The original task of this group was to develop a format to play back video and audio in real time from a CD. Temporarily the demands have raised and beside the CD the DVD needs to be supported as well as transmission equipment like satellites and networks. All this operational uses are covered by a broad selection of standards. Well known are the standards MPEG-1, MPEG-2, MPEG-4 and MPEG-7.

Multimedia information becomes available from many sources; various people would like to use this information for many purposes. This puzzling condition led to the need for a solution that rapidly and powerfully searches for and filters countless types of multimedia material that's exciting to the user. For example, finding information by rich-spoken queries, hand-drawn images, and humming improves the user-friendliness of computer systems and finally addresses what most people have been expecting from computers. For professionals, a new generation of applications will enable high-quality information search and recovery.

Every standard provides levels and outlines to support special applications in an optimized way. It's clearly much more fun to develop multimedia content than to index it. The amount of multimedia content available -- in digital archives, on the World Wide Web, in broadcast data streams and in personal and professional databases -- is growing out of control. But this enthusiasm has led to increasing difficulties in accessing, identifying and managing such resources due to their volume and complexity and a lack of adequate indexing standards. The large number of recently funded DLI-2 projects related to the resource discovery of different media types, including music, speech, video and images, indicates an acknowledgement of this problem and the importance of this field of research for digital libraries.

MPEG-7 is being developed by the Moving Pictures Expert Group (MPEG) a working group of ISO/IEC. Unlike the preceding MPEG standards (MPEG-1, MPEG-2, and MPEG-4) which have mainly addressed coded representation of audio-visual content, MPEG-7 focuses on representing information about the content, not the content itself.

The aim of the MPEG-7 standard, formally called the "Multimedia Content Description Interface", is to provide a rich set of standardized tools to describe multimedia content.

DIATHESIS - Voice Browser

Ms. Dhanamalar
Lecturer, Dept of CS

A Voice Browser is a "methodology which understands a (voice) mark-up language and is skilled of generating voice output and understanding voice input, and maybe other input/output." The point that the system deals with speech is evident, given the first word of the name, but what makes a software system that interacts with the user through speech a "BROWSER". The information that the system uses is dynamic and comes anywhere from the Internet. From a client perception, the impulse is to offer a service related to graphical browsers of HTML and related technologies today, but on devices that are not equipped with full-browsers or even the screens to support them.

Necessities of Grammar Demonstration

It explains a speech recognition grammar specification language that will be generally useful through a variety of speech platforms used in the situation of a dialog and synthesis mark-up environment."

NLP Requirements

It creates a ordered list of necessities for natural language processing in a voice browser environment. The data that a voice browser uses to create a dialog can differ from a rigid set of commands and state transitions, whether declaratively and procedurally stated, to a dialog that is created dynamically from information and controls about the dialog itself. The NLP requirements document describes the requirements of a system that takes the latter method, using an example paradigm of a set of tasks operating on a frame-based model. Slots in the frame that are optionally filled guide the dialog and provide contextual information used for task-selection.

Speech Synthesis Markup Requirements

It creates a ordered list of requirements for speech synthesis markup which any proposed markup language should address. A text-to-speech system, which is usually a stand-alone module that does not actually "understand the meaning" of what is spoken, must rely on hints to produce an utterance that is natural and easy to understand, and moreover, suggests the desired meaning in the listener. In addition to these prosodic elements, the document also describes issues such as multi-lingual capability, pronunciation issues for words not in the lexicon, time-synchronization, and textual items that require special preprocessing before they can be spoken properly .

Ranorex-Android Application Testing tool

Mr.G.Ramanathan
Lecturer, Dept of CS

Ranorex provides modularization features using which the related steps of the test code/recorded test case can separated into modules, and these modules can be reused to createaltogether new test cases. The modularization capability is taken a step further by additionof features that enable users to specify parameters for each modulegroup providing more flexibility to the user in organizing the test cases.One of the few tools that provide adequate support for test automation and test management is Ranorex.

Appreciated Features

No wastage of time in creation of test cases

- Ranorex provides support for creating script-less test cases. You can just record a scenario and a test case is created.
- It also provides support for coding the test cases in C# or VB.Net which are very commonly used languages. Using this feature the tester can add on to the functionality of the test cases created by recording a scenario, if required.

