

Events

Achievements

Innovation

MARCH 2017

# eBlitzüne

SILICON MINDS. CIRCUITED HEARTS

*Published by :*

**BLITZ**

(Computer Science Society)  
Department of Computer Science

**KESHAV MAHAVIDYALAYA**

NAAC Accredited Institution "A" Grade  
(University of Delhi)



"Only Knowledge can provide salvation"

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# From the Principal's Desk



The Department of Computer Science has launched its first E-Magazine “eBlitzine”. The magazine is an outcome of the creativity, hard work and enthusiasm of the students under the able guidance of their faculty members. The efforts of the students and faculty members in contributing towards protection of the environment by adopting green initiatives are indeed laudable. This magazine chronicles the happenings and numerous achievements of the department and its students. It is a reflection of the ideology and creative musings of the department. I convey my best wishes to all the students and staff members of the department for success in all their endeavours.

**Dr. Madhu Pruthi**

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# From the Convener's Desk



I sense extreme pride in presenting the first issue of eBlitzine, the annual E-Magazine of the Department of Computer Science, Keshav Mahavidyalaya. The magazine is an initiative of the students and for the students of the college. The first issue gives a glimpse of the department since its inception. This magazine is a platform to showcase the proceedings of the events held in the department throughout the year. The student members of BLITZ computer society have beautifully penned down interesting IT articles in this magazine.

The magazine is a forum which could appositely be used for recording events, student achievements, fond reminiscences and ingenious writings. I am sure that this magazine will be informative and resourceful.

I congratulate the editorial board consisting of students and faculty for bringing out the first issue of eBlitzine. I pay my sincere thanks to all the students and staff of the college for their valuable support and cooperation.

**Dr. Priti Sehgal**

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# From the Editorial Board



(From left to right): Shilpi Pandey, Tushita Chadha, Natasha Malik, Anushka Sharma, Arshdeep Singh

Dear Readers

It gives us immense joy and satisfaction to launch the very first E-Magazine of Department of Computer Science, Keshav Mahavidyalaya, “eBlitzine”. Our main emphasis is to promote subjects related to the field of Computer Science. We feel that there is a wide scope to explore various fields in computer science; hence we extend our boundaries right from technical, educational and to substantial opportunities.

For us, the aesthetic vibrancy and delicate subtlety of the magazine is the essence of inquisitiveness. We have revelled in the fervent exuberance of blossoming minds and nurtured curiosity.

Curious readers, you will be reading the fragile fragments of our desire, moments and assimilation of our thoughts. This magazine is the outcome of the best of efforts that we have put in in order to bring forth something that is worth pondering and appreciating.

Finally, we thank our mentors - **Dr. Richa Sharma, Ms. Richa Gupta, Dr. Priti Sehgal** and

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**Ms. Nidhi Passi** for their guidance and support along with the editorial team, technical team, authors and well-wishers, who were associated with the magazine. With these words, we conclude by wishing you contented reading.

Editors:

 **Natasha Malik (Co-Head)**

 **Shilpi Pandey (Co-Head)**

 **Tushita Chadha**

 **Arshdeep Singh**

 **Anushka Sharma**

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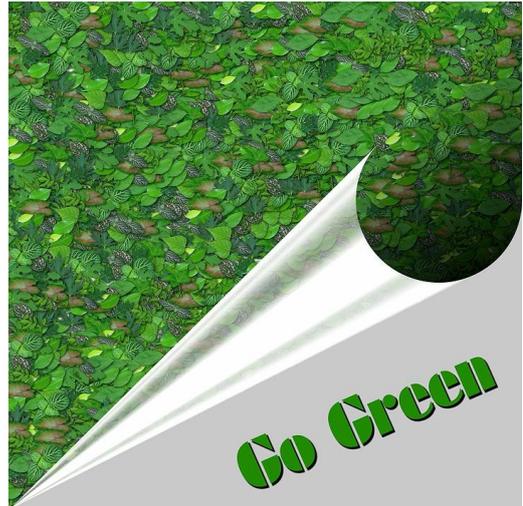
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## Why E-Magazine?



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**eBlitzine** is a green initiative by Blitz- The Computer Science Society of Keshav Mahavidyalaya. As concerned citizens of the planet Earth, we are taking a small step towards conserving our environment by eliminating the use of paper for publication. Why should we waste paper when we can go digital and contribute towards saving the environment? Instead of using the traditional approach of printing the magazine and distributing it, we have resorted to distributing the QR code that will direct the readers to the E-Magazine. We hope our readers understand the importance of environmental protection and appreciate this little initiative of ours of going GREEN!

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# About the Department of Computer Science

The Department of Computer Science of Keshav Mahavidyalaya, University of Delhi is one of the oldest departments in the college. It was established in the year 1994 with the objective of imparting quality education in the field of Computer Science. Under the able guidance of our principal, **Dr. Madhu Pruthi**, the department has been able to carve out a niche for itself in a very short span of time.

With an outstanding faculty and zealous student body, innovative classroom sessions and well-equipped laboratories, the department has been producing talented graduates every year. The exposure to the comprehensive foundation of the department allows graduates to adapt to new technologies, trends and ideas.

The following is the list of faculty members in the department:

- Dr. Priti Sehgal
- Dr. Anjali Thukral
- Dr. Roli Bansal
- Dr. Bhavna Gupta
- Dr. Richa Sharma
- Ms. Vinita Jindal
- Mr. Ravi Kumar Yadav
- Ms. Richa Gupta
- Ms. Maulein Pathak
- Ms. Nidhi Passi
- Ms. Rochana Chaturvedi
- Dr. Sumit Kumar Agarwal

- 
- Mr. Sumit Baberwal
  - Ms. Astha Goyal
  - Dr. Namita Aggarwal
  - Mr. Sudhir Kumar
  - Ms. Jyoti Kumari
  - Ms. Srishti Vashishtha
  - Mr. Anand
  - Mr. Pradeep Kumar
  - Mr. Rakesh Kumar

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# About Team Blitz



From back to front:

(From left to right): Atul Mittal, Saket Taneja, Sarthak Garg, Rallapalli Nagarjun, Tushar Garg, Shaunaq Narindra

(From left to right): Pooja Singhal, Alisha Garg, Sumedha Mittal, Harshita Hassani, Muskan Aggarwal

**Brilliant Information Technology Zealots (Blitz)**, a society, formed by the first batch of B. Sc. (H) Computer Science with a feeling to promote innovative thinking and professional growth, has come a long way since its inception. Under the tutelage of our respected Principal, *Dr. Madhu Pruthi* and faculty members we've been able to grow, nurture and tailor ourselves to the ever-changing tech-environment.

*"It takes two flints to make a fire"*. We, at Blitz, reckon that teamwork has the potential to underpin so much of what is valuable in work. Our team has been able to overcome an array of challenges with a full glass of gusto and in the interim, learn from them as well. Blitz's core team members are dedicated team players who bring in enormous amounts of energy and intuitive ideas. Each one of us embodies the spirit and vision of '**Brilliant Information Technology Zealots**' alias *Blitz*.

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Following are the pillars of strength of Blitz:

 **Dr. Priti Sehgal (Convener)**

 **Sumedha Mittal (President)**

 **Harshita Hassani (Secretary)**

 **Pooja Singhal (Treasurer)**

 **Alisha Garg (Senior Executive)**

 **Tushar Garg (Senior Executive)**

 **Atul Mittal (Senior Executive)**

 **Sarthak Garg (Senior Executive)**

 **Shaunaq Narindra (Senior Executive)**

 **Saket Taneja (Senior Executive)**

 **Muskan Aggarwal (Junior Executive)**

 **Rallapalli Nagarjun (Junior Executive)**

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# Workshop on Recursion

*“Allow yourself being a beginner; no one starts off being excellent.”*



**Blitz**, the Computer Science Society of *Keshav Mahavidyalaya*, organized an interactive workshop on **Recursion** conducted by **Coding Ninjas**. The event was graced with the presence of our honourable Principal, **Dr. Madhu Pruthi**, Convener, **Dr. Priti Sehgal** and other respected faculty members. Instead of letting students straight into the discussion of the topic, **Mr. Ankush Singla**, the speaker for the event, engaged students into some brainstorming puzzles first. Recursion is a fundamental topic and a powerful tool for most programmers. *Mr. Ankush Singla* not only explained the topic with help of ample interesting examples, but also encouraged the students to implement these examples at hand, which was the cherry on the top.

