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Some Tips - How to become an IoT developer

The Internet of Things (IoT) industry is booming—in 2017, the number of connected devices in use worldwide will reach 8.4 billion, outnumbering people, according to a recent Gartner report. By 2020, more than 20.8 billion IoT devices will be in use, Gartner predicts.

As connected homes, cars, and offices become more mainstream, more developers are needed to ensure that devices operate properly and securely.

The term "IoT developer" remains broad, said Greg Gorman, director of the IoT Developer Ecosystem at IBM. "There are a lot of discipline areas that are in play, including security, networking, systems engineering, cloud programming, and hardware device programming," Gorman said. "It pays to be multilingual so that you can be flexible and play many different roles in the team."

There are four stages in developing an IoT device, according to Kornilios Ampatzis, a software developer at InfoLearn:

- **Assembly of the physical hardware:** This requires engineering skills, and is usually not completed by a developer. Most IoT devices use primarily pre-assembled boards and sensors connected on them.
- **Programming the device:** This requires programming skills to read the data from the sensors connected on the IoT device, and send them to the server.
- **Programming the server that will receive and store the data from the device:** This requires the use of server side languages, like PHP, ASP.NET or Node.js, and database queries based on MySQL or some other SQL derivative.
- **Displaying data to the device user:** This involves creating the web page or app that will depict the collected data to the user, which requires web development knowledge of PHP, JavaScript, HTML, CSS, MySQL, or another framework.

Here are six tips from IoT experts on how to break into a career developing connected devices.

1. Gain a deep understanding of sensors

Unlike other developers, those who work in the IoT space must have a deep understanding of sensors and wireless communication, according to Karen Panetta, an IEEE fellow, and a professor of electrical and computer engineering and associate dean for graduate education at Tufts University.

It's recommended that IoT developers have a background in computer science or electrical engineering, Panetta said. However, IEEE and other professional organizations offer online courses on sensors and development in which you can make a project to show employers. And a number of inexpensive sensors and maker kits are available to practice skills on your own.

"Beyond computing, IoT will take you into the world of mechanical and civil engineering as sensors gather physics data. It's very difficult to be a 'deep' IoT technologist you have to be naturally curious about the world and a renaissance person at heart."

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2. Focus on user interface

When developing a commercial IoT product, it's important to hold yourself to high quality standards for user experiences, said Kit Klein, head of engineering at Wink. "Many customers depend on these products for critical tasks in their daily lives and are understandably intolerant of failures," Klein said. "As an industry, we need to ensure products delight a rapidly growing base of users who aren't necessarily tech savvy. Quality and reliability are paramount to this experience and need to be part of any developer's mentality."

Panetta recommends performing usability studies with customers to determine ease of use. "It all comes back to user interface," Panetta said. "You can have the best control for your thermostat, but it needs to be simple to use."

3. Learn JavaScript or Python

Suz Hinton, technical evangelist at Microsoft, recommends learning JavaScript before pursuing an IoT developer career. "Using a web based language for both the data processing backend, and the code running on the device itself makes a lot of sense," Hinton said. "JavaScript is a very event-driven language, and this makes it ideal for reacting to new data from devices and triggering actions on the devices themselves."

Working with new technology often means being motivated to work without documentation, code samples, or guidance other than the scant information provided by hardware manufacturers, said Rob Lauer, senior manager of developer relations at Progress. IoT developers tend to use common languages, including Python and JavaScript, with some Windows IoT-compatible devices using C#/.NET, he said.

4. Play with a Raspberry Pi

For those without a computer science or electrical engineering degree, Elliot Schrock, founder and lead developer at Thryv, Inc., suggests demonstrating your aptitude to employers by completing projects on a Raspberry Pi.

"Raspberry Pis are very inexpensive, tiny computers, and are often employed in proof of concept IoT projects," Schrock said. "They're also a great way to learn how to solder together simple circuits, and link those circuits with software. Putting together some simple demo projects and then coming up with, and executing, some projects of your own is a great way to show that you have the initiative and know-how to work in IoT."

Hinton agreed. "Using a device like the Tessel 2, or the Particle Photon, or even the humble Raspberry Pi can get developers fast on their way to learning how hardware ticks and the new skills required," Hinton said. "Writing for IoT is really just learning how to write for smaller, slower computers."

5. Find a community

Involvement in the surrounding communities of makers, inventors, and entrepreneurs with whom one can explore, develop, and refine their ideas into a reality is an important factor for becoming an IoT developer, said Emily Rose, lead developer evangelist at Salesforce. "The world of IoT is still so nascent and nebulous; there are few well-defined paths into the industry," she added. "This may seem like a daunting prospect, but it can also be a tremendous advantage to those with an eye for exploration beyond the bounds of convention."

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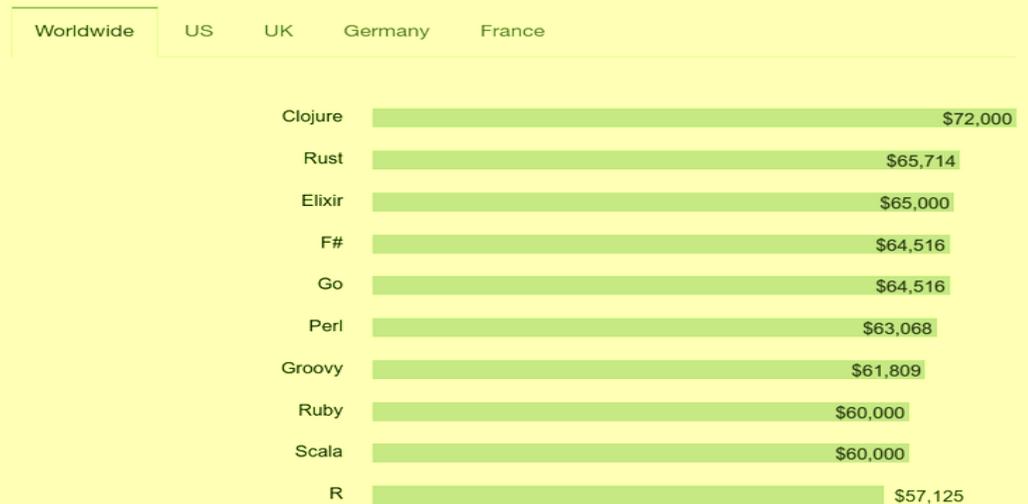
The highest paid jobs in programming & the top earning languages in 2017

Globally, developers whose role requires them to be proficient at using Clojure have the highest average annual salary, with the typical take home being \$72,000, according to the 2017 Developer Survey by programmer community Stack Overflow.