Test automation support for a wide range of technologies

- The Desktop Applicationsdeveloped in the following languages can be tested - .NET (C#, VB.NET), WPF (XAML), Win32, MFC, Java, NI Lab Windows etc
- Ranorex provides support for 3rd Party Controls like Infragistcs, DevExpress, QT, SAP GUI controls etc.
- Applications based on the following Web Technologies can be tested - AJAX, Javascript, Adobe Flash/Flex, Silverlight, testing (validation points on HTML tags), HTML5 etc
- It also supports Cross Browser Testing on the following browsers - Internet Explorer 6.0 and higher, Mozilla Firefox, Google Chrome, Apple and Safari. The test cases generated on one browser can be easily ported onto the other and tested. It also supports embedded browsers
- The PlatformsSupported by Ranorex are- Windows 2003 Server, Windows XP, Windows Vista, Windows 2008 Server, Windows 7, and Windows 8 Development Preview

Excellent Object Recognition Capabilities

A RanoreXPath is associated with all the testable elements appearing in the application under test. A RanoreXPath expression is a unique identifier of UI elements within a desktop or a web application consisting of: Adapters, technology dependent Attributes and Values. As shown in the figure below.

Main components of a RanoreXPath expression

- Ranorex Spy is the tool that provides the mapping information of the elements to their RanoreXPath expression. Under standing how the Path and object recognition works in Ranorex is a key component of creating robust UI automation tests.

Ranore XPath

- Helps in locating an object on the Application under Test.
- With RanoreXpath you can navigate an element like you are navigating a file. It maintains a parent child relationship.
- You can modify and adapt the information available to automate complex dynamic interfaces.
- It can be used as a query to filter UI elements.
- It is programmed to define the regular expression on the basis of attributes of the objects that are less likely to change in future so that more robust test cases can be created, like in case of a webpage instead of a URL a domain name appears on the RanoreXPath expression etc.

Support for Image based recognition

Ranorex supports image based recording in addition to the standard object (UI element) based recording. The screen shots using captured using Ranorex image recognition capability can also be added to the log files for better understand-ability.

Reusability - soul of the tool

It appears that the tool has been designed keeping in mind the re-usability principle

Test case modularization: The related steps of the test code can separated into modules, and these modules can be reused to create new test cases. Also this modularization helps in making the test case more intuitive and understandable.

Separation of test code and test data: The values that are to be used for a particular widget say a text box can also be picked up from a file stored separately. That file can be a csv file, an excel file or a SQL connector.

Provision for a test case repository:Ranorex Object Repository can be used to manage GUI objects for recordings or test automation code. The RanoreXPath identification information and test automation can be separated with the help of a repository thereby significantly reducing the time to maintain the tests. The repositories created for a test case can be re-used for writing more test cases on the same AUT.

A glimpse into the future of robotic technology

Shinto Peter, VI MCA

Replicating human behavior in robots has long been a central objective of scientists working in the field of information and communication technologies (ICT).However, a major obstacle towards accomplishing this has been controlling the interaction between movement and vision. Indeed, achieving accurate spatial perception and smooth visual-motor coordination have proved elusive. Tackling this issue was the main aim of an EU-funded project EYESHOTS ('Heterogeneous 3-D perception across visual fragments'). By simulating human learning mechanisms, the project successfully built a prototype robot capable of achieving awareness of its surroundings and using its memory to reach smoothly for objects.

The implications of this breakthrough are not limited to potential improvements in robotic mechanics - they will also help to achieve better diagnoses and rehabilitation techniques for degenerative disorders such as Parkinson's disease.

The project began by examining human and animal biology. A multi-disciplinary team involving experts in robotics, neuroscience, engineering and psychology built computer models based on neural coordination in monkeys (very similar to how human coordination works).

The key was recognizing that our eyes move so quickly that the images produced are in fact blurred - it is up to the brain to piece together these blurred fragments and present a more coherent image of our surroundings. Using this neural information, the project built a unique computer model that combined visual images with movements of both eyes and arms, similar to what occurs in the cerebral cortex of the human brain.

