



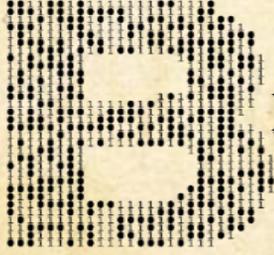
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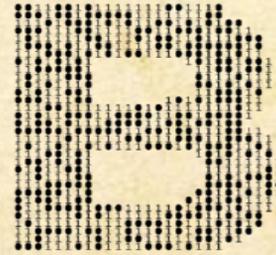
Gujarati Linguistic Minority Institution

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ITS



YTES

An Initiative By

ITSA

Department of Information Technology

#Satyavachan

"Never be intimidated by the success of people, the fact that you are 'HERE' doesn't mean you can't be 'THERE'. The only difference between 'HERE' and 'THERE' is T which stands for TIME!!"

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1 | Technical Articles

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3 | India's Pride

- Chandrayaan-2

- Hima Das

4 | Python Course

5 | Students Achievement

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Smartphone Ultrasound-Next Wave of Emerging Technology

There are a lot of exciting words being used to describe the emerging ultrasound technology in 2015. Smartphone ultrasound is described as a 'game changer,' while the focused ultrasound is called disruptive technology. These are just two of the technology advances that will have a significant impact on how Diagnostic Medical Sonographers deliver ultrasound exams. New technology is improving quality and effectiveness of patient care while reducing costs of services at the same time. What if ultrasound imaging could be delivered anywhere there is wireless access? It would mean an estimated 70 percent of the population around the world could potentially get access to ultrasound. There is no doubt that achieving this technological milestone could give so many in rural areas or undeveloped countries access to ultrasound. Sonographers could check the status of pregnancies, examine tissues and organs, and detect internal bleeding or cardio and vascular anomalies.

The future has arrived. The two primary reasons ultrasound is not available to so many people are high equipment cost and lack of portability. In response to a need, the Mobisante company has introduced the MobiUS SP1 System which consists of a transducer which plugs into a smartphone sized unit. The MobiUS SP1 device, an ultrasound machine with smartphone, overcomes both challenges. Images are stored once taken and can be shared through Wi-Fi, USB or cellular networks.

A quiet revolution in healthcare has started with the first smartphone ultrasound. It is small enough to slip into a pocket or small medical bag. It is considerably less expensive than the large ultrasound units used in hospitals and clinics. A typical ultrasound machine costs approximately \$300,000, while the smartphone version costs approximately \$7,500. It is powerful enough to be used for:

- Monitoring pregnancies
- Examining the abdomen, soft tissues, abdomen, and a variety of organs
- Examining the aorta and vascular system
- Detecting internal bleeding
- Guiding injections
- Guiding IV lines



Ref: <https://www.ultrasoundtechniciancenter.org/blog/smartphone-ultrasound.html>

Image Ref: <https://www.useoftechnology.com/technological-advancements-effects-humanity/>

- Mr. Jigar Chauhan

Why Use PHP in 2019?

Let's get it out of the way early: PHP is a strange and ugly language. It's not exceptionally fast. It's not beautiful syntactically. It's not formulated around a clear opinion about good software development practices. And it's still what I write a lot of software in. The obvious question is: *why? Why use PHP today?* There are lots of good reasons for it, above and beyond personal idiosyncratic preferences. Here's the space to cover exactly that. Why is PHP my language of choice for web development?

What is PHP?

"What is a PHP?" Or, more commonly, "what's PHP?" In short, PHP is a programming language made for the web, built up from the C programming language, and which uses idiosyncratic HTML-like tags (or sigils) to contain its code. The PHP programming language is mostly used server-side, which means that it runs on your web server software, which is customarily going to serve HTML to your visitors. PHP initially stood for "Personal Home Page." Because that pretty thoroughly constrained the meaning and desirability of using the language for general use, the language now stands for "PHP: Hypertext Preprocessor". This is what's called a recursive acronym (a name that contains the name). Nerds love them.

What can PHP do?