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# Workshop on Android App Development



**Blitz** believes that one must learn to adapt and learn new things to keep up with the changes in the tech world and hence, organised an interactive two-day workshop on **Android App Development** conducted by **Coding Blocks**.

Android development is crucial for every tech aspirant because this is an "App world" and Apps are an indispensable part of every small or big venture. **Mr. Arnav Gupta**, an acclaimed Android Developer, was the speaker for the workshop. He along with his professional team from Coding Blocks helped students understand the concepts of Android Development from the core. The first day of the workshop commenced with lamp lighting ceremony in the presence of our Principal, **Dr. Madhu Pruthi**, the Convener, **Dr. Priti Sehgal** and other respected faculty members, followed by a detailed tutorial by *Mr. Arnav Gupta* on how to install the required

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software. He then gradually explained all the necessary tools for Android Development. Not only students, but teachers also attended the workshop with same zeal and enthusiasm as the students.

The second day of the workshop was devoted to practical application of the concept learned earlier because coding is something which one learns with practice. The Coding Blocks team encouraged students to code on their own and even solved their problems. The workshop concluded with a question-answer session that aimed at clearing the doubts of the students.

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# Blitzkreig'16



**Blitzkreig:** The annual tech-fest of *Keshav Mahavidyalaya* is a platform for all tech lovers and coders to demonstrate their skills and win exciting prizes. It is one amongst the seven colleges of University of Delhi that organise a tech-fest. *Blitzkreig'16* was a successful event with a large number of tech enthusiasts participating in different events. The following events were conducted with enormous participation:

## CODESLAYER

This was the coding event for the curious minds who strived to solve every problem using their programming skills.

## PIXELATE

The Photoshop event was designed for the ones with out of the box imagination who believe

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that an image expresses the ideas in a lot better way than words!

## CYVASSE

This event was a treat for gamers. Love gaming? We figured it out for you.

## INQUIZITIVE

This was a perfect chance to bring out that nerd within you and flaunt that 'Tech-GK'.

## HUES

IT Rangoli, was a colourful event for the artistic minds who were tech freaks but creative at the same time.

## SPECWARS

This event was a treat to all the gadget junkies out there. It surely was a war of specifications!

## BOOTCAMP

This enthralling web designing event gave participants a platform to paint the canvas of web with their talent.

## EUREKA

The motto for this event was to - *Awaken the Sherlock. Solve the clues. Take the treasure home!*

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Besides the events, *Blitzkreig'16* offered a plethora of fillers to engage the crowd in fun activities. Behind the spectacular decoration work, was a team of dedicated students. Then there was the hard-working organizing team who managed to take care of the minutest of details of all the events. Credit is all theirs for carrying out the events so smoothly.

Our Silicon minds and Circuited hearts wait for this day to come again. This time with more surprises and double the fun!

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# Achievers

*“The starting point of all achievements is desire”,* said Napoleon Hill. The same stands true for all the great achievers of our department in both, curricular and extracurricular activities. In them they have the desire to learn, the desire to work hard and the enthusiasm to celebrate their victories. With as many as 8 placements in the past year, 21 students clearing various prestigious MCA and M.Sc. entrance exams and multiple students partaking and winning in various extra-curricular events organized in the DU circuit and beyond, the department feels proud of all those students who brought laurels to its name.



## Entrance Exams cleared

<b><u>Name</u></b>	<b><u>Entrance exam cleared</u></b>
Vishal Behra	DU M.Sc.
Saumya Bansal	DU M.Sc.
Sushant	DU M.Sc.
Rahul	DU M.Sc.
Shivek	DU M.Sc.
Ajay	DU M.Sc.

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<b><u>Name</u></b>	<b><u>Entrance exam cleared</u></b>
Preeti	DU M.Sc.
Nishant	DU M.Sc.
Pinki	DU M.Sc.
Kriti	DU M.Sc.
Saurav Saha	DU MCA
Rahul Kumar	DU MCA
Mohit Chauhan	DU MCA
Chirag Juneja	NIT Kurukshetra MCA
Harshita	NIT Kurukshetra MCA
Nimisha Sehgal	IGDTUW MCA
Shivangi	IGDTUW MCA
Chahat Bansal	BVP MCA
Jyoti Sachdeva	BVP MCA
Sonika Vyas	JIMS MCA

## Extracurricular Activities

### B. Tech Computer Science

<u>Name</u>	<u>Year</u>	<u>Name of the society (including cultural societies)</u>	<u>Position bagged in any event</u>
Dev Saluja	IV	Anhad	<ul style="list-style-type: none"> <li><input type="checkbox"/> First runner up at Freshers at Keshav Mahavidyalaya, 2013</li> <li><input type="checkbox"/> 2<sup>nd</sup> position in Battle of Bands, Antardhvani, 2014.</li> <li><input type="checkbox"/> 2<sup>nd</sup> position in Battle of Bands, IIT Roorkee, 2014</li> <li><input type="checkbox"/> Invited as a Judge and awarded a memento to judge War of Bands competition at IGDTUW, 2015.</li> <li><input type="checkbox"/> 1<sup>st</sup> position in Battle of Bands, Antardhvani, 2015.</li> </ul>
Ayushi Gupta	IV	Maniera	<p><b>Art events</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1<sup>st</sup> position in Trashion at Mood I, IIT Bombay, 2015</li> <li><input type="checkbox"/> 1<sup>st</sup> position in Waste Crafts at Maitreyi College, 2015</li> <li><input type="checkbox"/> 1<sup>st</sup> position in Artival at IIIT Delhi, 2015</li> <li><input type="checkbox"/> 2<sup>nd</sup> position in Graffiti at IIIT Delhi, 2015</li> <li><input type="checkbox"/> 2<sup>nd</sup> position in Mask Making at IIIT Delhi, 2015</li> <li><input type="checkbox"/> 3<sup>rd</sup> position in Fashion from Trash at Delhi College of Arts and Commerce, 2015</li> </ul> <p><b>Western Dance Competitions</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1<sup>st</sup> position at Apeejay School of Management, 2013</li> <li><input type="checkbox"/> 1<sup>st</sup> position at Technia Institute of</li> </ul>

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			<p>Management, 2013</p> <ul style="list-style-type: none"><li><input type="checkbox"/> 3<sup>rd</sup> position at Asia Pacific Institute of Management, 2014</li><li><input type="checkbox"/> 1<sup>st</sup> position at Usha &amp; Lakshmi Mittal Institute of Management, 2014</li><li><input type="checkbox"/> 3<sup>rd</sup> position at Institute of Home Economics, 2014</li></ul>
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## B.Sc. (H) Computer Science

<u>Name</u>	<u>Year</u>	<u>Name of the society (including cultural societies)</u>	<u>Position bagged in any event</u>
Pooja Singhal	III	Advaitaa	<input type="checkbox"/> 3 <sup>rd</sup> position at Technia Institute, 2015 <input type="checkbox"/> 2 <sup>nd</sup> position at Bhagini Nivedita College, 2015
Alisha Garg	III	Maniera	<input type="checkbox"/> 1 <sup>st</sup> position in Newspaper Dressing in Tryst, 2015 <input type="checkbox"/> 1 <sup>st</sup> position in Rangoli competition organized by NSS, 2015 <input type="checkbox"/> 1 <sup>st</sup> position in Trashion, organized by Mood I, IIT Bombay fest, 2015 <input type="checkbox"/> 1 <sup>st</sup> position in Logo Making competition organized by IEEE, MAIT, 2016
Abhilasha Gupta	III	Maniera	<input type="checkbox"/> 3 <sup>rd</sup> position in Trashion, event organized by Mood I, IIT Bombay fest, 2016
Charchit Nim	III	-	<input type="checkbox"/> 3 <sup>rd</sup> position in Trashion, event organized by Mood I, IIT Bombay fest, 2016