In effect, the project was built on the premise that being fully aware of the visual space around you can only be achieved through actively exploring it. This, after all, is how humans learn to understand the physical world - by looking around, reaching out and grabbing things.

In everyday life, the experience of the 3D space around us is mediated through movements of the eyes, head and arms, which allow us to observe, reach, and grasp objects in the environment. From this perspective, the motor system of a humanoid robot should be an integral part of its perceptual machinery.

The end result of this approach is a humanoid robot that can move its eyes and focus on one point, and even learn from experience and use its memory to reach for objects without having to see them first. The robotic system comprises a torso with articulated arms and a robot head with moving eyes.

Watch Dogs

Mr. Hebin Jose, IV MCA

Watch Dogs is an upcoming open world action adventure video game developed by Ubisoft Montreal and published by Ubisoft. It is due for release between April and June of 2014. The Watch Dogs video game is supported by Microsoft Windows, PlayStation 3, PlayStation 4, Xbox 360, and Xbox One consoles.

Watch Dogs is set in a fictional Chicago where most city functions are controlled by a central operating system, it is called the ctOS. Players can break into that operating system and take control of the infrastructure of the city itself. They can hack into the network and change traffic lights from red to green and open secure doors with the swipe of a finger on their in game phone and it can raise and lower the iconic bridges that span a simulated Chicago River. The single player story is told through Aiden Pearce, a highly skilled hacker, who can hack into various electronic systems. The game features an online multiplayer element. The multiplayer experience is a one on one interaction between two human characters in which one player secretly joins the single player experience of another player. The first player is tasked with finding the second player.

Once the first player finds the second player the objective is updated. The first player's new objective contains installing a back door virus into the second player's smartphone and then hiding that virus siphons off a portion of the data the second player has collected. This stolen information increases the first player's power once they return to their own single player session. The second player must stay within a certain radius of the first player for the download to progress. Once the download is started the second player is alerted that they have been hacked and that data is stealing from their smartphone. Once the second player has been alerted of the intrusion their objective is to locate the first player who is stealing their data and either kill the first player or cause them to escape to such a distance that the download is stopped.

The storyline of Watch Dogs game is built around the concept of information warfare and the data being interconnected. The game will follow a man named Aiden Pearce, he is a highly skilled hacker described as a person who uses both fists and wits.

Ubisoft Montreal started development work on Watch Dogs in 2009.Ubisoft Montreal's director Jonathan Morin noted that Watch Dogs is designed to go beyond the limits of today's open world games referencing its use of information and allowing players to control the entire city through its hacking mechanics. Watch Dogs uses a new engine called Disrupt. It is made in Ubisoft Montreal specifically for Watch Dogs. The game's creators worked with Russian anti-virus Kaspersky Lab to make hacking more realistic.

Ubisoft is also developing a Watch Dogs film along with Assassin's Creed, Far Cry, and Raving Rabbids films. Sony announced to the press conference that Ubisoft will work with Columbia Pictures and New Regency to make the film.

Internet of Things

Mr. Anish PD., IV MCA

The Internet of Things or IOT refers to uniquely identifiable objects and their virtual representations in an Internet-like structure. The Internet of Things (IoT) is a scenario in which objects, animals or people are provided with unique identifiers and the ability to automatically transfer data over a network without requiring human-to-human or human-to-computer interaction. IoT has evolved from the convergence of wireless technologies, micro-electromechanical systems (MEMS) and the Internet.

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."

Kitchens ordering food, washing machines turning on when energy demand on the grid is lowest, cars calling emergency services after an accident - all that could be part of an "Internet of Things."

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. So far, the Internet of Things has been most closely associated with machine-to-machine (M2M) communication in manufacturing and power, oil and gas utilities. Products built with M2M communication capabilities are often referred to as being smart.

Functional programming

Manjeet Kumar, IV MCA

In computer science, functional programming is a programming paradigm, a style of building the structure and elements of computer programs, that treats computation as the evaluation of mathematical functions and avoids state and mutable data. Functional programming emphasizes functions that produce results that depend only on their inputs and not on the program state—i.e. pure mathematical functions. It is a declarative programming paradigm, which means programming is done with expressions.