Clojure is a 10-year-old language that is growing in popularity and used by companies of all sizes. A functional programming language and dialect of the decades-old Lisp, it excels at handling tasks that can be split into smaller jobs, which can then be processed in parallel. Clojure also has the advantage of running on a Java Virtual Machine, or JVM, giving it a degree of compatibility with existing enterprise software stacks.

Other highly rewarded programming languages, according to the survey of almost 65,000 coders, include relative newcomers such as Mozilla's Rust, the Erlang spin-off Elixir and the Google-created Go. Also well-compensated were developers specializing in the functional, JVM-targeted language Scala, the Microsoft-designed F# and the venerable scripting language Perl.

Top Paying Technologies by Region



There are significant regional differences in compensation. In the US, developers who use Go and Scala are highest paid, with an average salary of \$110,000. In the UK, it's TypeScript that is the best rewarded at \$53,763, while in Germany it's Java, garnering the same level of return. Finally, in France, it's Python at \$42,151.

Relative to years of experience, the worst rewarded programmers were those using oft-derided, web backend language PHP, while those with skills in Clojure, Go and Rust were the best remunerated.

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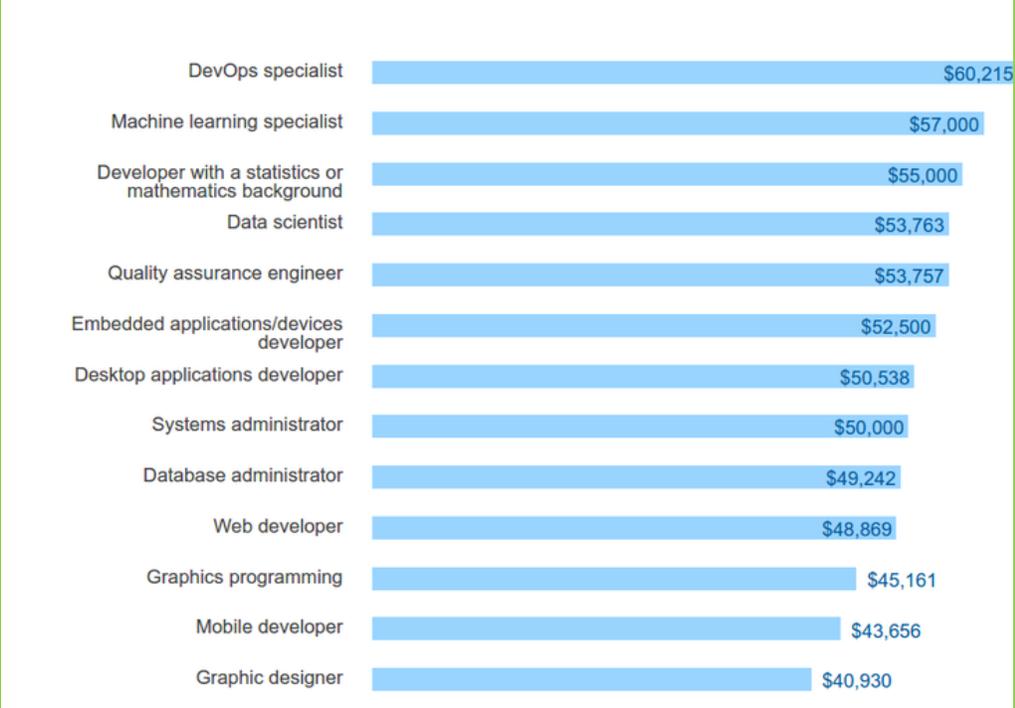
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Salary by Developer Type

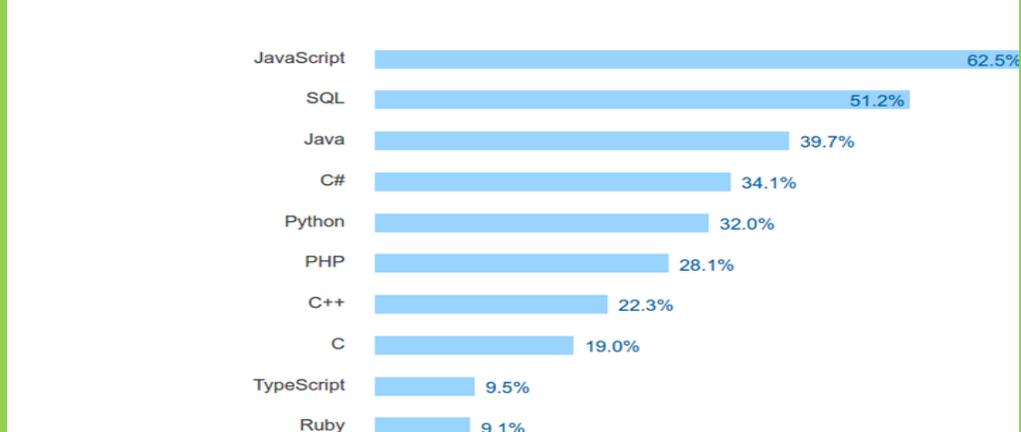


As would be expected, the most heavily used programming languages differ from best paid, with the web-programming language JavaScript being the most widespread for the fifth year running in the Stack Overflow survey. Skills related to perennially popular SQL remained in common use, and old favorites such as Java, C and C++ were once again a fixture among the most widely used languages. However, there were some notable changes, with the versatile Python overtaking PHP in the rankings.