<u>Name</u>	<u>Year</u>	<u>Name of the society (including cultural societies)</u>	<u>Position bagged in any event</u>
Mayank Kumar	II	Vagmita(Debate)	<p><b>Group Discussions</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2<sup>nd</sup> position at VIPS, 2015</li> <li><input type="checkbox"/> 1<sup>st</sup> position at DTU, 2016</li> <li><input type="checkbox"/> 2<sup>nd</sup> position at Fledgling, 2016</li> <li><input type="checkbox"/> 1<sup>st</sup> position at Motilal Nehru College, 2016</li> <li><input type="checkbox"/> 2<sup>nd</sup> position at BPIT, 2016</li> <li><input type="checkbox"/> 2<sup>nd</sup> position at MSIT, 2017</li> <li><input type="checkbox"/> 1<sup>st</sup> position in Khalsa, 2017</li> </ul> <p><b>Debates</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Best team in Debate tournament at DCAC, 2016</li> <li><input type="checkbox"/> 2<sup>nd</sup> Best speaker in debate, BCAS, 2017</li> <li><input type="checkbox"/> Best team in debate, VIPS, 2017</li> </ul> <p><b>Best Interjector</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Best interjector at SGND Khalsa College, 2016</li> <li><input type="checkbox"/> Best interjector at Kalindi College, 2016</li> <li><input type="checkbox"/> Best interjector at JIMS, 2017</li> <li><input type="checkbox"/> Best interjector at CBS, 2017</li> </ul>

<u>Name</u>	<u>Year</u>	<u>Name of the society (including cultural societies)</u>	<u>Position bagged in any event</u>
Darshika Singh	II	Vagmita(Poetry) Anhad	<input type="checkbox"/> 1 <sup>st</sup> position in w.d.c poetry slam at Sri Aurbindo College(evening), 2016 <input type="checkbox"/> 2 <sup>nd</sup> position in Hindi creative writing at Hansraj College, 2016 <input type="checkbox"/> 3 <sup>rd</sup> position in Kavya Path (Hindi poetry) at Ramjas College, 2015 <b>Music</b> <input type="checkbox"/> Finalist in Hindi solo singing at IIT Delhi, 2015 <input type="checkbox"/> Finalist in semi classical/Indian light music at NIFT, 2016 <input type="checkbox"/> Semi-finalist in Hindi solo singing at IIT Bombay, 2015
Aditya Alok	II	-	<input type="checkbox"/> 2 <sup>nd</sup> position at DU Intercollegiate Taekwondo championship, 2016 <input type="checkbox"/> 2 <sup>nd</sup> position at 400 m race on sports day in Keshav Mahavidyalaya, 2016 <input type="checkbox"/> Gold medal at 28 <sup>th</sup> Bihar state Taekwondo championship, 2016
Harshita Hassani	II	Maniera	<input type="checkbox"/> 1 <sup>st</sup> position in Cartoon Making competition at AIIMS, 2016 <input type="checkbox"/> 2 <sup>nd</sup> position in newspaper dressing held at Mood I, IIT Bombay, 2015
Bhavika Thakur	II	Maniera	<input type="checkbox"/> 1 <sup>st</sup> position in Cartoon Making competition at AIIMS, 2016
Sarthak Garg	II	Maniera	<input type="checkbox"/> 2 <sup>nd</sup> position in Paper Craft at Sri Aurobindo College, 2016

<u>Name</u>	<u>Year</u>	<u>Name of the society (including cultural societies)</u>	<u>Position bagged in any event</u>
Vanshu Batra	II	Maniera	<input type="checkbox"/> 2 <sup>nd</sup> position in Paper Craft at Sri Aurobindo College, 2016
Aanandita	I	Shades and Nrityaang	<input type="checkbox"/> 3 <sup>rd</sup> position in Roohaniyat theatre competition at LHMC, 2016 <input type="checkbox"/> 2 <sup>nd</sup> position at Kautuk street play competition organized by Panchtatva, The Environment Society of Hindu College, 2016 <input type="checkbox"/> Runner-up at Freshers at Keshav Mahavidyalaya, 2016
Ankit Kumar	I	Maniera	<input type="checkbox"/> 3 <sup>rd</sup> position in Trashion, event held at Mood I, IIT Bombay fest, 2016
Himansh Pandey	I	Shades	<input type="checkbox"/> Most Talented Fresher at Freshers held at Keshav Mahavidyalaya, 2016 <b>Nukkad Natak</b> <input type="checkbox"/> 1 <sup>st</sup> position at Mood I, IIT Bombay, 2016 <input type="checkbox"/> 1 <sup>st</sup> position at MSIT, 2016 <input type="checkbox"/> 3 <sup>rd</sup> position at JDM College, 2016

## B.Sc. Mathematical Sciences

<u>Name</u>	<u>Year</u>	<u>Name of the society (including cultural societies)</u>	<u>Position bagged in any event</u>
Gunika Choudhary	III	Advaitaa	<b>Western Dance</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1<sup>st</sup> position at I.T.S, 2016</li> <li><input type="checkbox"/> 1<sup>st</sup> position at Delhi Institute of Advanced Studies, 2016</li> <li><input type="checkbox"/> 3<sup>rd</sup> position at Bhagini Nivedita College, 2015</li> </ul>
Megha Batra	III	Maniera	<ul style="list-style-type: none"> <li><input type="checkbox"/> 1<sup>st</sup> position in Rangoli making in Modulus held at Keshav Mahavidyalaya, 2016</li> <li><input type="checkbox"/> 2<sup>nd</sup> position in Newspaper Dressing competition held at Delhi College of Arts and Commerce, 2016</li> <li><input type="checkbox"/> 2<sup>nd</sup> position in Rangoli making in Blitzkreig held at Keshav Mahavidyalaya, 2016</li> </ul>
Sahil Nangia	III	Advaitaa	<b>Solo dance</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1<sup>st</sup> position at BITS Pilani, 2015</li> <li><input type="checkbox"/> 1<sup>st</sup> position at AIIMS, 2015</li> <li><input type="checkbox"/> 2<sup>nd</sup> position at Ramjas College, 2017</li> </ul> <b>Group dance</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1<sup>st</sup> position at Delhi Institute of Advanced Studies, 2016</li> <li><input type="checkbox"/> 1<sup>st</sup> position at Institute of Technology and Science, 2016</li> <li><input type="checkbox"/> 2<sup>nd</sup> position at Bhagini Nivedita College, 2016</li> </ul>

<u>Name</u>	<u>Year</u>	<u>Name of the society (including cultural societies)</u>	<u>Position bagged in any event</u>
			<input type="checkbox"/> 3 <sup>rd</sup> position at St. Stephen's College, 2016
Shiwanshu Porwal	II	Vagmita(Debate)	<input type="checkbox"/> Best Speaker at The Negotiation table (nation category) organized by SRCC and IIT Delhi (2015-16)

## DU Innovation Project

<u>Name</u>	<u>Name of course</u>	<u>Year</u>	<u>Year of project</u>
Swarnika Sharma	B.Tech Computer Science	IV	2015-16
Vaishali Gera			
Shashank Uniyal			
Ayush Jain			
Arush Verma			
Natasha Malik	B.Sc.(H) Computer Science	III	2015-16
Tanya Goyal	B.Sc.(H) Computer Science	II	2015-16
Vaibhav Shorey			
Saket Taneja			
Uttam Singh			

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## Placements

<b><u>Name</u></b>	<b><u>Name of the company and Job Title</u></b>
Sagar Bajaj	Software Developer at Wipro
Charu Nijhawan	Sharepoint Developer at TCS
Varun Suthar	Sharepoint Developer at TCS
Suyash Gulati	Sharepoint Developer at TCS
Rishabh Mahajan	Assistant Manager at UrbanClap
Ashish Chauhan	Assistant Engineer at Atos
Jay Singh	Assistant Engineer at Atos

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# Competitions and Internships

“You need experience to get experience.”



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Some extra knowledge and experience always comes handy while facing interviews with top firms! While doing Bachelors in Computer Science everyone is busy making future academic plans. But before that you need to get real-life experience and exposure. Taking part in several competitions will help you gain excellence in your field. This content consists of a list of certification courses and online competitions which are available in the market and for which companies are paying big.