Functional Programming, however, is not about mathematics but about abstraction and reducing complexity: as such, it provides a powerful paradigm in which to tackle complex, real-world programming tasks. Recursion is heavily used in functional programming as it is the canonical and often the only way to iterate. Functional Programming Languages, which support this style of programming, provide at least some of the following features:

*   FirstClass functions
*   HigherOrderFunctions
*   LexicalClosures
*   PatternMatching
*   SingleAssignment
*   LazyEvaluation
*   GarbageCollection
*   TypeInference
*   TailCallOptimization
*   ListComprehensions
*   Monadic effects

This alone has several implications on the style of programming :-
* Since functions cannot modify arguments, they need to be able to return more than one piece of information: therefore tuples and lists are widely used, in Functional Programming Language.
* Since variables, even within functions, are immutable, writing loops using counters is impossible ; the dominant style of algorithm is therefore recursive.
* Since functions cannot modify variables, they cannot store state between successive calls. Thus data and functions are kept completely separate, which is the opposite philosophy to Object Oriented encapsulation.
* The emphasis is on writing pure, generic functions which could work in any environment, and choosing actual program behaviour at the top of the call hierarchy. This is in contrast to Object Oriented programming which encourages pushing behaviour into class methods and making decisions low down by overriding them in subclasses.

The following table shows which languages support functional programming:-

Language	Closures	Functional
C	No	No
Pascal	No	No
C++	Yes	No
Java	Yes	No
Modula-3	Yes	No
Python	Yes	No
Ruby	Yes	No
D (2.0)	Yes	No
Ocaml	Yes	Yes
Erlang	Yes	Yes
Haskell	Yes	Yes

Functional programming vs Object oriented programming
* Object-oriented languages are good when you have a fixed set of operations on things, and as your code evolves, you primarily add new things. This can be accomplished by adding new classes which implement existing methods, and the existing classes are left alone.
* Functional languages are good when you have a fixed set of things, and as your code evolves, you primarily add new operations on existing things. This can be accomplished by adding new functions which compute with existing data types, and the existing functions are left alone.

The functional programming languages such as Common Lisp, Scheme, Clojure, Racket, Erlang, OCaml, Haskell, Scala and F# have been used in industrial and commercial applications by a wide variety of organizations.

Pervasive computing

Nijo Anthony, IV MCA

Abstract: To introduce the pervasive computing, an upcoming trend in the field of information technology and its salient features.

Introduction:

Signals are found or surrounded in every nook and corner of the atmosphere. No one can escape from these signals. These signals are not mere signals or unwanted things but they are real and useful data. Then why do we restrict ourselves to make use of this data in a restricted area, Like in our house, or in workplace? If data or computing is available everywhere we need to make use of it in an efficient way. Pervasive computing is an upcoming trend in the field of information technology where mobility of data as well as its usage is done effectively and efficiently.

Mark Weiser in 1988 coined the term 'ubiquitous computing', it was a concept where computing is made available everywhere and anytime with natural interaction paradigm. Now it is called pervasive computing. In contrast to desktop computing, ubiquitous computing can occur using any device, in any location, and in any format. He found out that the GUI- based and menu driven are inappropriate and inadequate to ubiquitous model. So a natural interaction model has to be emerged.

Now the question is, are we not in a pervasive computing environment now? Through mobile and cloud technologies are we made it possible? Yes, in many ways we are already living in an ubicomp world. Through mobile and cloud technologies somewhat we made it. A fully robust ubiquitous computing has yet to emerge. What technology makes ubiquitous computing or pervasive computing a real computing? The underlying technologies that support ubiquitous computing include Internet, advanced middleware, operating system, mobile code, sensors, microprocessors, new I/O and user interfaces, networks, mobile protocols, location and positioning and new materials.

Salient features

Salient features of pervasive computing are the following.

Extending Computing Boundaries:

While traditional computing encompassed hardware and software entities, pervasive computing extends the boundaries of computing to include physical spaces, building infrastructures, and the devices contained within. This aims to transform dull spaces into interactive, dynamic, and programmable spaces that are coordinated through a software infrastructure and populated with a large number of mobile users and devices.