Most Popular Technologies

Programming Languages



As for the languages that developers enjoy the most, Rust was crowned the "most loved", by more than 73% of those questioned, whereas Visual Basic 6 was the language that filled the most developers with "dread".

The most widely used languages chime with a separate analysis of Stack Overflow and GitHub rankings by RedMonk, which also placed JavaScript, Java, Python and PHP as the most widespread languages.

Happening @ Department of I.T during January - March 2017

Industrial visit of MCA & BCA Students to TCS, Noida



Department of I.T organized one day Industrial visit for MCA/BCA students to TCS, Noida on 4th January, 2017. It was a full day visit. Total 28 students had visited TCS, Noida along with Director (IT), Dr. Sunil Kr. Pandey, Prof. Smita Kansal, Prof. Varun Arora, Prof. Nancy Sharma, Dr. Vidushi Singh and Prof. Yogita Chauhan. Session started with a welcome note by Ms. Prachi Desai and followed by different sessions.

Session I was taken by Mr. Vikas Tripathi Senior HR Manager. He has briefed about the values of TCS i.e. LIREL (Leading Change, Integrity, Experience/Excellence, Learning and Sharing). He also guided students about the industry expectations from the fresher. Session II was taken by Mr. Mudit which was based on the TCS ION Project and GD & PI. He also discussed in detail about the vertical and horizontal dimension of the TCS ION project as this project has converted almost every competitive exam of India from pen paper to online. Mr. Mudit discussed that how a participant of GD can play role of initiator, salesman, time keeper, passenger and missionary. He also briefed about the confidence level a student should possess at the time of interview. Session III was taken by Mr. Rajat Sikka. He discussed about the kind of attitude a person should carry throughout his life. After this session there was a Team Building exercise for students in which they enjoyed by participating in games by HR spoke of TCS, Delhi NCR. Session IV was the taken by Mr. Ankur Narang, Program Manager. He discussed about IT security in detail. Session V was the video about "Keepers of the Flame" which showed the actual history behind the birth of TCS in India. Students enjoyed the video. Students were very happy for their learning and a fruitful day spent @ TCS.

3-days Entrepreneurship Awareness Camp for MCA Students

Department of I.T organized 3-Days Entrepreneurship Awareness Camp sponsored by Department of Science & Technology, Govt. of India for MCA Students. With an objective to promote and create awareness among students of MCA Programme, a Three-days Entrepreneurship Awareness Camp (EAC) sponsored by Department of Science & Technology, Government of India, New Delhi was organized by Entrepreneurship Development Cell (E - Cell) of Department of IT, Institute of Technology & Science Mohan Nagar, Ghaziabad organized from 06th - 9th January 2017.

The Camp was inaugurated on 6th January 2017 by Dr. A.K. Puri- Director General, I.T.S, Mohan Nagar, Dr. S.P. Mishra, Dr. Vidya Sekhri- Director-U.G. campus, Dr. Sunil Kumar Pandey - Director-IT, Chairperson MCA Prof. Puja Dhar, Event Coordinator Prof. Saurabh Saxena and Prof. Varun Arora. Total 75 students of MCA IV Semester attended this entrepreneurship awareness camp.

During these 3-days many eminent speakers shared their views with the participants including Ms. Shampa Banerjee, Executive Director WASME & Owner of NGO SAVE, Shared her experience that how she created many poor women an entrepreneur. Ms. Banerjee emphasized on the need of repeated assessment of an idea before actually thinking of direct

implementation, as at a later stage such approach may lead to difficult situation. Shri Amit Chaudhary, Growth Catalyst, inMorphis & Shri Rajat Agarwal Regional Head OLA-Digital also shared their own journey & presented a detailed discussion on importance of idea and its implementable action plan.



Dr. V.K. Arya, Former Deputy Director, NIC, Government of India also took the session. In his session he addressed students about the various scopes of being entrepreneurship in the field of Mobile computing. He motivated students to start their own ventures without being worried about failures. He said that with small startup they can build their future. He said the students should be job providers rather than job seekers.

After this, a valedictory session was organized. Director-IT Dr. Sunil Kr. Pandey congratulated the participants for completing 3Days Entrepreneurship Awareness. Participants were also felicitated with the Certification of participation.

Guest Talk on “Cloud CRM” for MCA Students



On Friday, 20th January 2017 Department of I.T. organized a Guest Talk on “Cloud CRM” for MCA-IV Semester students. Mr. Ankit Sharma, CEO, EdifySelf was the resource person for this session. Mr. Saurabh Singh and Mr. Amol Sharma from Edify Self were also present in this session. The objective of this workshop was to make students aware about the Cloud Computing and its career options for the students.

Chairperson-MCA, Prof. Puja Dhar said that Department of I.T always provide many opportunities to the students where they can clear their doubts about the various career

options available in the IT market and what are the prerequisite for it via different Guest Talks and industrial visits. She advised all the students to have an interactive session.

While addressing the students, he discussed about the various topics like Cloud Computing, Components of Cloud Computing, Deployment Models of Cloud and Cloud CRM Model.

He said that Cloud CRM typically offers access to the application via Web-based tools (or Web browser) logins where the CRM system administrator has previously defined access levels across the organization. Employees can log in to the CRM system, simultaneously, from any Internet-enabled computer or device. Often, cloud CRM provides users with mobile apps to make it easier to use the CRM on smart phones and tablets. Overall it was an interactive and new learning session for students.