Some of the courses are:

## Web Development

[Beginner Focused Books at Launch School](#)

[Build Your First Laravel App](#)

[Bento](#)

[Code4Startup](#)

[CodeAvengers](#)

[Codecademy](#)

[CodeCombat](#)

[Codementor Learning Center](#)

[Coder Camps](#)

[Code School](#)

[Free Code Camp](#)

[HowToCode.io](#)

[iLoveCoding](#)

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[LiteratePrograms](#)  
[Odin Project](#)  
[Quackit](#)  
[StudyTonight](#)  
[Thinkful](#)  
[Tuts+](#)  
[Udemy](#)  
[Viking Code School Prep](#)  
[The great tool for Full Stack Developer](#)

## Web Designing

[W3Schools](#)  
[Opera Web Standard Curriculum](#)  
[Google Code University](#)  
[Treehouse](#)  
[Lynda.com](#)  
[Don't Fear the Internet](#)  
[Mozilla School of Webcraft](#)  
[net magazine on Creative Blog](#)  
[Codecademy](#)  
[Webdesigntuts+](#)  
[Code School](#)  
[CSS-Tricks](#)  
[Sitepoint](#)  
[Udacity](#)  
[Code Racer](#)  
[Rails for Zombies](#)  
[Why's Poignant Guide to Ruby](#)  
[Learn Python the Hard Way](#)  
[Stackoverflow](#)  
[LearnToProgram.tv](#)  
[Khan Academy](#)

## App Development

[Official Android Documentation](#)

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[Android Open Source Project \(AOSP\)](#)  
[Android Tools Project Site](#)  
[Google Play Services](#)  
[Android Developers Blog](#)  
[Android on StackOverflow](#)

## Free Online Courses offered by Google

[Fundamentals of Google Android Development](#)  
[Google SketchUp for 3D Modeling](#)  
[Google Analytics](#)  
Google AdSense  
Google Webmaster  
Google Blogger  
Data Analysis and Reports in Google Analytics

“To gain substantial experience, showcase skills, analyse and evaluate outcomes participating in competitions is essential!”

Some of the online competitions are:

### [CodeChef](#)

The specialty of the site is that not only it is an online programming contest site but it also provides the programmers an opportunity to be trained, meet each other and have a healthy competition. It is good to try out this site as apart from competing, aspiring programmers stay updated through its presence in social media.

### [Sphere Online Judge \(SPOJ\)](#)

This online judge system (tests programs online in contests) has the solutions to 10000 problems in languages like English, Polish, Vietnamese and Portuguese. C++, Java, C are some languages in which solutions are submitted. Availability of an online forum allows more than

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100000 users registered to decide how to solve the problem.

## Similar sites for online competitions and contests to brush up coding skills are:

[UVa Online Judge](#)

[ProjectEuler](#)

[Programmr](#)

[TJU](#)

[PJU](#)

[TIMUS](#)

[AIZU](#)

[URI](#)

[NTHU](#)

[LeetCode](#)

[AI Challenge](#)

[Saratov](#)

[Google Code Jam](#)

[Herbert](#)

[CoderCharts](#)

[CodingBat](#)

[HackerRank](#)

[Al Zimmermann](#)

[Lightoj](#)

[Infoarena](#)

[CrowdAnalytix](#)

[TunedIT](#)

[Innocentive](#)

[Challenge.gov](#)

[Codeforces](#)

[Coder Byte](#)

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## For practicing online programming:

### [ProjectEuler](#)

Both adults and students who have interests in programming and mathematics can try this site out. The site has hundreds of problems solved by programming. There are 17 levels of achievements and participants can go to a higher level by solving certain problems.

Other such sites are:

[Topcoder](#)

[Programmr](#)

[URI](#)

[Google Code Jam](#)

[CodingBat](#)

[Lightoj](#)

[InterviewStreet \( HackerRankX\)](#)

[Kaggle: Big Data Competition- Making Data Science A Sport](#)

[Innocentive](#)

For learning hacking techniques:

[Hackquest](#)

[Hacktissite](#)

[TrythisOne](#)

[Hackchallenge](#)

[Hacking-lab](#)

Thus, the above discussion on online contesting and challenges helps us to understand how web is aiding in building up the programming as well as non-programming skills online. Besides this, competitions and internships are the essential ingredients for a successful life ahead. Taking up opportunities on every step can take you miles ahead!

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# What after Bachelors in Computer Science?



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It is preeminent that students in computer science keep fun in computing while balancing it with startling knowledge that not only creates copious opportunities but also enables them to push their boundaries to explore the procured experience hereafter.

There are myriad organizations and opportunities available in the field of IT sector, Private Sector for those considering career abroad. Students can get in top IT firms in India which provide attractive packages along with indispensable exposure in the field. Besides these IT firms, students can also get jobs with management consultancy organizations, power plants and other organizations that use computers and computer-aided systems. For those students who plan to go abroad for their career can look up for firms from the Middle East and Europe.

Teaching is another option that students can consider for which they need to clear the NET. The National Eligibility Test (NET) is a test to determine eligibility for college and university level lectureship. It aims to ensure minimum standards for the entrants in teaching professions and research. Interested student can apply for NET twice a year and after successful clearance can get jobs in colleges or universities.

If one wishes to learn further to hone their skilful knowledge can pursue higher education. Given below are few preferable courses:

## **M.Tech (for B.Tech only)**

It is a master's degree offered to students who are interested in advanced learning and research in any area of computer science. Applicants for this degree are expected to already have an excellent background in computer science.

*Note: Some colleges also accept students from B.Sc. for M.Tech but only in selective fields.*

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## **Master in Business Management in Computer Management**

This is a postgraduate course that is intended to create professionals for specialized commercial application in software.

## **Master of Science by Research in Computer and Information Science**

It is a professional degree program that is designed to combine a thorough education in computer science and emphasizes on advanced programming using the latest technology.

## **Master of Science in Computer Communication**

Communications Engineering major focuses on communications and networking technologies, networking business and human centric communication.

## **Master of Science in Computer Science and Technology/ Master of Science in Computer Science/ Master of Science (H) in Computer Science**

The Master of Science in Computer Science (MSCS) program is a terminal degree program designed to prepare students for more highly productive career in industry. Graduates receive the MSCS for completing one of the three options in the program as described in the program of the study.

## **Master of Science in Operation Research Engineering**

The M.S. in Operational Research Engineering trains students in solving business problems with computers and mathematics.

## **Master of Science in Statistics and Computer Applications**

It's a mathematical postgraduate degree with an emphasis on collecting and interpreting statistics. The degree requires a solid mathematical background, with equal attention given to practical mathematics.

## **Post Graduate Diploma in Computer Programming**

Computer programmers who obtain graduate degree often progress to higher-level design or

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development roles, including:

- Software Engineer
- System Designer
- Computer System Consultant

## **Post Graduate Diploma in Computer Hardware**

It imparts students with knowledge of data communication through networking, different operating systems and functionality of computer hardware.

## **Post Graduate Diploma in Computational Linguistics**

It is a short term one year program which helps students acquire knowledge of the important aspect of computational linguistics which further is devoted to project work.

## **Post Graduate Diploma in Computer Aided Interior Space**

It offers excellent opportunities of self-employment, or work part time.

## **Post Graduate Diploma in Computer aided management**

It is designed to train students to become excellent general managers and high-level-decision-makers with broad strategic vision.

## **Post Graduate Diploma in Computer Application**

This course is designed to primarily focus on the stream of students who wish to have ample amount of knowledge in the IT field.

## **Post Graduate Diploma in Computer Science and Applications**

The (PGDCSA) course is designed for students with a degree who are interested in computer applications. This course is also suitable for engineering graduates who are interested in making their career in the IT sector.

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- ✓ [targetstudy.com](http://targetstudy.com)
- ✓ [masterstudies.com](http://masterstudies.com)
- ✓ [iiit.ac.in](http://iiit.ac.in)

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# Sundar Pichai

- From a quiet boy to one of the most influential men in the world



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*Pichai Sundararajanaka Sundar Pichai, born in Madurai, Tamil Nadu, in his formative years, was so shy that none of his teachers noticed or remembered him. He was one of those students who rarely participated in sports and was a bookworm all through school. Belonging to a middle-class family, he never experienced the luxury of watching television or travelling by a car in his childhood. Being the one who could memorize phone numbers, developed the skill and ability to impress Larry Page and Sergey Brin to be chosen Google's 3rd CEO and to be the backbone of Chrome OS, Chromebook, Chrome cast, Gmail and Google Drive.*

*"Sundar was academically bright, but he was never the topper. He always secured third rank and kept it to himself." recalls a classmate. He is still the same as he always was. It is difficult for us to imagine that he now heads Google", says the same classmate.*

After completing *B.Tech* in Metallurgy from *IIT Kharagpur* and then *M.S.* from *Stanford* in Material Sciences, he did his *MBA* from *Wharton School* at *University of Pennsylvania*. Before working at *Google*, he worked at *Applied Materials* as an engineer and worked at *Mckinsey* as a management consultant. He joined *Google* as a Product Manager in *2004*, and started working on various *Google* products like *Firefox*, *Google toolbar*, *Desktop search*, *Gadgets* and *Google Gears* though he was not from computer science background. Success of *Google's toolbar* gave Pichai the idea that *Google* should develop its

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own browser. He persevered and convinced the co-founders of *Google*, *Larry Page* and *Sergey Brin*, to launch *Google's* own browser though the then-CEO *Eric Schmidt* objected to it, thinking it would be an expensive affair.