What is PHP used for? Basically, anything that you want to do on a web server, you can do with PHP. Make a blog? Yep. Create a full fledged software-as-a-service application? Absolutely. Write a little script to process some data in a few seconds? PHP is great for that. Write a complicated set of scripts that accidentally becomes a successful software business? PHP is used like that a lot.

If you don't trust me, the PHP website lists the following uses:

- Server-side scripting
- Command-line scripting
- Writing desktop applications

I'm not so sure I'd encourage the last bullet point, but it is possible. But the first two are common and good reasons to use PHP in 2019.

This leads to one important and unavoidable fact...

PHP is EVERYWHERE

There are a lot of reasons to know and love PHP, probably the most potent and valid of which is this: it's used and runs EVERYWHERE the web does. Your cheap little \$3 per month hosting account *may* let you run a web application in Python or Ruby if you shop carefully. But it'll definitely run PHP. This means that you can count on it wherever you are. And because it runs everywhere, and is easy to get started with, *a lot* of very popular software is written in PHP. **WordPress** is the example that's both largest and most familiar to me, but tools like Joomla, Drupal, Magento, Expression Engine, vBulletin (yep, that's still around), MediaWiki, and more are all running PHP on the server. And there are more PHP application frameworks than you can shake a stick at as well: Symfony, Zend, Laravel, Aura, CakePHP, Yii, and even the venerable CodeIgnitor. Surely you can make a list of web frameworks of some length for almost any other language. And for the commonly used web languages like Python, Ruby, or Node/JavaScript you may even be able to amass a numerically competitive list. But the sheer volume of sites running PHP is immense.

WordPress proudly boasts that it powers more than 30% of the internet. You don't need to even trust that fact to realize that *a lot* of the internet must be using PHP if that fact is even conceivably true.



PHP has some very good qualities :

Easy Dynamism is Baked into PHP

PHP does HTML rendering and programming easier than almost any other language. So it's pretty simple to change HTML to PHP. Just change your file.html to file.php, add a bit of dynamism inside some `<?php` and `?>` tags. Most web servers will have already been configured to take care of the rest for you. It's so simple that almost anyone can get started without a need for much more of an understanding of programming than this. Because PHP is so friendly to cut your teeth with, a lot of bad code is written in it. Once you realize that most bad PHP is written by novice programmers, most of the fear and hatred of PHP you encounter in the world comes from one other essential problem: PHP has never had a grand design with a visionary idea about why it was the perfect language for your web server. Instead, it's the result of wide collaboration through an open process which serve as a crucible through which any good idea — and a few bad ones — must pass.

Object-Orientation with (Great) Package Management is now the Norm in PHP

Composer is a great reason to use PHP and bad ideas can make it through that crucible. The most popular example is that PHP 5.3 — separately widely regarded as the first modern version of PHP — introduced the goto statement, which is generally either scoffed at or thought an easy source for errors. Similarly bad thing in PHP that have resulted from the process through which the language has grown: object-orientation was first implemented as a flawed and limited concept, the standard library is full of inconsistent names and parameter ordering, and (in an example that recently got a fair amount of attention) the `::` token is called by the interpreter by the inscrutable-to-English-speakers: `T_PAAMAYIM_NEKDOTAYIM`. But today, OOP is fully-realized in PHP. Few languages have as much Java-like OOP practice than PHP. What's more, unlike Java, PHP has a single and widely-love package manager, called Composer. It was very good, and so the ease of pulling in other well-written and well-maintained libraries in PHP is nothing to be trifled with.

PHP Has Gotten a Lot Faster

But those thing said, PHP is evolving in interesting ways. It's growing toward being a pretty fully-featured Java-like (for better or worse) object-oriented language. And much like Java, it's gaining easy abstractions for functional programming — arguably the current hotness. It's also growing a pretty awesome set of tools — PHP loves Composer, and for good reason — and a commendable effort to make all of these large open source projects in PHP work a little bit better together. Oh, and we shouldn't forget the current hotness: speed gains PHP has made in the PHP 7 series of releases. This is widely regarded as having been initiated by the HHVM coming out of Facebook. For a short time, there was a risk that the speed of the HHVM would fracture the PHP community. But it didn't. Instead PHP just got so much faster that people have mostly forgotten that the HHVM exists.