Invisibility and non-intrusiveness:

In current computing models, computers are still the focus of attention. In effect, people have to change some of their behavior and the way they perform tasks so that these tasks can be computerized. To boost productivity, it is important that computing machinery disappear and leave the spotlight. Computers should blend in the background allowing people to perform their duties without having machines at the center of their focus.

Creating smart and sentient spaces:

A dust of invisible embedded devices and sensors are incorporated to turn physical spaces into active, smart surroundings that can sense, "see," and "hear," effectively, making the space sentient and adaptable. Ultimately, the space should become intelligent enough to understand users' intent and become an integral part of users' everyday life.

Context awareness:

A pervasive computing environment should be able to capture the different context and situational information and integrate them with users and devices. This allows the active space to take on the responsibility of serving users and automatically tailoring itself to meet their expectations and preferences.

Mobility and adaptability:

To be truly omnipresent, the pervasive computing environment should be as mobile as its users. It should be able to adapt itself to environments with scarce resources, while being able to evolve and extend once more resources become available.

Conclusion:

Even though we have many challenges to overcome, to make this happen. Hope in the coming future all this will come true. All these features of pervasive computing make the future world a real virtual world. There will be an era where human beings really live in a sophisticated virtual wonderland. So let's hope for the best.

Service

Mr.Vineeth, IV MCA

Oh I dint know that!! Now that's a common phrase that's used by most of us in so many situations in our daily life but these days it's mostly used by people to describe something that's related to technology. The field of IT is so vast that there are so many technologies that exist today that could ease out so many of our day to day situations but unfortunately for many of us we still go through the manual and regular methods of doing things and eventually these many available technologies are used by the very few people who know about them.

The IT field has such a huge potential to entirely change the way our world works and yet the impact expected has still not happened the way it could have except in the very few fields of social networking, entertainment and may be medicine but what about everything else?? It's still left lurching in the dark.

There was this women who started her own business she bought the many systems required and purchased all the required software's and equipment's and started her business with high expectations but unfortunately she couldn't reap the dividends she had spent on setting up her business in the first place now let's try to rewind a bit and may be readjust a few things here what if she hadn't purchased most of the things she did and instead had just borrowed them by using services of cloud computing technology she could have saved a lot money at the least but unfortunately for her she didn't know about this service giant. And later when she was explained about this service all she could say was "Oh I dint know that!!" Just like her there are many out there who don't really use the many services that the various technologies could offer and how much it could help them but they can't be blamed because they don't know.

Now there's something that we as IT professionals could do here I think it's time we extend our ambits and perhaps occasionally move away from the comforts of our work places and computers and out into the non IT world and do our little bits possible to spread the real meaning of IT technology and extract its hidden potential and explain it to the general public it could be the social work that we as members of the IT family could do. Imagine the impact we could create in society we could ease the life's of thousands and doing this could really spread the true meaning and potential of IT.

So why don't we pause a bit and maybe not just settle our IT skills for our computers and clients but also to the many to whom IT could be of much greater service help and meaning.

Students Achievements

Academic Achievements:

i. Ms. Pheba Abraham and Ms. Laiby Philip of V MCA attended a Seminar on "SAP Global Career" conducted by eDrishyaa SAP organized eAcademy on 31st August, 2013

ii. Ms. Pheba Abraham and Ms. Laiby Philip shared their knowledge and experience gained during their visit to eDrishyaa on the topic SAP Global Career to their peers on 03rd September, 2013.

iii. Mr. Dennis, Ms. Sumi, Ms. Amitha and Ms. Biya students of V MCA Students conducted a workshop on Web browser testing tool – Selenium to their peers on 07th November 2013.

iv. Mr. Souma Kumar Paul submitted a project on "Guardian Call Logger" - An Android App, which monitors calls and analyze prioritized and unnecessary calls, with complete statistics @ Ignite 2013 – An inter collegiate IT fest organized by Marian College, Kuttikkanam, Kerala on 12th Nov 2013

v. Mr. Baby K. Jojo, Mr. Rahul and Mr. Souma Kumar Paul presented a paper entitled "Magnus Space" - A floppy drive with an extended space and based on new technology like helium filled disk replacing traditional magnetic tape disks @ Ignium – an inter collegiate IT fest organized by PESIT, Bangalore on 30th Oct 2013

vi. Mr. Ashwin and Mr. Souma Kumar Paul presented a paper entitled "Steganography" - image embedding and hiding data used over traditional cryptography @ Anvaya 2013 – National Level Technical Symposium conducted by Ethiraj College, Chennai on 02nd Sept 2013.