*Pichai* played a pivotal role in the launch of the browser and it proved to be a great success. He became an internationally known figure and paved the way for a series of other important products like *Chrome OS*, *Chromebook* and *Chromecast*. *Pichai* has a great relationship with all his partners and colleagues.

Making his way to success from a quiet boy to the Vice President of *Chrome* and *Google apps* and then the in charge of *Android*, he was named as the *CEO* of *Google* on *August 10, 2015*.

*"It's good to be insecure because that means you're working with people who are better than you and you're being pushed to be better."* said *Pichai* while talking to students at SRCC, University of Delhi.

**Nishi Aggarwal**

**B.Sc. (H) Computer Science (III year)**

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# IBM Watson at work!

Watson is working with businesses, scientists, researchers and government to outthink the biggest challenges.



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*Watson* is an intellectual computer system developed by IBM's research team which is capable of answering questions. Named after *IBM's* first CEO *Thomas J. Watson*, it is a supercomputer that combines Artificial Intelligence (AI) and an analytical software for optimal performance. The sources of information for *Watson* include encyclopaedias, dictionaries, thesauruses, newswire articles and several literary works. The computer system was specifically developed to answer questions on the quiz show '*Jeopardy*' and defeated former champions *Ken Jennings* and *Brad Rutter* in *2011*. *Watson* was set up as a human competitor and had no internet access while competing for the quiz. Watson-based technology is capable of replacing many of the current services like travel agents, bank officers, real estate agents, and financial advisors. It can also take over the role of an expert in diagnosing diseases and prescribing the most cost effective treatment. *Watson* is working with businesses, scientists, researchers and government to outthink the biggest challenges.

**Tanya Goyal**

**B.Sc. (H) Computer Science (II year)**



# The Unforeseen INTERNET

## Surface, Deep, Dark

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Contrary to common assumption, Internet consists of 3 layers- Surface, Deep and Dark. The entire web that we have surfed since childhood and all we can surf for the rest of our lives is the Surface web. It surprisingly constitutes 4% of the entire Internet. Rest of the Internet is shrouded from normal population and therein starts the second layer called the Deep web. It was created to echo the internet at its beginning i.e. "Information should be free". It has hidden itself with the help of onion routing. But in reality, it has become a place to sell illegal things. It has become a hub of hackers and illegal activities.

There are rumours of one more layer called the Dark Web, which is rumoured to be hub of all the top-level hacker organizations. Many people have taken advantage of this. Deep Web uses two networks - Tor and I2P to hide itself which anciently started as government projects.

The Deep Web was made on the principle of anonymity and free speech which has evolved to more dangerous means. One such example is William Ulbricht (aka dread pirate Robert) who founded Silk Road, an online Darknet Market (best known for selling drugs). So, the internet is so much greater than one may think and its use has differed from its original approach.

**Aakash Dabas**

**B.Sc. (H) Computer Science (III year)**

# The Life And Lies Of A Programmer

By Jaideep Sagar

Hey, what's new buddy?

I was just searching about a programming problem but all I have found till now is a bunch of threads with same questions but no results.

I dont know WHY these morons ask same question again and again, when they get same answer every time?

yeah?

Here, look at this. I HAVE ALREADY TRIED THAT BlueMoon95.

So what are you gonna do now?

I know what I am gonna do.

I am gonna start a fresh new thread.

Jaideep Arya

B.Sc. (H) Computer Science (III year)

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# Advancing or Retarding?

The big question...



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*Google has changed our way of learning,  
Sticking to the laptops until our eyes starts burning.  
Using CAD for 2D 3D,  
Wikipedia is a boon for the needy!  
Life took a turn with android apps,  
Indeed, deserving applauds and claps!  
Buttons gave way to touch screen,  
Swept us off our feet, simply with a perfect gleam!  
There's been a time for the qwerty which made us all a wee flirty.  
With the clash of man and the machine,  
Being scolded by the dean,  
In between while growing, we learnt how to play it clean.  
Getting addicted to Temple Run,  
Forgetting life's real fun!  
Growing in this scenario, along with the computers  
Enjoying the slice of bread-jam and supercomputer.*

**Yukti Kaushik**

**B.Sc. (H) Computer Science (I year)**

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# Tesla Motors



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In numerous countries across the world, the personal automobile is the single largest polluter, as the emissions from millions of vehicles on the road add up to the atmospheric pollution. Also, we must not forget that the raw crude oil is an exhaustible resource and the current demand-supply ratio does not lead to a promising future. The idea of electric cars was a very promising one with great potential and feasibility. *Tesla Motors* gave this vision a perspective and made this dream a reality. Founded in *2003* by *South-American Billionaire* business man, engineer, scientist and inventor *Elon Musk*, *Tesla Motors* have completely revolutionised the automobile industry with its Combustion free electric engine that runs solely on electricity. *Tesla* is not just an automaker, but also a technology and design company with a focus on energy innovation.

A few automotive giants like *BMW* and *Mercedes-Benz* designed electric car prototypes and tried to explore the possibility of emission free driving experience but the resultant products just couldn't deliver the horse powers like the conventional combustion engine. *Tesla Motors* took this to the next level with its state of the art engineering and technology. Currently with 3 cars in production the *Model X (Hybrid SUV)*, *Model S (Luxury Sedan)*, *Model 3 (Hatchback-Sedan Crossover)*, *Tesla* has completely changed the way people look at electric cars. The biggest question mark was the performance, that whether these electric cars would be able to match with their fuel powered counterparts. Well, performance is a big plus when it comes to any *Tesla*. As per latest statistics, the *Tesla model S* can go from *0-60 mph* in a ridiculous *2.38 seconds* making it the fastest car in

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production. The technology *Tesla* offers is miles ahead of any other car in the market. Basically, it is a futuristic car inspired by the tech around us. The *Tesla* comes with built in autopilot and cruise control. Safety is paramount when it comes to a *Tesla*. And with all its smart sensors and airbags, it ensures the safety of its driver and all the passengers. It's a smart car which explores a future where the driver should do the minimal. *Tesla Motors* aims at an effortless and luxurious driving experience. It is a tech device before it is a car. And just like any other tech device in the world, your *Tesla* will also receive firmware and software updates. These updates usually work around the autopilot and the software around which your *Tesla* runs and functions, like fixing the bugs and if the owner encounters any hardware issue, *Tesla* flies an engineer from their Headquarters at *Palo Alto, California* to have a closer. These are the premium benefits and exclusivity of owning a *Tesla*. The driving experience of a *Tesla* is surreal and *Tesla* ensures that with its state of art interiors which create the perfect ambience for driving. Re-Fuelling, rather Re-Charging a *Tesla* is also not an issue as *Tesla* has a lot of charging stations and service stations spread across *The United States* making it more convenient for the owners. Ultimately it all comes down to the price. The *Tesla Model 3* base model retails at a price of *35,000 \$*, *Model S* and *Model X* starts at *74,000\$* and *88,000\$* respectively, making them *one of the most expensive cars* in the market. But think of it as an investment as these cars were made keeping in mind an emission free future and with *Tesla's* exclusive technology of updating their machines time-to-time makes these electric cars long lasting and durable. This is a change we should embrace and move on with it. I hear *Mercedes* is working on a vehicle that runs on water vapours, interesting stuff. I would be STEAMED if that doesn't end up working out.