Common Comparisons to PHP

A lot of people new to programming are looking for very general face-offs of languages. So, here they come. All the languages I'm going to write up here have the following traits in common with PHP:

They're open-source. What this means is that you can use the underlying language for free (no cost), and you are able to see and understand the underlying program if you wish to.

They're often used for web development. Pretty straight-forward, these are languages used a lot for web development. Some are also widely used outside of that venue, but not all.

They're high-level, loosely- and dynamically-typed. This means that a variable can change types, and that you don't have to define when you define a variable what type of things (numbers vs strings vs objects, etc.) it'll store. This is generally favored for web programming, but not universally.

Their communities are good-sized or better. There are a lot of interesting languages that have the qualities listed above, but which don't have a large community of practice. I'm leaving them aside here.

Ref: <https://www.thoughtfulcode.com/why-use-php/>

- Mr. Sandesh Patil

What is sci-hub?

Sci-Hub is a website with over 64.5 million academic papers and articles available for direct download. It bypasses publisher paywalls by allowing access through educational institution proxies. Sci-Hub stores papers in its own repository also the papers downloaded by Sci-Hub are also stored in Library Genesis (LibGen) or library genesis proxy 2019. Sci-Hub has been controversial, lauded by parts of the scientific and academic communities and condemned by a number of publishers.

In 2015 academic publisher Elsevier filed a legal complaint in New York City against Sci-Hub alleging copyright infringement, and the subsequent lawsuit led to a loss of the original sci-hub.org domain. Though Sci-Hub domains are restricted by many countries, still Sci-hub proxied through various types of domain extensions like sci-hub.tw, sci-hub.hk, sci-hub.cn, sci-hub.la, sci-hub.mn, sci-hub.name, sci-hub.tv, sci-hub.nu, sci-hub.is, sci-hub.ws, sci-hub.ga, sci-hub.gq, and sci-hub.nz.

A lawsuit isn't going to stop [Sci-Hub], nor is there any obvious technical means. Everyone should be thinking about the fact that this is here to stay. Peter Suber, Harvard University.

Working Sci Hub Proxy Links:

The updated working Sci-hub proxy links are given below.

Working link: Sci-Hub.be (Updated-1.08.2019) Sci-Hub.be

Working link: Sci-Hub.tw (Updated-01.08.2019) Sci-Hub.tw

Working link: Sci-Hub.se (Updated-01.08.2019) Sci-Hub.se

Not Working now: Sci-Hub.fun (Updated-01.08.2019) Sci-Hub.fun

White Screen After Entering Link in Sci hub

Most of the time when you put URL or DOI in the Sci hub search bar, you will be directed into a white screen. The main reason for the white screen problem is that the particular request from the Sci hub is not authorized to access that web page as per the dot compliance of your country. Therefore, you can not access the document with the direct method of using Sci hub.

Solution:

- You can try the alternative Method to download papers instead of Sci hub.
Ex: <https://booksc.xyz>
- Use a Virtual Private Network(VPN) to access Sci Hub.
- Use Sci-Hub Android App to download the paper.



Ref: <https://en.wikipedia.org/wiki/Sci-Hub>

- Mrs. Yogita Mane

Brian Kernighan famously wrote:

Everyone knows that debugging is twice as hard as writing a program in the first place. So if you're as clever as you can be when you write it, how will you ever debug it? — *The Elements of Programming Style*, 2nd edition, chapter 2

The following version also circulates on the net:

Debugging is twice as hard as writing the code in the first place. Therefore, if you write the code as cleverly as possible, you are, by definition, not smart enough to debug it.

It is tempting to interpret Kernighan's aphorism as a warning: Stay away from clever techniques, it seems to say, because if you write clever code, you will never be able to get it to work. But this interpretation is unfortunate, and rests on the false assumption that cleverness is static.

While it is possible that Kernighan intended us to interpret the message in a specific way, he wisely restricted himself to merely presenting an observation, allowing us to draw our own conclusions from it.