vii. Mr. Souma Kumar Paul and Mr. Manjeet Kumar developed an on the spot project "Joshiana Score Card" - A standalone desktop application to manage score cards @ Joshiana – an inter collegiate IT fest organized by St. Joseph Engineering College, Mangalore.

viii. Mr. Dennis, Mr. Bibin, Ms. Sumi, Ms. Amitha and Ms. Biya students of V MCA Students conducted a workshop on Web Browser Testing Tool – Selenium to the I and III Sem Students on 16th November 2013.

Achievements in Co- curricular activities:

Inter-college Fests participated : 08
Prizes Won : 43
Overall Championships : 07
Runners up : 01

Sl. No.	Date of the Event	Title of Fest	Organized by and Venue	Overall Position & Status
1	27th & 28th Aug, 2013	Computantra 2013	Presidency College , Bangalore	Overall Winners
2	02nd & 03rd Sept, 2013	Anvaya 2013	Ethiraj College, Chennai	Overall Winners
3	10th & 11th Sept, 2013	Gateways 2013	Christ University, Bangalore	Overall Winners
4	27th Sept 2013	Resolutions	CMRIT, Bangalore	Overall Winners
5	30th Sept & 01st Oct, 2013	Joshiana 4.0	St. Joseph Engineering College, Mangalore	Runners
6	30th Oct, 2013	Mavrick 2013	T John College, Bangalore	Overall Winners
7	30th & 31st Oct, 2013	Ignium 2013	PESIT, Bangalore	Overall Winners
8	12th & 13th Nov, 2013	Ignite 2k14	Marian College, Kuttikkanam, Kerala	Overall Winner "Best Gang"

Industry Mentorship Programme

To hone the technical skills demanded by the industry, the Department of MCA introduced the Technical Communities to provide sound technical platform and the required knowledge base for students to meet the contemporary challenges in the Industry by exposing them to wide array of cutting edge technologies. As an intensive support service towards Technical communities the Department unleashed the innovative thought process of introducing Industry Mentorship Programme [IMP] for students from this academic year.

The Industry Mentorship Programme [IMP] is the collaborative effort sharing programme both in terms of time and knowledge by the Mentor and an in-house faculty member with maximum of three Students on their field of interest. Mentors will be sharing their knowledge through offline or online streams and inviting the students to visit their organization for seminar or any kind of technical discussions. Students will be completing their assignment work assigned by their respective mentors in a stipulated time monitored by the in-house faculty.

Placement News

S.No	Name	Company
1	Vinod Krishnan	ITC Infotech,Bangalore
2	Kapil.K.U	JMR Technologies,Kozikode,Kerala
3	Geomon Joseph	JMR Technologies,Kozikode,Kerala
4	Sagar Ignitios	JMR Technologies,Kozikode,Kerala
5	Prince Thomas	Aditi ,Banagalore
6	Prashanth Mathew	Aditi ,Banagalore
7	Acsha susan mathew	Aditi ,Banagalore
8	Anil	ITC Infotech,Bangalore(Danske)
9	Jenin	Fidelity, Bangalore
10	Cyril Varkey	Fidelity, Bangalore
11	Sherin Rappai	Fidelity, Bangalore
12	Dilip Jacob	Fidelity, Bangalore
13	BhavyaLatha	Utegration,Bangalore
14	Thomas Raju	Pole to win, Bangalore
15	Princly Devasi	Unisys,Bangalore
16	Preethi Das	Altisource,Bangalore
17	Abin Baby	Altisource,Bangalore
18	Ravi Kishore	Altisource,Bangalore
19	Kiran Singh	Flipkart,Bangalore
20	Lakshmi	Shalimar Technologies,Bangalore.
21	Anila.C	Keynote, Bangalore
22	Shameekh Ul Ameer	Trion educational solutions pvt ltd.
23	Chones Prakash	Free Lancer
24	John Bosco	Just Dial, Bangalore
25	Sandeep Kumar	Red Orange, Pune
26	Pradnya Sawant	Open destinations Infotech pvt ltd, Goa
27	Bastin Kadavy	Cerner,Bangalore
28	Hemin Basheer	Techchoice, Chennai
29	Amala K George	Infosys, Bangalore
30	Sudesh Gama	Bluestar Infotech, Mumbai
31	Pheba Abraham	Keynote, Bangalore
32	Shinto Peter	UST Global, Bangalore
33	Jerlin John	UST Global, Bangalore