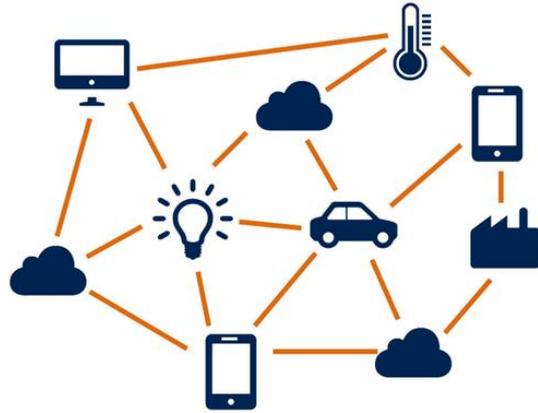
**K. Subramaniam**

**B.Sc. (H) Computer Science (I year)**

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# Internet of Things

Wave of the future



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***“The internet has always been a magic box and always will be”***

***~Marc Andreessen***

We all possibly use internet for anything and everything. Getting our fingers and brain together is what we do all day. What if the first thing you do in the morning and the last thing that finishes your day gets connected to the internet! *\*\*Surprised, right? \*\**Well, this is where the concept called *IoT* or *Internet of things* comes into the picture. A clear vision to what we do and how we do is the basis of *Internet of Things*. What exactly it includes? Well, in simple words, cell phones, coffee makers, washing machines, headphones, lamps, wearable devices and almost anything you can think of!

Bringing down the real definition, it says, if we could possibly connect any device with an on-off switch to the internet, that's what *IoT (Internet of Things)* is! It's a giant network of *“Things”* that brings up the relationship between *“People and People”*, *“Things and People”* and *“Things and Things”*.

In terms of *IoT*, *“A hidden connection is stronger than an obvious one”*. Considering an example, what if you have an important meeting and your car knows it and pre-manually prepares for the fastest and easy route? The question might be, how can the car automatically consider the day of meeting and can get the fastest route without you entering any information. What if the traffic is heavy and your car might send a text to the other party notifying them that you will be late? What if your alarm clock wakes up you at 6 a.m. and then notifies your coffee maker to start brewing coffee for you? What if

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your office equipment knew when it was running low on supplies and automatically re-ordered more? That's how *IoT (Internet of Things)* is working on changing the experience and bringing the human life a little too much closer to the Internet. It's like you thinking and then letting the Internet manage and serve you with comfort.

The reality is that the *IoT* allows for virtually endless opportunities and connections to take place, many of which we can't even think of or fully understand the impact as of today. Since it gets the world connected with everything, hence makes you and your data more vivid for security threats and privacy issues. This hot-button topic even today is under imagination for how the conversation and concerns will escalate when we are talking about many billions of devices being connected all together and at one place.

Conversations about the *IoT* are taking place all over the world that not only seeks us to understand how this will impact our lives but also trying to work the way out for the opportunities and challenges that will be coming up when this imagination takes an actual turn towards the reality of joining *IoT*. For now, the best thing that we can do is educate ourselves about what the *IoT* is and the potential impacts that can be seen on how we '*live and work*' that will bring a change in the society to impact for an incredible hereafter.

**Arshdeep Singh**

**B.Sc. (H) Computer Science (I year)**

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# Technology

So vast, so great...

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*Technology so vast, so great*

*Evolving at a faster rate.*

*COBOL C++ Java*

*Acting like alpha beta and gamma!*

*AND OR NOT*

*Still falling for the DOT(!)*

*And there comes the array,*

*Making our thoughts narrow*

*While in labs engrossed in coding*

*Leaving us all brooding!*

*Technology so vast, so great*

*Getting a job...*

*Totally dependent on fate!*

*Web, blogs & social media,*

*Hats off for eliminating the need of encyclopaedia!*

*'Go-Pro' sweeping us off our feet*

*Till the time no one can beat.*

*Technology so vast, so great*

*No doubt evolving at a faster rate!!*

**Yukti Kaushik**

**B.Sc. (H) Computer Science (I year)**

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# Android vs iOS

## The battle continues...



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Smartphones are ingrained in today's society. Owning a smartphone means that you can live much of your day to day life on the move. Reading a book and not getting the meaning of a word or walking down the streets and *\*oops\** you forgot the way or setting a reminder regarding your meeting. Solutions to all these can be provided by a single device – *A smartphone!*

And the two biggest players in the smartphone market are the *Android operating system by Google*, and *iOS by Apple*. There is way too much to talk about these two, plus there is an argument that's been going on for years: *iOS or Android?* So, let's begin by considering some WHYs!! *Why people buy an android based phone? And why do people buy an iPhone?* There are reasons like UI customizability, free apps and much more for buying an android phone! But they particularly don't require a reason to buy an iPhone because *Excuse me! It's an iPhone!* *\*ha-ha\** Jokes apart, *iPhone* should not be underestimated because *iPhone* is of equivalent quality! But wait, *Android Smartphone* is affordable and efficient! So basically, we are back at square one! *iOS or Android?* So hence talking on a serious note, none of them is less than the other! And it's time to talk about some of their features!

*iOS* and *Android* both use touch interfaces that have a lot in common - swiping, tapping and pinch-and-zoom. If it comes to personalizing your phone, then *Android* allows the use of widgets, rearranging apps on home screen and using different themes. But to personalize your *iPhone*, you simply go and buy a different colour case because it doesn't allow you to use widgets on your home screen! But, *iPhone* has a physical switch on its body that allows you to silent your phone and is a better option

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than long pressing the volume button on an *Android Smartphone*. Apart from these features, the app store and affordability in both OSs are amazing! The *Google Play Store* has 1,00,000+ apps and it allows several alternative app stores. And on the same hand in iPhones, *Apple app store* too has 1,00,000+ apps BUT it blocks 3rd party app stores. The phone needs to be jailbroken if you want to download apps from other stores. Now, we get to the camera which is the major selling point of a smart phone! There are *terrific Android phone cameras*, and there are *awful Android phone cameras*. But the *iPhone camera* is consistently great!

But wait! I must tell you that both *Apple* and *Google* launch brilliant phones every year! Like in 2016, *Android* blew the market by revealing the brand-new *Samsung Note 7* which literally BLEW \*moment of silence\*! And on the same hand, Apple retaliated by losing the JACK! So basically, 'twas a battle of "who can blunder more than the other" But in the end *Apple* TRUMPed *Android*! Jokes apart, there are plenty of fields on which we can compare the two operating systems! *Apple's Siri* and *Android's Google Now* both are great at work but *Siri* has a fun personality and understands natural language better than *Google Now*. And the best is iMessage! Drawing to your friend, sending messages with wonderful effects for free is great! But again, it is possible only if your friend has an *iPhone* too! And how can I forget to mention another killer feature of *iPhone* - FaceTime!

So, if you're out to buy a phone, I think you should consider buying an *iPhone* or an *Android phone* or an *iPhone*!! See we're back on square one again! So, to be honest, it totally depends on the user and his way of working! Because a windows phone would be great too!

**Anushka Sharma**

**B.Sc. (H) Computer Science (I year)**

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# Cookies

What are they and why do we need them?



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For those of you not belonging to the computer background, *cookies* are probably the brown dough with little pieces of chocolate that you eat with milk, but for us, 'computer geeks', it holds a completely different meaning, what is that? Let's see.

*Cookies* are small files which are stored on a user's computer. They are designed to hold a modest amount of data specific to a client and website, and can be accessed either by the web server or the client computer. This allows the server to deliver a page tailored to a user, or the page itself can contain some script which is aware of the data in the *cookie* and so can carry information from one visit to the website (or related site) to the next. Once the *cookie* has been read by the code on the server or client computer, the data can be retrieved and used to customize the web page appropriately.

A *cookie* is usually created when a new web page is loaded - for example after a 'submit' button is pressed, the data handling page would be responsible for storing the values in a *cookie*.

The question remains why are *cookies* used and why is it so important to store that little piece of data? One of the reasons is convenience - a *cookie* is a convenient way to carry information from one session on a website to another, or between sessions on related websites, without having to burden a server machine with massive amounts of data storage. Suppose there is a large amount of information to store, then a *cookie* can simply be used to identify a given user so that further related information can be looked up on a server-side database. For example, the first time a user visits a site they may choose

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a username which is stored in the *cookie*, and then provide data such as password, name, address, preferred font size, page layout, etc. This information would all be stored on the database using the username as a key. Subsequently when the site is revisited, the server will read the *cookie* to find the username, and then retrieve all the user's information from the database without it having to be re-entered.

Yet another question that boggles my mind is are these so-called *cookies* safe? There is a lot of concern about privacy and security on the internet. *Cookies* do not in themselves present a threat to privacy, since they can only be used to store information that the user has volunteered or that the web server already has. Whilst it is possible that this information could be made available to specific third party websites and those websites may use a *cookie* to track your web habits for different purposes.

*Cookies* normally do not compromise security, but there is a growing trend of malicious *cookies*. These are the bad *cookies* to watch for, because they track you and your surfing habits, over time, to build a profile of your interests. Once that profile contains enough information there is a good chance that your information can be sold to an advertising company who then uses this profile information to target you with interest specific adverts. Further, if you are concerned that the information you provide to a web server will not be treated as confidential, then you should question whether you need to provide that information at all.