Special session on “Framework for Mobile Applications”

Once Again one of our Senior MCA Alumni shared his experience and knowledge with the students of MCA. On Saturday, 21st January 2017, Department of I.T. organized a workshop on “Framework for Mobile Applications” for MCA-IV Semester Students. Mr. Peeyush Goyal, Technical Architect, Tata Consultancy Services, Noida &

MCA Alumni 2004 batch pass out was the resource person for this session. The objective of this workshop was to make students aware about the Framework requirements for developing Mobile Apps.



While delivering his welcome address, Director-IT, Dr. Sunil Kr. Pandey said that we are privileged to have good support of our MCA Alumni and they are always ready to guide their juniors. He suggested the students to emphasize on the fundamentals and basics of whatever they study and should be connected with the corporate. Chairperson-MCA, Prof. Puja Dhar said that this is one of the proud moments for her to share the dias and listen her student as a speaker of the session. She advised all the students to clear their doubts regarding the career opportunities in the area of Mobile App development. While addressing the students, he discussed about the various topics like three Approaches of Technical Architecture, difference between Native Client, Web Client and Hybrid Client, iOS-Native App Development, Android –Native App Development, Windows Phone – Native App Development. He also explained the detail Device Client Architecture of Native Client. He also discussed about the Mobile Middleware Architecture and Pros and Cons of each type of client. While addressing he also throw some light on Mobile Web Architecture. He also shared a video showing the usage of Technology in 2020 and also advised students to update their skills.

SAMVAD a Group Debate Activity for MCA Students

Department of I.T conducted a series of group discussion activity, SAMVAD-2017 on 21st January, 2017, 17th



discussions.

February, 2017 and 31st March, 2017. During this event students of MCA had a group discussion on various topics like Post demonetization, Govt. has achieved the set objectives, Alliance Govt. is better or single majority party in a country like India and the constitution of Anti Romeo squad is justified? Faculty members including Prof. Abhay Narayan Tripathi, Prof. Varun Arora, Prof. Gaurav Midha, Prof. K.P.Singh, Prof. Saurabh Saxena and Prof. Chandra Mani Sharma were the moderators of different sessions. Students with full enthusiasm took participation in these

Department of I.T. conducted Workshop on “PHP” for ITS-BCA Students

To provide the extra knowledge other than university curriculum to our BCA students, Department of I.T had planned a series of workshops for them on different current technologies. The objective of these workshops was to make them aware about the new trends which will help them in their higher studies. Two days workshop on “Web Application Development using PHP” was conducted on 24th January to 25th January,

2017. Prof. K.P.Singh, Prof. Varun Arora and Prof. Smita Kansal, faculty members of the Department IT, were the resource person for these 2 days session. Total 33 students had participated in this workshop.

Workshop was formally inaugurated on 24th January 2017 in the presence of Dr. Sunil Kumar Pandey, Director-IT, Prof. Puja Dhar, Chairperson-MCA, Prof. Smita Kansal, Coordinator-MCA, Prof. Richa Singh, Chairperson-BCA, Prof. Yogita Chauhan, Coordinator-BCA-IIIrd year, Prof. Nancy Sharma, Prof. K.P. Singh, Prof Varun Arora and Dr. Vidushi Singh.



While in his address Director IT discussed how market demand is changing day by day and how a student can prepare him/her as per the changing environment. Prof. Richa Singh, Chairperson-BCA briefed about the need of the workshops on new technologies to BCA III year students. Prof. Puja Dhar, Chairperson-MCA discussed that Department IT has scheduled workshops on the current and new technologies which will be beneficial to them in their future. The Workshop covered hands on Practice on Introduction to Web based application, Introduction to Web Site, Static Pages, Structure of HTML, Basic Tags of HTML (Heading, Font, Title, Bold, Italic, Break Line, Underline), Form Tags in HTML (Textbox, Password, Submit and Reset Button), Dynamic Pages, Introduction to PHP, Introduction to WAMP server, Writing PHP Code, Component to PHP page, Variable, Handling HTML data.

PRAMARSH-2017, a career cum-counseling Session



Department of I.T. conducted an open House career counseling & guidance Session "PRAMARSH-2017" with our MCA Alumni scheduled on Saturday, 28th January, 2017 in the for our BCA Final year Students. The objective of this session was to provide with an opportunity to our existing BCA 6th Semester Students of UG Campus, to meet & interact with the MCA alumni serving in leading organizations and get their queries resolved. Mr. Manish Sharma, Technical Lead, Syscom MCA (2005) passout, Mr. Rahul Srivastav, Sr. Software Engineer, NIIT MCA (2010) passout and Mr. Nitish Bhardwaj, Software Engineer, Paytm MCA (2015) passout were the expert panelists in this session.

The session started with the introduction & briefing about the objective of the session by Chairperson, MCA, Prof. Puja Dhar. Dr. Vidya Sekhri, Director-UG briefed about the benefits of the session and explained the purpose. She also encouraged students to come up with their questions, doubts and other issues that they would be having regarding their future & career options.

Prof. Puja Dhar, introduced the Alumni and thanked them for their support and active involvement in institutional activities. Thereafter the session opened for the discussion & interaction between the BCA VI semester students and MCA Alumni. During the session many of the BCA VI Semester students interacted and asked lots of queries which were addressed by the Alumni. Alumni present, shared their own experiences and advised the students to stick on core fundamentals of the subjects, understand their strengths & interest and accordingly plan for their future. Students were very happy with the session.

