



Vidya Vikas Education Trust's

Universal College of Engineering

Approved by AICTE, DTE, Maharashtra State Government and Affiliated to Mumbai University

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ITS



BYTES

An Initiative By

ITSA

Department of Information Technology

#SATYAVACHAN

Never give up, never look down and never look back. Always move forward in life. Don't let anyone make you feel as if you don't belong or unworthy of...ever. Those that do are just not strong enough to handle such greatness. Be proud of who you are. Always walk with your head high, you are never alone.



Staff Coordinators:

- Mrs. Sanketi Raut
- Mr. Akshay Agrawal

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Top 20 Coding Tips to Improve your Programming Skills

Understanding your existing skillset will help you identify gaps in your knowledge and the learning methods that will help you to improve your programming skills.

Let's begin with top 20 coding guidelines:

1. Set up version control (e.g., Github, Bitbucket) and commit to individual projects on a regular basis. You won't regret losing data or not knowing why something worked yesterday if you use it on tasks where you work alone.
2. Don't use labels like "Fixes," or "Refactor," in your commits; instead, use descriptive titles.
3. Before you commit anything, double-check everything you've done.
4. Create your code with other developers in mind, and write it for your future self.
5. Use comments to describe why you did something rather than how you did it.
6. Learn how to use Google properly.
7. Try to learn how to copy and paste while also understanding what's going on behind the scenes.
8. Learn how to debug properly.
9. Take a look at the documentation.
10. Don't start coding on the spur of the moment or based on what you've read on Stackoverflow.
11. Try to learn not just how to copy&paste, but also how to grasp what's going behind the scenes.
12. Consider what you want to achieve first, then create the test, and lastly code.
13. Patience is required. Some days (the fewest) will go smoothly, and you will make significant progress; on other days, challenges will develop. So relax and take it easy.
14. Make use of a good logging system. Use a cloud log system if the program runs on the client.
15. Learn the fundamentals first, then utilise frameworks as needed.
16. Libraries should take precedence over frameworks.
17. There are advantages and disadvantages to all languages and technology.
18. It's more important to learn concepts than syntax.
19. You must be extremely neat in this line of work.
20. Read about technology and software development if you're curious. You don't need to know everything, but it's always useful to know what tools are available to address an issue. Medium is an excellent place to visit, or you may follow amazing software engineers on Twitter.

Source: <https://content.techgig.com/top-20-coding-tips-to-improve-your-coding-skills/articleshow/90092488.cms>

**- MR. AKSHAY AGARWAL
(Assistant Professor)**

Why isn't Earth Perfectly Round?

If you had an enormous measuring tape that started at Earth's center and went to our planet's highest peak, you wouldn't be looking at Mount Everest. Rather, the tallest mountain would be on the other side of the world: Ecuador's Chimborazo.

Chimborazo wins in this case because Earth is actually a little squished at the poles, like a person pressing both hands on the top and bottom of a ball. As a result, the equator — where Ecuador sits — juts out. Rather than a perfect sphere, Earth is "oblate," meaning it's shaped like a slightly flattened sphere.

In fact, "most planets and moons are not true spheres; they are usually squished in some way or another," said James Tuttle Keane, a planetary scientist at NASA's Jet Propulsion Laboratory in Pasadena, California. So why aren't Earth and other planets and moons perfectly round? The obstacle is something called the centrifugal force, Keane told Live Science, or the apparent outward force experienced by an object that's spinning.

A rotating planet experiences the centrifugal force. You can see it in action, too: If you spin around in a chair or on your feet, you should feel a pull away from your center. Maybe your arms or legs will flail. Or, if you sit on a merry-go-round, "there's a little bit of extra force acting on you on that merry-go-round, and so you feel tugged off to the side," Keane said.

Because planets and moons spin, the centrifugal force causes them to bulge at their equators. The effect can be very subtle, but good examples of this are Jupiter and Saturn. If you look at a global image of either gas giant, you'll notice that they're slightly squished and their middle bulges. These planets' squished shape is more noticeable because they are the fastest spinning planets in the solar system, Keane said.

The faster something spins, the more the centrifugal force acts on it.

An extreme example of the centrifugal force acting on a body is the dwarf planet Haumea, Keane said. The dwarf planet resides in the Kuiper Belt, a region of icy objects outside the orbit of Neptune. Haumea is about the size of Pluto, but it's spinning so fast (one complete rotation every four hours) that it's "almost egg-shaped," Keane said.

Source: <https://www.livescience.com/why-earth-not-round>

- MS. MALIHA MOMIN
(TE IT)

Researchers Generate the First Complete Gapless Sequence of Human Genome

According to researchers, having a complete, gap-free sequence of the roughly 3 billion bases (or “letters”) in our DNA is critical for understanding the full spectrum of human genomic variation and for understanding the genetic contributions to certain diseases. The work was done by the Telomere to Telomere (T2T) consortium, which included leadership from researchers at the National Human Genome Research Institute (NHGRI), part of the National Institutes of Health; University of California, Santa Cruz; and University of Washington, Seattle. NHGRI was the primary funder for the study.