Pay close attention to what is actually being said: Having written code as cleverly as you can, you will suddenly face a problem that you are not clever enough to solve. Certainly, "clever" in this context does not refer to some innate talent, because nobody is born with the ability to write clever code in the first place. The "cleverness" required to write and understand intricate code is an acquired mental skill.

If you are a programmer, you will be familiar with a sense of wonder, gradually transforming into utter stupor, as you stare at some perfectly reasonable code that couldn't possibly fail, and yet somehow it does. And since you are confident that you understand how the code works, having written it yourself, you feel that you must be able to figure out what is going on. Not only the desire to deliver working software on time, but other powerful forces such as pride, stubbornness and curiosity contribute to the motivation that pushes you onwards through the arduous task of tracking down the root cause of the error. Suddenly you see it, and you're blinded by a bright light as all the pieces fall into place. The inexperienced programmer may fall into the trap of self-degradation: "Oh, look at how stupid I was!" But that same sentiment is proof that your programming-related cleverness, or skill, has increased: "Oh, look at how clever I've become!" (Although I wouldn't recommend saying that out loud.)

Skill is the result of practice, that is, of systematically trying to work slightly beyond one's ability. Quite understandably, most of us don't spend that kind of effort unless we have good reason to. Hence, without motivation we do not practice, but simply cruise along at our current level and never improve any further.

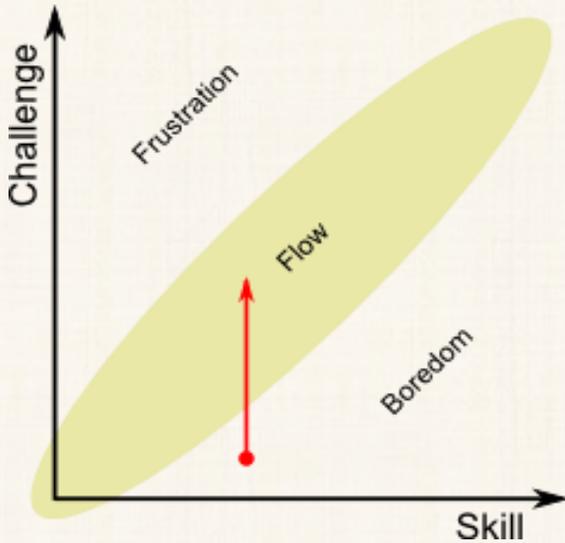
The mind is very good at rationalizing, and will convince us that our current skills are sufficient, that we are all "good enough"; certainly better than the average programmer anyway. The human brain will do this trick regardless of our actual level of skill. So while we all tend to consider ourselves sufficiently skilled right now, we never regret improving.

You effortlessly wield clever programming techniques today that would've baffled your younger self. (If not, then I'm afraid you stopped evolving as a programmer long ago.) But this improvement is the result of practice, and something must have motivated you to put in all those hours of work. Kernighan's witty remarks provide a clue: In programming, as soon as you work at your current level, you will automatically end up in a situation where you have to work beyond your current level. By means of this very fortunate mechanism, you will leverage several basic human drives (honour, pride, stubbornness, curiosity) into providing the motivation necessary for improvement.

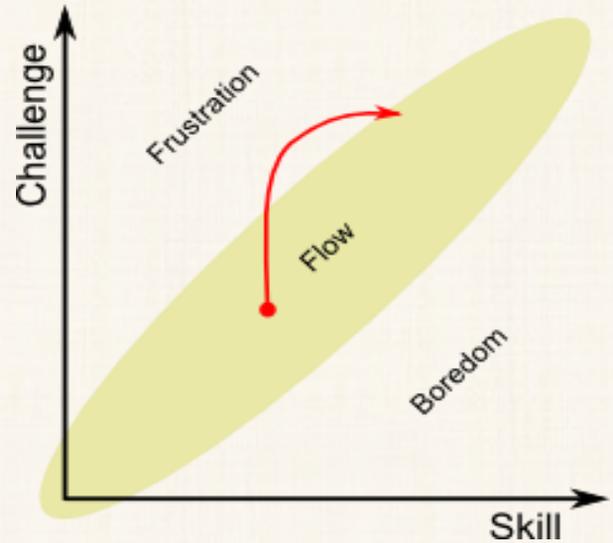
I call this mechanism *Kernighan's lever*. By putting in a small amount of motivation towards the short-term goal of implementing some functionality, you suddenly end up with a much larger amount of motivation towards a long term investment in your own personal growth as a programmer.