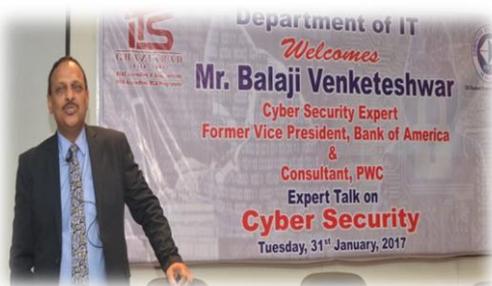
Dr. Umang, Alumni Coordinator, Dr. Vidushi Singh, Prof. Chandra Mani Sharma, Prof. Nancy Sharma, Prof. Richa Singh, Chairperson BCA and Prof. Yogita Chauhan, Coordinator BCA Final year, were also present in the session. The main highlights of the session were as follows:

- The experts from industry enlightened the students regarding various career myths while choosing a career option. They emphasized on perusing the higher education in regular mode and other similar questions.
- The Experts from industry advised all the BCA students to prepare their road-maps of their career so that they can act accordingly.
- The session was interactive and UG students raised their queries and these were properly addressed by the Alumni Experts.

Expert Talk on “Cyber Security” in association with CSI Student Branch

Department of I.T. organized an Expert Talk on “Cyber Security” in association with CSI Student Branch @ ITS, Ghaziabad on Tuesday, 31st January 2017 for MCA-IV Semester Students. Mr. Balaji Venketeshwar, Consultant PWC, Former Vice President, Bank of America was the resource person for this session. The objective of this Talk was to make students aware about many cyber threats and solutions available.

While delivering his welcome address, Director-IT, Dr. Sunil Kr. Pandey said that Department of IT always provide many opportunities to their students where they can update their knowledge and bridge the gap between industry and academia.



Chairperson-MCA, Prof. Puja Dhar said that cyber security is a top concern in the IT industry today and students are privileged to listen to Sh. Balaji where they can know the various career opportunities available in the market. While addressing the students, Sh. Bala ji discussed about many cyber security threats to information system like Vulnerable web applications, Being overall security “aware”, Failure to encrypt PCs and sensitive data and Hacking of systems.



He also advised students to do more coding and improve coding skills, start writing your own codes and don't be dependent on tools, so that it will help you to find your own bugs in the code. He also advised students to prepare themselves for ethical hacking and also try their hands in cyber security. He also mentioned various career opportunities in cyber security area. Students also asked many queries related to the cyber security and cleared their doubts regarding to the ethical hacking.

Sh. Balaji Venketeshwar also had an interactive session with faculties, where he advised faculty members to allow students to work on new and real life

problem based projects and give emphasis on the project development done by students.

The session was followed by the lunch with all faculty members. Overall it was an interactive and new learning session for students.

Workshop on “Quantitative Aptitude & Reasoning” for MCA 2nd year students

C Club of Department of IT in association with CSI Student Branch @ I.T.S Ghaziabad conducted a workshop on “Quantitative Aptitude & Reasoning” for MCA 4th Semester students on 10th February, 2017. The resource person for the workshop was Prof. C M Sharma. Total 62 students of MCA 4th Semester participated in the workshop. The objective of this workshop was to prepare students for upcoming placements on Quantitative Aptitude & Reasoning. The recruiters coming for recruiting MCA students have the questions on the topics in their written round.



Prof. Sharma started the workshop with the importance of Quantitative Aptitude & Reasoning in placement process. He then discussed problems and important formulas on Ages, Average, Boats & Streams, Time & Distance, Mixture, Proportions, Pipers & Cisterns, Series etc. Prof. Sharma also told the students various shortcut methods to solve problems and gave many useful tips to improve accuracy and speed. The workshop was a helpful exercise for the students.

Industry Academia Collaboration Program with SOPRA

A session for Industry Academia Collaboration Program with SOPRA was held on 18th February, 2017. The session was taken by Ms.Swati Chawla and Ms.Deepti Batra, from SOPRA. 19 students who are involved in the project were present during the session.



Prof.Varun Arora and Prof.Rakesh Roshan were also present in the session. During the session they discussed about what is design, why is design is important, Pros and cons of designing phase, Types of designing, How to create a good design, Design Principle , General design consideration, Business layer, presentation layer, data layer, Architecture overview model1, MVC Model 1, MVC Model 2, Database Design, ER Diagram, Steps to create ER Diagram. Session was very interactive and students learnt importance of analysis in

Software development Phase.

Series of workshops on Current Technologies in association with CSI Student Branch @ ITS, Ghaziabad for BCA students

Department of I.T. conducted a series of workshops from 14th February to 24th February, 2017 for the students of ITS-BCA on different current technologies for making them aware about the new trends which will help them in their future from. Workshops were conducted on different technologies like Java, Data Structure using C, Python, Oracle Database and Implementation, Importance of Mobile Application and Mobile Application Development.



Workshop on “Java Technology”

The workshop on Java Technology was conducted on 14th -15th February 2017. The objective of the workshop on Java technology was to familiarize the students with the Java technology and to make them understand Servlets, JSP and JDBC. Prof. Gaurav Midha and Prof. Varun Arora was the resource person for the 2-days session.

Workshop on “Data Structure Using C”

In continuation of this, next two day's workshop on Data Structure was conducted during 15th -16th February, 2017. The resource persons for the workshop were Prof. Rakesh Roshan & Prof. Chandra Mani Sharma. In the workshop, the programming constructs in C was discussed along with overview of Data Structures and their applications.



Workshop on “Python”

During 20th -21st February, 2017 two day workshop was conducted on Python. Prof. Rakesh Roshan was the resource persons for this workshop. Introduction to Python, Data types, Variables, Strings, Multiple Assignment, List, Tuple, Dictionary, Decision Making, Looping, Functions and Module and File Handling were the contents discussed in the workshop.