**Manvi Aghi**

**B.Sc. (H) Computer Science (I year)**

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# A Trillionaire in the Making

## A technologist, a business leader and a philanthropist- Bill Gates



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The *Microsoft* co-founder is on his way of becoming the *world's first trillionaire!* Despite a grand level of philanthropy, this tech-magnate stands with a current worth of \$84million. *Bill Gates* who left his daily job at *Microsoft* in the year *2008* and even stepped down as chairman in the year *2014* continues to be the wealthiest man in the world. *Gates* started as a *Harvard* dropout, with a vision of ***“a computer on every desktop and in every home”***.

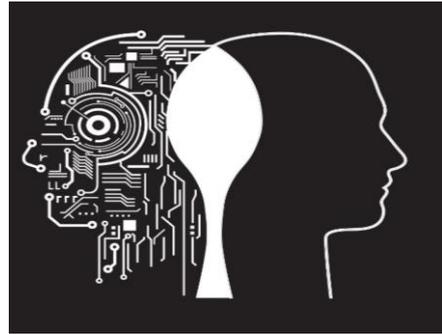
*Oxfam*, which works to alleviate global poverty, said *Gates’* fortune has risen 50 percent – the equivalent of \$25billion – since stepping down from working full-time at *Microsoft* in *2008*. The report stated if billionaires like *Gates* continue to secure these returns, “We could see the *world's first trillionaire* in *25 years*”. Currently *65* years old, he is expected to be a trillionaire by age *86*.

Currently working with his self-established *‘Bill and Melinda Gates Foundation’*, he has already given away \$28 million in a fight against global poverty. Despite all the money he has, *Mr. Gates* believes that money has no utility to him beyond a certain point and believes that money's utility is entirely in building an organisation and getting the resources out to the poorest in the world. Salute to such an honourable personality.

**Tushita Chadha**  
**B.Sc. (H) Computer Science (II year)**

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# Artificial Intelligence



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*“To be human is to be ‘a’ human, a specific person with a life history and idiosyncrasy and point of view; artificial intelligence suggests that the line between intelligent machines and people blurs most when a puree is made of that identity.”*

— *Brian Christian*

*Artificial intelligence (AI)* is a field within computer science that seeks to explain and to emulate, through mechanical or computational processes, some or all aspects of human intelligence. Included among these aspects of intelligence are the ability to interact with the environment through sensory means and the ability to make decisions in unforeseen circumstances without human intervention.

## *1. Most AIs are females*

When it comes to *AI* that you possibly interact with, like *Google Now*, *Siri*, and *Cortana*, the default voice is female. Studies have shown that males and females both like the sound of female voices a bit better.

## *2. Artificial Intelligence can repair itself*

There was a robot that could rebuild itself, even after losing two of its six legs. The robot doesn’t know what’s broken, but notices that its performance has dropped. Using an algorithm based on trial and error, the robot can figure out what’s wrong and how to repair itself.

## *3. Artificial Intelligence can write*

The computer was able to write an article based on data that was pulled from seismographs, which turned them into figures and then plugged those figures into a story.

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#### 4. *Artificial Intelligence can learn*

There's a saying about computers that they're only as smart as the person using them. However, with advancements in *AI*, computers are starting to learn by themselves. For example, Google developed an *AI* system that taught itself to play Atari 2600 games!

#### 5. *The AI Apocalypse*

*AI* will make roads safer, help in medicine, aid the disabled and the elderly, work customer service and several countless other jobs. However, top scientists and technologists like *Stephen Hawking*, *Bill Gates* and *Elon Musk* believe that *AI* is a very real, and dangerous threat to humankind.

#### 6. *Virtual Personal Assistants*

*Siri*, *Google Now* and *Cortana* are all intelligent digital personal assistants on various platforms (*iOS*, *Android* and *Windows mobile*). In other words, they help you to find useful information when you ask for it using your voice; you can say “*Where's the nearest Chinese restaurant?*”, “*Remind me to call Jerry at eight o'clock*”, and the assistant will respond by finding information, relaying information from your phone or sending commands to other apps.

#### 7. *Smart Cars*

Self-driving cars are moving closer and closer to reality. *Google's* self-driving car project and *Tesla's* “autopilot” feature are two examples that have been in the news lately. Last year, the *Washington Post*, reported an algorithm developed by *Google* that could potentially let self-driving cars learn to drive in the same way that humans do-through experience.

#### 8. *Smart-home devices*

Many smart home devices now include the ability to learn your behaviour patterns and help you save money by adjusting the settings on your thermostat or other appliances to increase convenience and save energy.

**Ashish Tyagi and Abhilasha Gupta**

**B.Sc. (H) Computer Science (III year)**

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# Bitcoin

Completely digital!



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*Bitcoin* is a digital currency, which is decentralized and not regulated by any authority. The original *Bitcoin* was created by a developer going by the name *Satoshi Nakamoto*, but the currency itself is now created, traded and controlled by *bitcoin* users rather than a central authority. Ultimately *Bitcoin* is completely digital, it's just a number associated with an address.

The algorithm that drives the *Bitcoin* network forward is designed to generate only 21 million bitcoins and it automatically maintains itself. It grows at a steady pace. 21 million bitcoins are expected to be generated by 2040. The *Bitcoin* network prides itself on its openness. It tracks and records every *Bitcoin* transaction, so anyone can check how many bitcoins have been created till date.

One of the most unique features about the currency is that you don't need to put any money on the line to get any *BTC's*. You can make *Bitcoin* by installing and running a *bitcoin element* on your PC. The clients use the processing power from CPU and GPU to process the *bitcoin algorithm*. The solution is shared by *Bitcoin* network. *Bitcoin* is still nascent, but list of businesses that accept it are growing rapidly. Transaction made of *Bitcoin* is irreversible. Your *Bitcoin* wallet can be hacked by malicious hackers. *Bitcoin* is not the first virtual currency to have come to the world and won't be the last but, is the most successful so far.

**Aakash Dabas**

**B.Sc. (H) Computer Science (III year)**

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# Li-Fi

## An edge over Wi-Fi...



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Whether you're using wireless internet in a coffee shop, stealing it from the guy next door or competing for bandwidth at a conference, you've probably gotten frustrated at the slow speed you face. As more and more people access wireless internet, it is difficult to latch onto a reliable signal. But the fact is, we are using only one part of the spectrum i.e. radio waves whereas, we can use other waves to surf the internet.

And here comes *Li-Fi* into the picture. *Li-Fi* i.e. *Light Fidelity* means “*Data through illumination*”. *Li-Fi* is a wireless optical networking technology that uses visible light to transmit information (*Visible Light Communication*). It can be thought of as a *light-based Wi-Fi*.

The basic technique used in *Li-Fi* is switching the current on and off in the LEDs at a very high rate, too quick to be noticed by the human eye. So, instead of using *Wi-Fi* Modems, transceiver-fitted LED lamps are used that can light a room as well as transmit and receive information. Since simple light bulbs are used, there can be any number of access points. *Li-Fi* has already achieved high speeds up to *500 mbps* during testing.

Despite of the disadvantages such high installation costs and short range of signals, *Li-Fi* not only solves the issue of lack of spectrum space, but can also enable novel application and can be used for communication at a very high speed.

**Pooja Singhal**

**B.Sc. (H) Computer Science (III year)**

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# The-Trump-Effect



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President of *The United States*, *Donald Trump* recently signed off on an Executive Order which restricts refugees from seven predominantly Muslim countries from entering *The United States* for a period of *90* days. *Trump's* new immigration initiative has been widely criticized and has resulted in waves of protests across the country.

There is no doubt that the *Silicon Valley* will be affected by his recent executive actions. A lot of big technology companies were co-founded by immigrants, and most of them have immigrant employees. This not only means that *Trump's* immigration order could hurt their future recruitment, it also means these companies have a lot of current employees who could be affected. Not only the high skilled engineers but also the thousands of lower-income immigrants that the country depends on for so many of its vital services will be affected. Per economists, his prospects for the tech economy are grim. While it is believed, that the manufacturing jobs will benefit from the *Trump* presidency, the technology firms may have a tough time complying to the effects.