If we deliberately stay away from clever techniques when writing code, in order to avoid the need for skill when debugging, we dodge the lever and miss out on the improvement. We would then need other sources of motivation in order to grow as programmers, and if no such motivation appears, our abilities stagnate (or even deteriorate).

The psychological concept of *flow*, somewhat simplified, can be used to visualize the process. Flow is when you are "fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity" (Wikipedia), and it only occurs when the challenge that you are tackling matches your current level of skill.



1. Implement below your ability, and you get to debug in the "flow" area.



2. Implement at your ability, and the debugging will be frustrating, but you gain skill.

You will find yourself situated at a particular x-coordinate, corresponding to your current level of skill. If writing code is a point on this graph, then (according to Kernighan's assumption) debugging the same code would be a point a fair bit directly above it.

It is certainly possible to deliberately pick a low starting point just to avoid ending up in the *frustration* area. But this will put you squarely in the *boredom* area, and boredom is frankly no better than frustration. However, should you pick a starting point in the enjoyable *flow* area, Kernighan's lever will screech into action and push you sideways through the graph, increasing your skill until it matches the challenge posed by the bugs in your code.

Naturally, the real world is more complex than this, and you will sometimes have compelling reasons to go for the boring option, and artificially reduce your cleverness in order to dumb down the debugging phase. But it may harm your long-term personal development if you go down that road every single time you write a program.

In conclusion, the answer to Kernighan's rhetorical question — "how will you ever debug it?" — is straightforward: By tackling the problem, thereby gaining valuable experience and becoming more clever in the process. And the second version of the quote can be adorned with a single word at the end: Yet.

Ref: <https://www.linusakesson.net/programming/kernighans-lever/index.php>

- Mr. Sandesh Patil

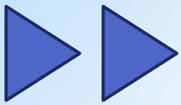
- Do not force someone to remember you all the time.
- Just stay silent and let them realize how they will be without you in their life.
- Successful people always have two things on their lips: 1) Silence & 2) Smile.
- Do not cry because it is over, smile because it happened.
- For every minute you are angry you lose sixty seconds of happiness.
- Patience is not about the ability to wait, but the ability to keep a good attitude while waiting.
- Fight with your strength, but not with others' weakness! Because true success lies in your efforts, not in others' defeats.
- Helping one person might not change the whole world, but it could change the world for one person.
- Life will be happier and stress less if we remember one simple thought, "We cannot have all that we desire, but time will give us all that we deserve."
- Success does not depend on the size of our brain. It is dependent on the size of our thoughts. Think positive, achieve greater success!
- Never hold your head high with pride or ego. Remember...even the winner of a Gold Medal gets the medal only when he puts his head down!
- A mountain is not higher than your confidence, because it will be under your feet if you reach the top.
- If 5 seconds of smile you can make a photograph more beautiful. Then just imagine how beautiful your life will be when you keep on smiling.
- No matter how many times teeth bite and tongue. They still stay and work together. That is the spirit of forgiveness and relationship.

QUOTE FOR THE MONTH

The EGO

All bad qualities Centre round the ego. When the ego is gone, realization results by itself. There are neither good nor bad qualities in the self. The self is free from all qualities. Qualities pertain to the mind only.

- *Mr. Jigar Chauhan*



MELTING GLACIERS

Listening to the news talking about the **melting glaciers**, of the harsh causes and difficult consequences on the environment is nowadays become normal.

A very important phenomenon to do not underestimate:

- it is damaging our generation
- It may cause ruin the life on the earth forever

The melting of the glaciers is caused by the **climate change**, a consequence of the extended industrialization of our planet in the last 200 years.