Workshop on “Oracle Database and Implementation”

Two-day's workshop on “Oracle Database and Implementation” was conducted on 22nd February to 23rd February, 2017. The objective of this workshop was to make students aware about the basic concepts of Oracle Database and how it will help them in their higher studies and job too. Prof. Puja Dhar and Prof. Saurabh Saxena was the resource person for this workshop. They discussed about the Oracle History, Overview of Oracle Grid Architecture,



Developer Tools, Differentiation between File Processing System and Database Processing System, Database Structure including logical & Physical structure, Security mechanism, Overview of data types, Functions of DBMS, DDL & DML statements.

Five days workshop on Importance of “Mobile Application and Mobile Application Development” under DST sponsored Women Entrepreneurship Development Program in association with DST, Govt. of India

For the female students of BCA 5-days workshop on Importance of “Mobile Application and Mobile Application Development” under DST sponsored Women Entrepreneurship Development Program in association with DST, Govt. of India was conducted during 20th February, 2017 to 24th February, 2017 .



Prof. Puja Dhar, Dr. Umang, Prof. Abhay Kumar Ray and Prof. Rakesh Roshan were the key resource person for this workshop. Prof. Puja Dhar and Dr. Umang discussed about the importance of mobile application in the today's scenario and also the security issues and challenges in the usage of mobile application for the women.

Prof. Abhay Kumar Ray and Prof. Rakesh Roshan discussed about the architecture of android mobile application development and also encouraged to develop some sample applications on android using different features.

Overall it was an interactive and new learning sessions for the students. Students found these workshops very informative and helpful for their career.

An Educational visit for the students of MCA & BCA to Narora Atomic Power Station, Bulandsahar

Department of IT organized an Educational visit for a group of 40 students of MCA & BCA accompanied by Director-IT, Dr. Sunil Kr. Pandey, Prof. Smita Kansal, Prof. Saurabh Saxena, Prof. Varun Arora, Dr. Vidushi Singh, Prof. Nancy Sharma, Prof. Yogita Chauhan and Prof. Shreyta Raj to Narora Atomic Power Station (NAPS), a public sector undertaking under the Department of Atomic Energy, Government of India which is located at about 176 kms from Ghaziabad on 25th February, 2017.

The trip started from I.T.S, Mohan Nagar campus at about 6.30 AM. After reaching there a guest lecture was delivered by Mr. Mukesh Sharma, Training Officer, NAPS. He gave a brief description about the power plant through an interactive presentation. He explained about the growing need of nuclear energy in the near future. Narora Power plant has two units which produce 220MW units of power. Later, the group was taken to Nuclear Energy Information Centre, where the process of nuclear power generation was clearly explained through a schematic flow diagram. Nuclear applications in various fields were visually explained for a better understanding.

Later, students were divided into two groups headed by Mr. K. Singh, visit coordinator from NAPS and Mr. Mukesh Sharma & taken to Turbine building. Safety measures were taken before witnessing the functioning

of turbine. Students keenly observed the entire process and raise their queries which were resolved by the instructors accompanying them. Control room, the much awaited place for all as many devices that were controlling overall system were witnessed. An internal view of the reactor (Calandria) was shown through cameras. A working view of twin units with many functioning devices created a sense of inquisitiveness amongst the students.

It was indeed a unique experience to visit the entirely automated Control Room and see how IT is helping in such a critical system and to see and experience of having Uranium Channels, operations of Turbine, Environmental Science Lab. It was a wonderful learning experience for everyone.

SAMAGRA-2017, an inter-institutional Techno-Cultural Fest

Department of I.T, I.T.S, Mohan Nagar, Ghaziabad organized "SAMAGRA-2017", an inter-institutional Techno-Cultural Fest on 04th March, 2017. The event received registration from 70 plus institutes in various activities and witnessed huge participation from institutes of NCR and far off places like Indore, Gaya, Lucknow, Moradabad, Kanpur, Saharapanur Meerut etc with about 600 participants.

The event comprised of 13 activities under four categories including Technical, Cultural, Literary and Fine Arts. The event was full of fun, great display of talent, commitment, high class performances in all the categories.



SAMAGRA-2017 was inaugurated by lamp lightening by Honorable Vice Chairman, I.T.S-The Education Group, Shri. Arpit Chadha, Chief Guest - Mr. Shubhankar Nandy, CIO, Jindal Stainless, Gurgaon, Guest of Honor, Dr. R. K. Bhadauria, Sale Tax Commissioner (Retd.) & well Known Poet and Musician, Director-IT - Dr. Sunil Kr. Pandey & SAMAGRA Coordinators Prof. Saurabh Saxena, Prof. Puja Dhar & Prof. Varun Arora.

While addressing the gathering Vice Chairman, I.T.S-The Education Group appreciated the efforts of Department of

I.T. and expressed his happiness for the huge participation in both Technical and Cultural events. He wished best luck to all the participants and welcome them at I.T.S. Director-IT, Dr. Sunil Pandey welcomed the guest, while addressing the students said that such events cannot be conducted overnight and requires lots of planning, committed efforts. He also congratulated the Team SAMAGRA and said these events give platform to all the students to show their technical and non-technical skills.

Prof. Saurabh Saxena one of the coordinators of SAMAGRA also briefed about the event. Chief Guest of the event, Mr. Shubankar Nandy shared his thought provoking address which inspired everyone present. He emphasized on the regular updation of an individual in this fast changing world to stay relevant & competent. Guest of Honor, Dr. Bhadauria blessed the participants with his words of wisdom. He motivated participants to showcase their natural talent without mimicking anyone else.

After that the students of MCA IV Semester welcomed all the dignitaries and participants by their foot-strapping Cultural activities including a beautiful Ganesh Vandhana ,song on guitar, Group dance of the bollywood songs from



1980 to 2017 & very special performance by the students on save girls child. The inaugural session was appreciated and enjoyed by everyone present in the hall. The events were categorized into four heads and comprised of different activities

Under Technical category, there were 4 activities as C-Twister for C- Programming contest, Java Junkies for on spot java programming, Abhivyakti for Technical Poster Presentation, Aavishkar for Mobile Application Demonstration & Brain Booster for IT quiz .