Extension activities

Social Outreach Programme of Dept of MCA "SAHANAVAVATHU - KISHORA GANAKA JNANA" "SAHANAVAVATHU" means 'Let's Come Together'- and "KISHORA GANAKA JNANA"- mean "Computer Knowledge for Children". This was a program for school children of Siddhartha High School, Kothanur on 26th November 2013 to create awareness about the computer and its working.

The objective of the program was to give basic information about computers which is essential for the upcoming generation. There is no field in this world where computer has not reached. Through this program we are trying to help students to develop fundamental knowledge of computer.

The programme commenced by the inaugural function in the presence of Rev. Fr. Sebastian T A , Principal, Rev. Fr. Augustine George, Dean of Science, Prof. R. Kumar, Head, Department of MCA, Prof. Velmurugan, Prof. Manjunath, and Prof. Narayanaswamy and Ms. Geetha Principal - Siddhartha High School. During the inauguration, Prof. Narayanaswamy spoke about the importance of learning the computer in the right way rather than making it as a tool for entertainment.

The trainers were the students of V Sem MCA and the beneficiaries of the programme were 82 students of 8th standard. Students were interested to listen and learn about the computer basics. It was an interactive training session. It was an enriching experience for our students, teaching the school children. Students gave positive feedbacks about the program and they were very happy on this initiative.

Industry Interaction

- Tech Talk is a forum for interaction with high end professionals and official from elite and prime companies of India and multinational organization was organized at Kristu Jayanti College, by the department of MCA. The below list of Tech talks were conducted during last semester.

Sl. No.	Guest Lecture / Seminar	Date of the Event	Name of the Resource Person
1	Vinimay Series	13th Aug 2013	Smt. Sudha Murthy
2	Tech-Talk Series I – Changing Trends in IT Sector	24th Aug 2013	Mr. L V Sridhar, NIIT Technologies
3	Tech-Talk Series II –SDLC – An Industrial Perspective	29th Aug 2013	Mr. David Vikrant, NIIT Technologies, Bangalore
4	Tech-Talk Series III – SPM Tools	30th Aug 2013	Ms. Savitha, Fidelity Investments, Bangalore
5	Tech-Talk Series IV – Cloud Computing	31st Aug 2013	Mr. Neel, G - Tech Computer Education, Bangalore
6	Tech-Talk Series V – Big Data - "Hadoop"	06th Sept 2013	Mr. Shamshad Ansari, Accure Software, Bangalore
7	Tech-Talk Series VI - SAP Basis	12th Sept 2013	Mr. Antony Vincent, Cognizant Technologies, Bangalore
8	Tech-Talk Series VII – DBA - An Organizational Perspective	21st Sept 2013	Mr. Tijo Thomas, United Health Group, Bangalore
9	Tech-Talk Session VIII – Data Warehousing Tools	26th Oct 2013	Mr. Leo Paul, Wipro Technologies, Bangalore
10	Guest Lecture - Linux Device Driver and Embedded Systems	09th Nov 2013	Prof. Sudharsan –Vivekananda Engg., College, Tiruchengode, Tamilnadu.