Is it to late to step in and change our behaviour ?

No, it's not.

We can still work hard to save the Hearth from the forthcoming disaster.

Then, let's try to better understand which are the **causes** and, later, also the **consequences** of the melting glaciers.

The causes of the melting glaciers:-

Which are the **causes of the melting of the glaciers**?

First of all, it is important to know that the causes are not natural.

The **melting of the glaciers** is due to men's behaviour.

We have seen the first effect starting from the XX century.

Now, the phenomenon is getting worse and the temperature of the hearth's surface is growing.



The effects of the global warming:-

Our impact on the environment that surrounds us has brought during the time to serious consequences and to the consequently global warming. Which are the **effects** and the problems caused by this phenomenon?

Let's discover it together.

The causes of the global warming:-

Certainly you have already heard about the **global warming**: an issue that is permanently damaging our planet.

Which are the **causes** of this event?

The principal causes that are bringing to the global warming of the Earth's surface are:

- the important **production of CO2**;
- the intensive **combustion of fossil carbon**;
- The extended process of **deforestation**.



Main effects of global warming:-

All of these causes lead to serious consequences of the **global warming** that are negatively affecting the planet Earth and its inhabitants.

Which are the effects of this phenomenon?

The main consequences are:

- **imbalance of the temperatures and rainfalls;**
- **risks for the life** of the men and the animals;
- **Melting of the polar and mountain glaciers.**

What are the Effects of Melting Glaciers?

Today we have the necessity and responsibility to resolve the issue of the melting of the glaciers and the serious consequences. The impact that this event is having on our planet is really dangerous and is improving every day more.

The main consequences of the melting of the glaciers are:

- **Increase of the level of the oceans.** The level of the water is growing covering a big part of the continental areas, that is some years could be completely submerged.
- **Climate change** . The equilibrium of the cyclonic and anticyclonic structures and the weather conditions are getting worse.
- **Imbalance of the food chain.** The habitats of several marine and terrestrial species are changing and they are preserving the natural cycle.

The North Pole is melting:-

The **North Pole** is the area where it is easier to observe the melting glaciers.

During the last 30 years, the surface of the **arctic glaciers** has extraordinarily decreased. Moreover, the average age of the of the arctic ice cap is diminishing: only a few parts are overcoming the **5 years**.

The majority of the ice of the **North Pole** grows during the winter season and melts during the summer. Scientists have estimated that in some years the North Pole will transform into an enormous salty lake.

Antarctic glaciers melting:-

Even **Antarctic** is abundantly affected by the issues caused by the **melting of the glaciers**.

The surface of the ice cap of the South Pole is less, between 2010 and 2016 of approximately 1500 km².

The ice cap is **loosing every year approximately 5 meters of thickness** from the base of the ice layer, near the ocean floor.

During the last 50 year, the phenomenon of the melting glacier is getting worse

Only in Italy, during this time we have lost the **30% of the glaciers**.

Scientists estimate that in **30 or 40 years** the glaciers will disappear.

Or they will be unusable as water resource.

Would we arrive to a disaster?

No, we don't want it and we mustn't.

Let's make me a promise: starting from today you will get involved in the safeguard our our planet!

Ref: <https://ecobnb.com/blog/2018/11/melting-glaciers-causes-consequences/>

- Ankita Metrani

Dealing with Stress at work

When I first went to the United States, everybody was talking about “stress Management”. I really didn’t get this because, in my understanding, we manage things that are precious to us - our business, our family, our money, our wealth and our children. Why is everybody giving so much importance to stress in the first place?

1. MANAGE YOURSELF: What you identify as stress, fear or anger doesn’t happen because of what’s around you, but due to your own faculties not taking instructions from you. If your mind was taking instructions from you, it would create pleasantness, not unpleasantness. It is your inability to manage your own system that causes this problem. Assume control over your own being, and everything will be fine.

2. GET THE CONTEXT RIGHT: If somebody’s life is happy, it does not mean that he is doing something differently. He does the same things you do after he wakes up in the morning, or before he goes to bed at night. But somehow, his life seems magical and beautiful because of the context in which it is being seen. The quality of your life does not depend on how simple or complex it is; it depends on how you look at it.