Many colleges from NCR and outside NCR participated in SAMAGRA-2017. Some of the colleges include Gaya College Gaya, Theerthanker Mahaveer University Moradabad, National PG College Lucknow, JNU Delhi, Delhi University, IIMT Meerut,

ABES, RKGIT, Sunder Deep, Mewar, IMS, LPU, Dronacharya Group of Institutes, Amity University, Satyawati College, New Delhi, BBDIT, IDEAL, PIET Panipat, Monad University, Galgotia, IIMT, Gr. Noida, KIET, Institute of Management & Technology Tech., Faridabad, IP University etc.

At the end of the event, I, II and III winners for all the activities were awarded with cash prize, Medal & Certificate and these awards were distributed to all the winners of this event by Director-IT, Dr. Sunil Kr. Pandey & Internal & external Judges. On this occasion, Coordinators of SAMAGRA-2017, Prof. Saurabh Saxena, Prof. Puja Dhar, Prof. Varun

Arora and Faculty Members of Dept. of I.T. were also present. The whole event was full of learning, fun and enjoyment.



Department of I.T. organized a workshop on “Computer Network: Implementation & Troubleshooting”



On 9th March, 2017, Department of I.T. conducted a workshop on “Computer Network: Implementation & Troubleshooting” for the students of ITS-BCA. Prof. Sauresh Mehrotra was the speaker of this session. He discussed about the basic concepts of networking. The main objective of this workshop was to make students aware about the working of networking in the campus. Students were also taken to the Server Room where Prof. Mehrotra also explained about the proper working of the

server. Students were happy to learn about the new concepts of networking.

Workshop on “Dot Net Technology and Responsive Web Page Designing”



On 10th March, 2017 Dot Net Club, of Department of I.T. conducted a workshop on “Dot Net Technology and Responsive Web Page Designing” for MCA students .Prof. Chandra Mani Sharma and Prof. Rakesh Roshan were the resource persons of this workshop. Total 58(Fifty Eight) students of MCA Second year participated in the workshop. This workshop was focused towards making the students aware & sharpening the skills on ADO DOT Net, T-SQL, Writing Stored Procedure ,Writing C# code to use Stored Procedure , Responsive Web Application Development, Different classes of Bootstrap and application of Bootstrap classes for controls designing and a test of 30

minutes was also conducted at the end of the workshop.

JAVA Club of Department of I.T. conducted workshop on “Advance Java Technologies”

A workshop on advanced “Java technologies, JSP, Servlets with MVC” was conducted for MCA-IV semester students on 10th March, 2017. The workshop was aimed to provide concepts of project development using JSP, Servlets on MVS followed by hands on by the students. The workshop was conducted by Prof. KP Singh and Prof. Gaurav Midha as resource person. The workshop was started with brief overview of MVC architecture. In this part the MVC concept along with its evolution, types and frameworks were discussed with students. The workshop was further continued with demonstration cum detailed discussion of a module developed in JSP, Servlets, JDBC, JSTL based on MVC architecture. The logic of source codes of all the required programs in JSP, Servlet and JSTL was also explained and integration of all the programs was demonstrated to the students.

In later part of the workshop, the students made hands on practice for development of the same module by their own. The students learned

configuration of development environment like, Tomcat, MySQL on Eclipse IDE.



Department of I.T. organized a Workshop of “Internet of Things (IoT)”

Department of I.T successfully conducted two days workshop on “IoT :Design, Application & Implementation ” for the students of MCA during 16th & 17th March, 2017. Prof. Abhay Kumar Ray , Prof. Rakesh Roshan and Prof. Smita Kansal were the key resource person for this workshop.

The objective of this workshop was to help the students to understand and take better use of the Arduino Uno, components of Arduino Uno, Application of different sensors, Integration of sensors to the Arduino chip, Program writing, development and implementation of application using Arduino Chip and different sensors. After this workshop students can develop Arduino chip and sensor based applications. Total 36 students had participated in this workshop. Students showed their interest to learn this technology.

National Seminar on “Cyber Security: Issues & Challenges (CSIC-2017)”



On Saturday, 18th March, 2017, National Seminar on Cyber Security: Issues & Challenges (CSIC-2017) was organized by Department of IT, I.T.S Mohan Nagar, Ghaziabad. The Seminar was inaugurated by Shri M.S. Vilku, Chief of Information Security at IBM, Ms. Karnika Seth, Cyber Law Practitioner, Supreme Court of India Attorney at law. & Founding Partner Seth Associates, New Delhi, Shri. Surinder Sood, Director (PR) - I.T.S - The Education Group, Prof. Ashok Kumar Puri, Director General, I.T.S, Ghaziabad and Dr. Sunil Kr Pandey, Director (IT) at I.T.S, Ghaziabad.



After the Inaugural Session, Experiential Talks Session was scheduled in which The Industry Experts and Practicing Professionals, who are actually into Cyber Security related domains addressed and share their perspectives in different sessions ranging into Legal, Telecom Technology, Data Center, Application Security including Internet of Things (one of the most fast coming up Technology), Financial (HeroFinCorp), Banking domains. This session was graced by the presence of Key note Speakers, Shri Mr. Bharat Gautam, CISO, Hero Fincorp, Shri Sameer Gandhi,

Director-Telecom(India & South Asia), Juniper Network, Mumbai, Shri Bohitesh Mishra, Vice President – IT & BI, Simpa Network, Shri Nishith Seth Executive Director - SSPL Mumbai.