Research Cell Activities

The faculty members of MCA department are actively involved in research activities. As a part of research activities, they take part in various seminars and workshops and also publish articles in various journals

- Prof.Jyothi Manoj attended three days training on Statistical Techniques on Data Mining and Business Analytics conducted by ISI Bangalore.
- Prof.Jyothi Manoj authored a chapter Title " India: Maltreatment of adolescents among high school children" in Book titled; "Children, Violence and Bullying: International Perspective": 2013: ISBN: 978- 1- 62948-342-9
- Prof.Ambika.P published a paper titled "Unsupervised Neural Network for Content Based Image Retrieval by Utilizing Content and Model Annotations" in Research Journal of Information Technology, ISSN 1815 -7432, DOI:10.3923/rjit.2013.468.472
- Prof. R. Kumar chaired a Technical Session in the AICTE sponsored National conference on Research Trends in computer Applications and Information Management organized by Acharya Institute of Management Studies (24.01.2014), Bangalore
- Fr. Augustine George participated in a 10 day workshop on Hadoop Development and Training (Dec 23rd to Jan 7th) by Cyberforce Academy, Kerala
- Prof. Jyothi Manoj and Prof.P.Ambika participated in a workshop on "Big Data Analytics"(15.02.2014), CDAC Bangalore.

Research Colloquium

In- house Research colloquium is one of the unique practices of the department which promotes research culture among faculty members to provide a platform for teacher's to share the advancements in their area of research interest.

The 6th session of the Research colloquium conducted by Dept. of Computer science on the Topic: "An overview of Tools useful for Research in Computer science" was held on 13-12- 13. From 9.30 – 1.00. There were four sessions, Prof.R.Kumar started the first session with a presentation on Introduction to Data mining and Statistical tools used in mining, this session gave an overview of the various data mining techniques, statistical techniques useful for mining, and the software tools available. Prof.Jyothi Manoj has given hands on session to explain, when, why and how Factor and cluster analysis will be performed using SPSS. Session 3 with a title Application of factor and cluster analysis in Computer Science was handled by Prof.Ambika.P. This session gave an overview of applications in Face recognition, Neural Networks, Image processing, Multimedia etc. The final session about MATLAB programming was handled by Prof.Aruna Devi K. She explained about MATLAB features, how to program in MATLAB and Applications. It was a lively and informative session. The session got over with a feedback note by Fr. Augustine George, Dean of Science.

Manoeuvre

MANOEUVRE 2013, an intra-collegiate IT fest, conducted by the MCA department every year with the intention to prepare the students to equip themselves to participate in various Events being conducted inside as well as outside the college. The fest is organized by the final year students, and the 1st and 2nd year students participate in the various events. Preparation of MANOEUVRE started early in the month of august. Their work started immediately and brought forth the new logo, invitation, poster for MANOEUVRE 2013. Tag line for this manoeuvre is "Envision the Instauration". There were 10 events selected like IT Manager, Quiz, Software Launch, Web Designing, Coding and debugging, Tech and NonTech etc., From then on 3rd years effort was to bring into light the talents of the first and second years students of MCA department. The students of 1st and the 2nd years were divided into 7 teams, with maximum of 8 students in each team. The team names were given, Coordinators for each team were allotted from 3rd years and team leaders from each team were also selected. Manoeuvre Student Coordinators Mr. Mahesh and Miss. Jeema Thangam Varghese.

The prelims of Manoeuvre been started from 22nd of October onwards and all the off stages were conducted during that week.

29th Oct , MANOEUVRE was inaugurated by Chief Guest Mr. Finney J George, Senior Manager, Altisource, Bangalore. The function started with awelcome note followed by the Principal message by Rev. Fr. Sebastian T.A. Mr. Finney gave a very enlightening and thought provoking speech on "Emerging Trends in IT" – Technologies like Cloud computing, Big Data, Social and Mobility opportunities for students and future trends of these areas. After inauguration events were conducted. In all, 56 students from 1st and 2nd year participated in all the events.

GALACTICA & SOLARIA were the teams who shared the overall and Manjeet Kumar of III Sem MCA was the: "Star of MANOEUVRE 2013"

Value added Courses

Department has organized few certificate courses for the students, to mention a few;

- Web Designing course by Prof.Muruganantham for I MCA Students
- VB.Net for III MCA students by Prof.Aruna Devi .K
- Life skills training to V MCA students by Prof. R.Kumar
- Spread Sheet for Business Applications by Prof. Velmurugan. R and Prof. A. Muruganantham for IV BBM Students.