3. BE ACTIVE, BUT HAPPY: You do not have to be ambitious to be incessantly active; it works even if you are joyful. If there’s no stress in what You’re doing, you will be willing to be active any number of hours per day. Being driven is overrated; you function best in an environment of freedom and intelligence.

4. DON’T LOSE PERSPECTIVE: Stress is the natural by-product of human beings losing perspective of what this life is all about. Their psychological process has become far larger than the existential process. That is the fundamental source of all suffering. Everything around you may be going pretty well, but just one wrong thought or emotion could destroy everything.

5. MIND YOUR THOUGHTS: Your mind is society’s trashcan. Everyone who passes by stuffs something into your head. You have no choice about what to take, and what to discard. If you take another look at this knowledge, you will realize it’s just something that is expected from you; it has nothing to do with who you are.

6. APPRECIATE REALITY: Life is about making the most of your reality, knowing it absolutely, and experiencing it just the way it is. There’s no real need to distort it. If your thoughts and emotions seem important, your whole attention will focus right there. But that is a psychological reality, not existential. Stress is not showered upon us, it is manufactured.

7. DON’T PURSUE HAPPINESS: Today, we seek happiness so vigorously that we threaten the very existence of our planet. Don’t be in pursuit of happiness; instead, know how to appreciate and express it. If you look back, you will find that the most beautiful moments in your life were those in which you were expressing your joy - not seeking it.

8. TRANSFORM WHAT’S WITHIN: The quality of your life is not determined by the clothes you wear or the bank balance you hold. Rather, it depends upon how peaceful and joyous you are inside. People deprived of basic needs may be physically miserable, and therefore in need to rectify their circumstances. But the needs of most others are not decided by what they have, but how they are at that moment.

9. LEAVE THE JONESES ALONE: Most people are miserable not because of what they don’t have; it is simply because they are comparing themselves with someone else. It is a foolish game. From your own experiences in life, you can see that true well-being comes from within. Instead of trying to turn the world into something you want it to be, you should try your hand at changing yourself first. Shunning envy could be a step in the right direction.

10. GET YOUR MIND TO RELAX :Let’s look at the various factors that influence us from dawn to dusk. If you did not sleep well last night, even your morning could be bad. As it’s the level of relaxation that makes all the difference, it is necessary to keep your system relaxed in a way that activity doesn’t take a toll on it. You could be physically exhausted, but it wouldn’t stress you out in any way. Simple yoga can help.

Ref: <https://spiritualityhealth.com/articles/2016/08/29/dealing-stress-work>

- Mrs. Yogini Bazaz

A.P.J. Abdul Kalam Quotes

SIR A.P.J. Abdul Kalam is the 11th President of the Republic of India. He was a Great Inspiration for Young Generation. No one can forget his Contribution to Indian Defense Technology. He was also known as MISSILE MAN OF INDIA. We respect and thanked him for his Unforgettable Contribution. As a Tribute to HONORABLE A.P.J. Abdul Kalam, We collected some of His Most Inspiring Quotes for the Youth.

“When we tackle obstacles, we find hidden reserves of courage and resilience we did not know we had. And it is only when we are faced with failure do we realize that these resources were always there within us. We only need to find them and move on with our lives.”

“The sides of the mountain sustain life, not the peak. This is where things grow, experience is gained, and technologies are mastered. The importance of the peak lies only in the fact that it defines the sides.”

“Be active! Take on responsibility! Work for the things you believe in. If you do not, you are surrendering your fate to others.”

“Why be afraid of difficulties, sufferings and problems? When troubles come, try to understand the relevance of your sufferings. Adversity always presents opportunities for introspection.”

“To succeed in life and achieve results, you must understand and master three mighty forces— desire, belief, and expectation.”

“God, our Creator, has stored within our minds and personalities, great potential strength and ability. Prayer helps us to tap and develop these powers.”

“All of us do not have equal talent. But, all of us have an equal opportunity to develop our talents.”