The *Silicon Valley* has always supported the *H-1B* visa program, which enables talented workers from overseas to remain in the *U.S.* and obtain a green card while fulfilling the Valley's demand for highly skilled jobs. The program brings in approximately 65,000 foreign workers to the *U.S.* every year as listed by the *U.S.* Citizenship and Immigration Services. *Trump* is planning to eviscerate this program; his team has proposed to reform the lottery system used to issue the *H1B* work permits. Suggestions for reforming the visa program include raising the cost of the application process, and instituting a petition system for jobs with high salaries. If these reforms are made, the companies would be forced

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to hire *Americans* first and then, highly paid foreign workers would be hired.

It is no surprise that executives from Facebook, Google, LinkedIn, Microsoft, Uber, Lyft and many other companies have been particularly vocal in their opposition to *Trump's* new immigration policy. These companies depend on various immigrants from parts of the world – including these seven countries.

Google's CEO, *Sundar Pichai*, sent a heartfelt message to Google employees stating that as many as *187* Google employees may be affected by the travel ban. *Pichai* added that the search giant will do any and everything in its power to help them. He said, "We're upset about the impact of this order and any proposals that could impose restrictions on Googlers and their families, or that could create barriers to bringing great talent to the *US*. It's painful to see the personal cost of this executive order on our colleagues." Google has created a *\$2 million* crisis fund that can be matched with up to *\$2 million* in donations from employees, totalling *\$4 million*. The money will go to the *American Civil Liberties Union, Immigrant Legal Resource Centre, International Rescue Committee* and *UNHCR*.

Apple's CEO *Tim Cook* took a stand and sent out a companywide mail expressing similar concern regarding *Trump's* immigration policies. As for other tech companies, *Lyft* promised to donate *\$1 million* to the *American Civil Liberties Union (ACLU)* to help them fight on behalf of refugees. "Banning people of a particular faith or creed, race or identity, sexuality or ethnicity, from entering the *U.S.* is antithetical to both *Lyft* and our nation's core values," *Lyft* said. "We stand firmly against these actions, and will not be silent on issues that threaten the values of our community."

Facebook's CEO, *Mark Zuckerberg*, criticized *Trump's* order, saying, "We are a nation of immigrants, and we all benefit when the best and brightest from around the world can live, work and contribute here. I hope we find the courage and compassion to bring people together and make this world a better place for everyone."

Some of the founders belong to immigrant families. *Steve Jobs'* father came to the *U.S.* from *Syria* – the country whose refugees are now banned until further notice. Google's co-founder *Sergey Brin* came to the *U.S.* from what was then the *Soviet Union* when he was *6* years old. Google's CEO *Sundar*

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*Pichai* emigrated to the *U.S.* from *India*, as did *Microsoft* CEO *Satya Nadella*. So, as it turns out, the president's agenda could have a detrimental effect when it comes to people who live and work in *U.S.* These policies could keep the next *Steve Jobs* or *Sergey Brin* from coming to the area to start one of the world's great companies or any of thousands of software developers or engineers from contributing to the technology breakthroughs that could improve the lives of millions.

**Srishti Bhatia**

**B.Sc. (H) Computer Science (II year)**

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# The Reflections of the Department of Computer Science

The Department of Computer Science of *Keshav Mahavidyalaya* is creating copious opportunities to bring out the best for the students and to take the name of the college to an ultimate pedestal.

The teaching staff along with members have been working together as a unit, but along with their diligent investment there has been an integral factor which always have been there to appreciate and motivate the unit to touch heights beyond success.

Presenting our respected Principal madam, **Dr. Madhu Pruthi**, followed by the Department of Computer Science, *Keshav Mahavidyalaya*.



**Dr. Madhu Pruthi**

**Principal**

**Keshav Mahavidyalaya**

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## Faculty of the Department of Computer Science



**Top to bottom:**

**1st row (left to right):** Mr. Anand, Mr. Sudhir Kumar, Dr. Sumit Kumar Agarwal, Mr. Sumit Baberwal, Mr. Ravi Kumar Yadav, Mr. Pradeep Kumar, Mr. Rakesh Kumar

**2nd row (left to right):** Dr. Namita Aggarwal, Dr. Richa Sharma, Ms. Jyoti Kumari, Ms. Rochana Chaturvedi, Ms. Maulein Pathak, Ms. Astha Goyal, Ms. Nidhi Passi

**3rd row (left to right):** Ms. Vinita Jindal, Dr. Anjali Thukral, Dr. Priti Sehgal, Dr. Roli Bansal, Dr. Bhavna Gupta, Ms. Richa Gupta

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## Non-Teaching Staff of the Department of Computer Science



**Left to right:** Mr. Akhilesh Sharma, Mr. Lovkesh Jairath, Ms. Anuradha Chadha, Ms. Pooja Batra, Mr. Rajesh Wadhwa, Mr. Ritesh Gupta

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## Student Batch of 2013-2017



### **Top to bottom:**

**1st row (left to right):** Singhraj, Sagar Suman, Sushil Kumar, Devanshu Taneja, Shubham Gupta, Pushpender Patel, Gulshan Kumar, Sahil Gupta, Vishal Sahu, Shubham Singh, Gaurav, Vikash Kumar, Sujan Karki, Tushar Yadav, Vikash Saw

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**3rd row (left to right):** Ravethi Subramanian, Anjana Kumari, Archa Jain, Nidhi Sharma, Himanshi, Rashika Jain, Shivani Monga, Sakshi Yadav, Sakshi Mantri, Sushma Yadav, Rekha Rawat, Tanushree Chauhan, Ragini Gargai

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## Student Batch of 2014-2017



**Top to bottom:**

**1st row (left to right):** Ashish Tyagi, Aakash Dabas, Charchit Nim, Ayush Malik, Mohit Arora, Tarun Upreti, Jaideep Arya, Mohit Kandpal, Atul Mittal

**2nd row (left to right):** Nishi Aggarwal, Lahak Bhalla, Abhilasha Gupta, Shilpi Pandey, Rupal Sharma, Tantuja Raj, Suman Kumar, Pooja Singhal, Natasha Malik, Alisha Garg, Aanchal

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## Student Batch of 2015-2018



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**4th row (left to right):** Mohit Chaurasia, Gulab Yadav, Harshita Hassani, Bhavika Thakur, Tushita Chadha, Tanya Singhal, Swati Gautam, Vratika Jindal, Smriti Sharma, Sakshi Arya, Shikha Bisen, Ayushi Diwakar, Kajal Rathore, Tanya Goyal, Amritansh Kumar Mishra

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## Student Batch of 2016-2019



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**1<sup>st</sup> row (left to right):** Ahmed Mustafa Akbar, Sahil, Anurag Kaushik, Nirnay Mittal, Hikansh Kapoor, Nikhil Agarwal, Chinmay Jain, Kanishk Anand, K. Subramaniam, Chirag Bansal, Himansh Pandey, Mehtab Khan, Kanhav Gupta, Chirag Mittal, Mohit Uniyal, Rallapalli Nagarjun, Pawan Kumar, Shubham Kumar, Himanshu Baldodia, Saurabh Kumar Adhana, Keshav Singh

**2<sup>nd</sup> row (left to right):** Tarun, Rishabh Jain, Vishwajeet Kumar, Shankar, Rahul Bisht, Jatin Sharma, Ankur Tyagi, Minesh Kumar Mandia, Rahul Ray, Sumit, Sarthak Taneja, Vishwas Kumar Vishwakarma, Vipin Kumar Malik, Tushar Pal, Rishabh Jain, Praveen, Rahul Gupta, Sunny Yadav, Shivam Kumar Sinha, Nikhil, Vipul Aggarwal, Sachin Chauhan

**3<sup>rd</sup> row (left to right):** Radhika Chhabra, Riya Goel, Tanya Garg, Savita, Vrinda Anand, Yukti Kaushik, Anandita, Srishti Gupta, Priya Aggarwal, Divya Singh, Namrata Agrawal, Cecelia Ruby Tirkey, Neha Soni, Bharti Bhati, Divyanshi Aggarwal, Anushka Sharma

**4<sup>th</sup> row (left to right):** Ashish, Arun Jain, Preksha Sachdeva, Ishvina Kapoor, Manvi Aghi, Rimjhim, Pulkit Aggarwal, Muskan Kathuria, Muskan Aggarwal, Megha Naithani, Sonakshi Garg, Arshdeep Singh, Adarsh Saket

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“The science of today is the  
technology of tomorrow.”

- Edward Teller