Analyses of the complete genome sequence will significantly add to our knowledge of chromosomes, including more accurate maps for five chromosome arms, which opens new lines of research. This helps answer basic biology questions about how chromosomes properly segregate and divide. The T2T consortium used the now-complete genome sequence as a reference to discover more than 2 million additional variants in the human genome. These studies provide more accurate information about the genomic variants within 622 medically relevant genes.

“Generating a truly complete human genome sequence represents an incredible scientific achievement, providing the first comprehensive view of our DNA blueprint,” said Eric Green, M.D., Ph.D., director of NHGRI. “This foundational information will strengthen the many ongoing efforts to understand all the functional nuances of the human genome, which in turn will empower genetic studies of human disease.”

The now-complete human genome sequence will be particularly valuable for studies that aim to establish comprehensive views of human genomic variation, or how people’s DNA differs. Such insights are vital for understanding the genetic contributions to certain diseases and for using genome sequence as a routine part of clinical care in the future. Many research groups have already started using a pre-release version of the complete human genome sequence for their research.

The full sequencing builds upon the work of the Human Genome Project, which mapped about 92% of the genome, and research undertaken since then. Thousands of researchers have developed better laboratory tools, computational methods and strategic approaches to decipher the complex sequence. Six papers encompassing the completed sequence appear in *Science*, along with companion papers in several other journals.

The cost of sequencing a human genome using “short-read” technologies, which provide several hundred bases of DNA sequence at a time, is only a few hundred dollars, having fallen significantly since the end of the Human Genome Project. However, using these short-read methods alone still leaves some gaps in assembled genome sequences. The massive drop in DNA sequencing costs comes hand-in-hand with increased investments in new DNA sequencing technologies to generate longer DNA sequence reads without compromising the accuracy.

Over the past decade, two new DNA sequencing technologies emerged that produced much longer sequence reads. The Oxford Nanopore DNA sequencing method can read up to 1 million DNA letters in a single read with modest accuracy, while the PacBio HiFi DNA sequencing method can read about 20,000 letters with nearly perfect accuracy. Researchers in the T2T consortium used both DNA sequencing methods to generate the complete human genome sequence.

"Using long-read methods, we have made breakthroughs in our understanding of the most difficult, repeat-rich parts of the human genome," says Karen Miga, Ph.D., a co-chair of the T2T consortium whose research group at the University of California, Santa Cruz is funded by NHGRI. "This complete human genome sequence has already provided new insight into genome biology, and I look forward to the next decade of discoveries about these newly revealed regions."

According to consortium co-chair Adam Phillippy, Ph.D., whose research group at NHGRI led the finishing effort, sequencing a person's entire genome should get less expensive and more straightforward in the coming years.

Many early-career researchers and trainees played pivotal roles, including researchers from Johns Hopkins University, Baltimore; University of Connecticut, Storrs; University of California, Davis; Howard Hughes Medical Institute, Chevy Chase, Maryland; and the National Institute of Standards and Technology, Gaithersburg, Maryland. The package of six papers reporting this accomplishment appears in today's issue of *Science*, along with companion papers in several other journals.

Source: <https://www.genome.gov/news/news-release/researchers-generate-the-first-complete-gapless-sequence-of-a-human-genome>

**- MS. LAVANYA DEIVAKARUNATHAN
(TE IT)**

AURORA 2K22 WINNERS

AURORA is the *Sports and Cultural Fest of UCoE* which is celebrated each year with great enthusiasm. This time after a wait of 2 years we had AURORA on ground conducted from 19th– 25th March 2022!!

We CONGRATULATE each and every Winners and Participants of “AURORA 2K22” !!!

EVENT NAME	STUDENT NAME	CLASS	POSITION
Throwball (Girls)	Shaili Shah Payal Chaudary Samiksha Nijai Rachita Mogaveera Purna Manu	BE-IT	Winner
Tug of War (Girls)	Shaili Shah Payal Chaudary Samiksha Nijai Sonia Bagalkot Vedangi Aashka Manu	BE-IT	Winner
Football (Boys)	Siddhant Bhogle Jeet Patil Sahil Koli Jay Bhagat Viraj Butani Saurabh Shinde Saiprasad Shetty	TE-IT	Winner
Cricket (Boys)	Yash Devani Shubham Rathod Sidharth Dalal Ashwin Wagela Viraj Butani Narendra Chauhan Het Vikam Aks Jain Divyanshu Singh Deepak Gupta Saiprasad Shetty Jaideep Chauhan	TE-IT	Runner-Up
Dodgeball (Girls)	Shaili Shah Samiksha Nijai Rachita Mogaveera Purna	BE-IT	Runner-Up