With an objective to provide students opportunity to explore, prepare and demonstrate their understanding of Cyber Space, Cyber Crimes, Cyber Security Threats, Cyber Laws, two activities - Poster Presentation and Paper Presentation Contests were organized. It was wonderful to see the kind of work students carried out and presented confidently before the Judges and Industry Experts including Shri, Sameer Gandhi, Director (Telecom) - India and South Asia and Shri Bohitesh Misra - Vice President (BI & IT), Simpa Networks. At the end of this Seminar winners of Paper Presentation and Poster Making Presentation were also awarded. It was a great learning for everyone who was present in different sessions of the Seminar.

Educational Visit to ITS-CDSR (CAD/CAM Centre)

Department of I.T organized one day educational visit for MCA students to ITS-CDSR, CDA/CAM Centre on 23rd March, 2017. The objective of this visit was to make students and faculty members aware about the usage of CAD/CAM technology in the field of dentistry. Total 37 students had visited CAD/CAM Centre along with Director (IT), Dr. Sunil Kr. Pandey, Prof. Puja Dhar, Prof. Smita Kansal, Dr. Umang Singh, Prof. Saurabh Saxena, Prof. Sauresh Mehrotra and Prof. Chandra Mani Sharma.

Visit started with an address by Dr. Vinod Sachdev, Director, PG-Studies. Dr. Sachdev interacted with all the faculty members along with Director-IT ,Dr. Sunil Kr. Pandey discussing about the implementation of new technologies in their CAD/CAM centre.



Milling Machine for Tooth Manufacturing

Dr. Praful Mehra, Lecture at ITS-CDSR nicely addressed the student regarding the CAD/CAM Technology and how it is used in the field of dentistry. The demonstration was done in the Kalpana Chawla Auditorium of ITS-CDSR, Muradnagar.



After this session students were divided into two batches in which Batch-1 visited to CAD CAM section for Demonstrations by Mr. Vasanth Suresh. He presented the Demo of Scanning, Demo of Computer Aided Designing of single crown and Demo of Computer Assisted Milling of single crown where as Batch-2 visited to Centre for Advanced Research demonstration of Genomic and Metallurgical section by Dr. Akansha Banga.

It was a new learning experience for both students as well as faculty members to see the manufacturing of tooth of different shapes and sizes using CAD/CAM Technology. Students were very happy for their learning and a fruitful day spent at ITS-CDSR, Muradnagar, Ghaziabad

Faculty Participation in External Events

Date	Faculty	Events
12 th January, 2017	Director General, Dr. A.K. Puri, Director IT, Dr. Sunil Kumar Pandey and Prof. K.P. Singh	Attended a digital marketing seminar co-hosted by Google and HT Campus was attended by
14 th to 16 th Jan, 2017	Prof. Abhay Ray/ Prof. Rakesh Roshan and Prof. Smita Kansal	Attended three days workshop on "IoT and Connected Hardware" at Mlabs , Janakpuri New Delhi
16 th January 2017	Prof. Puja Dhar and Dr. Vidushi Singh	Attended one day Faculty Development Programme on " Application Development" organized by TCS,iON Pride
28 th – 29 th January, 2017	Dr. Sunil Kr Pandey, Director (IT)	Invited as Key Note Speaker in National Seminar on "DIGITAL INDIA: Use of Technology for Transforming Society" organized at Gaya College Gaya
28 th February – 1 st March, 2017	Dr. Umang	Presented paper in 2 nd IEEE International Symposium on Internet of things : Innovation and Usage (IoT –SIU 2017) organized by FET, MJP, RU, Bareilly
1 st -3 rd March 2017	Dr. Umang	Chaired a session in 4 th International Conference INDIACom-2017 the them Computing for Sustainable Global Development at BVICAM, New Delhi
1 st -3 rd March , 2017	Dr. S.K. Pandey	Chaired a session in 4 th International Conference INDIACom-2017 the them Computing for Sustainable Global Development at BVICAM, New Delhi
7 th -8 th March, 2017	Dr. Sunil Kr. Pandey, Director – IT	Addressed as Chairperson & Chaired a Session in International Conference (ICACCF-2017) on "Impact of Emerging Trends in Entrepreneurship: Focus on Digital India, Start-up India Stand Up India Initiative" organized by Amity College of Commerce & Finance, Amity University, U.P.

Student Participation in External Events

Date	Student Name	Events
13 th – 14 th February 2017	Ms Pooja/ Mr Prashant and Nitish	Participated in CSI Regional student's Convention, Ghaziabad organized at SRM, Modinagar
15 th February 2017	Anupriya/ Riya/ Divya/ Muskan and Abhishek	Participated in Budget Conclave 2017 organized by AKGIM Ghaziabad
16 th -18 th February, 2017	Rajat Singh /Ashutosh Mishra/ Nitish/ Hemant/ Kaviraj/ Prashant	Participated in Annual Fest organized by ABES, Ghaziabad
28 th February – 1 st March 2017	Ms. Anupriya	Presented paper through Skipe in "2 nd IEEE International Symposium on Internet of Things : Smart Innovation and Usages" (IoT-SIU 2017) organized by FET, MJP RU, Bareilly
7 th – 8 th March 2017	MCA students along with Faculty IT	Two days industrial visit to Mother Diary
7 th -8 th March,2017	Vaidehi Chettri /Abhishek/ Rajat Singh/ Ashutosh Mishra/ Rashmi Rawat	Participated in 'Endeavour-17' being organized by KIET
16 th March, 2017	MCA students along with Faculty IT	Educational Visit to iOS Lab & COE at ITS ,Greater Noida
24 th – 25 th March 2017	Gunjan	Participated in SCINTILLA 2017 Cultural Fest, Ghaziabad organized by Jaipuria School of Business, Indirapuram

Announcement and Contact Details

VIBRANCE is a quarterly E-Newsletter of Department of I.T, I.T.S, Ghaziabad. We look forward to the contribution from our students, alumni, faculty members and industry experts.

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