EVENT NAME	STUDENT NAME	CLASS	POSITION
Carrom (Boys)	Rohit Pal	SE-IT	Winner
Shot Put (Girls)	Shaili Shah	BE-IT	Runner-Up
400m (Boys)	Sudarshan Langer	SE-IT	Runner-Up
Cartooning	Divvyra Rambhia	-	Runner-Up

Major Accomplishment

Dr. (Mrs.) Yogita Mane, H.O.D., Department of information technology has successfully completed her Ph.D. in Computer Engineering from St. Francis Institute of Technology.

Best wishes for your **Ph.D.**! Your burning passion speaks through your achievement! Congratulations on attaining your **Ph.D.**!



“After all the hard work you put in, you sure deserve what you have...!!!”



Heartiest Congratulations to Mr. Jeet Doshi, a student of B.E. IT for being placed as Digital Specialist Engineer at Infosys with a whopping package 6.25 lakh per annum.

“Congratulations and best wishes for your next adventure!”

A session on - SSRF & DOS

A session was conducted on – **SSRF & DOS** by Ncrypted – Cyber Security Club of UCoE on **15th March, 2022** from 10.30 a.m. – 12.30 p.m.. Total 24 participants have attended the session. Speaker was Mst. Het Vikam, Technical Head at Ncrypted, Founder of Securze, cyber security researcher, bug bounty hunter and ctf player.

Participants were will be able to :

1. Understand the attack and the consequences of it.
2. Understand how it can be prevented.
3. Learn about exploiting the system.



Women's Day Celebration

The Women Development Cell (WDC) committee of Universal college of engineering had organized an International Women's Day Celebration program on 8th march 2022 during 3.30 p.m. to 5 p.m.. All female staff members including housekeeping, security ,lab assistant, admin staff and faculty members attended this celebration. J. B. Patil, our Campus Director had highlighted, appreciated and encouraged the WDC members and all female staff for their valuable contribution in the overall growth of the institution.



Workshop on FLUTTER framework

A workshop was conducted on – Flutter Framework by CSI Student Chapter of UCoE on **09th March, 2022**. Total 49 participants have attended the session. Speaker was Mst. Saurabh Pandey & Jaimitkumar Panchal.

Participants were will be able to :

1. What is Flutter Framework? How it is used?
2. Types of Approaches for framework.
3. Application Building.





Introduction to Recursion

A session on Introduction to Recursion was conducted by CodeChef UCoE student chapter on 10th March 2022. Total 37 students registered for the event. Speakers for the session were Mst. Gaurav Dutt, the lead of CodeChef College UCOE.

Participants were will be able to learn:

1. What is recursion?
2. How a problem is solved using recursion?
3. Practical aspect of Recursion



7 Day Residential Camp of NSS UCoE

NSS UCoE organised its 7 day Residential Camp at Nagle (Adopted village of NSS UCoE) from 25th March, 2022 to 31st March, 2022; which was attended by 34 NSS Volunteers and 5 faculties at periodic intervals.. An amazing amount of work was performed within this period; with great enthusiasm and enjoyment. The Samaaj Hall of the village was the place of residence for everyone for the next 7 days. The 34 NSS Volunteers were divided into teams, which worked for a particular activity like cooking, washing, etc. and these roles changed every day. Thus each Volunteer had an exposure to every activity along with enough time to contribute for the tasks planned for the Camp.



Upcoming Events

Vidya Vikas Education Trust's
Universal College of Engineering
Near Bhagwanrao and Pongalrao, Kaman Bhiwandi Road, Vasai, Palghar-401208.
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<PYTHON HANDS-ON>

Sasin Nisar
Ashutosh U.
Yameen Vinchu
Meet Bhanushali
(PRESIDENT)

11TH - 12TH APRIL, 2022
10:30 AM-12:30 PM &
1:30 PM-3:30PM (IST).
3RD FLOOR, LAB 318.

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1 Day Hands-On Online Session on PWA

Organizers : Department of Information Technology under IQAC & ITSA.
Date : Thursday April 14th, 2022
Speaker : Ms. Jesleena Gonsalves, St. Francis Institute of Technology
Audience : T.E. IT students

Time : 10:00 a.m. to 01:00 p.m.
Gmeet Link : <https://meet.google.com/mtz-mhly-clz>

PATRON
Dr. J. B. Patil
(Campus Director)

CONVENER
Dr. Yogita Mane
(HOD, I.T. Department)

FREE

***Farewell for batch 2021-22 is scheduled on
- 30th April 2022***

Scan for previous edition



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akshay.agarwal@universal.edu.in

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