“Confidence and Hard-work is the Best Medicine to Kill the Disease called failure. It will make you a Successful Person.”

“Dreams are not those which comes while we are sleeping, but dreams are those when u don't sleep before fulfilling them.”

“He who knows others is learned, but the wise one is the one who knows himself. Learning without wisdom is of no use.”

“We are all born with a divine fire in us. Our efforts should be to give wings to this fire and fill the world with the glow of its goodness.”

“My message, especially to young people is to have the courage to think differently, courage to invent, to travel the unexplored path, courage to discover the impossible and to conquer the problems and succeed. These are great qualities that they must work towards. This is my message to the young people.”

– A.P.J. Abdul Kalam, Wings of Fire

- Mrs. Rovina Dbritto

खारूताईची एक गंमत माहिती आहे...?

ती नेहमी खाण्याच्या
बिया शोधून, कुठे कुठे खणून
जमिनीत लपवून ठेवते व नंतर ती साफ
विसरून जाते..... माहिती आहे का,
पृथ्वीवरील व विशेषतः जंगलात ५५ टक्के
वृक्ष हे यातून पुढे निर्माण होत असतात...
असं आहे सगळं निसर्गाचं... म्हणून
आपण छान कर्म करायचं आणि विसरून जायचं
बिनधास्त पुढच्या चांगल्या कर्माकडे जात
राहायचं.....

खारूताई प्रमाणे
आपल्या प्रत्येक 'चांगल्या
कर्मातून' कुणासाठी तरी मस्त
काहीतरी निर्माण झाल्याचं
भविष्यात दिसेल....
.... बाकी हिशोब ठेवणारा तो
आहेच.....!

#PROUD TO BE A TEACHER

Taking a class for 45 minutes needs the energy which is equal to the to walk 10 kilometers....

It means that a teacher walks 50-60 kilometers daily...

Millions of kilometers are walked by the teacher to take their students to their destination without getting tired but with smile on face and enthusiasm at heart...

Salute to each and every teacher!

- Mrs. Yogita Mane

ISRO'S CHANDRAYAAN 2 MISSION IS A STEPPING STONE TO LARGER, MORE COMPLEX MISSIONS TO THE MOON AND BEYOND

ISRO has come a long way in the last five decades from its first sounding rocket launch in 1965 to its Mars Orbiter Mission (MOM) in 2014 being successful in the very first attempt. The latest Chandrayaan 2 lander and rover mission that would soft-land on the moon on 7 September 2019 is easily ISRO's most ambitious mission so far given several aspects of the mission on the whole. The spacecraft will be hitching a ride on ISRO's most powerful rocket, the GSLV Mk III, which has only been flown three times so far. In comparison, the MOM mission rode atop the smaller and less powerful Polar Satellite Launch Vehicle (PSLV) that then had nearly 25 successful launches to its credit. The last-minute calling-off of Chandryaan-2's launch on 15 July 2019 due to a leak in the GSLV's cryogenic engine only underscores how inherently unpredictable and risky space missions are.

The GLSV Mk III has now successfully lifted off from Sriharikota and placed the Chandrayaan 2 payload into the desired orbit for lunar transfer. Another fact which adds complexity to the C2 mission is that while being only the second attempt of ISRO to reach the moon, it comprises a lander and a rover in addition to an orbiter module, each of them carrying several science payloads. The first-ever successful soft-landing on the Moon was performed in 1966 by the USSR and only in 1969 have they attempted to include a rover, having spent the intervening three years gaining confidence in flying orbiters and landers. Returning to Chandrayaan 2, after a successful lift-off comes the elaborate orbit raising sequence around Earth followed by entry into the lunar transfer trajectory. Once inside the moon's sphere of influence, the spacecraft's retro thrusters slow it down and perform several orbital manoeuvres so that the spacecraft ends up in a 100 km circular orbit around the moon. These final lunar orbital insertion manoeuvres can be seen as the reverse of the initial orbit raising manoeuvres around the Earth. In spite of the previous nearly perfect (There is no perfection in space!) Mangalyaan-1 and Chandrayaan-1 trajectory profiles, these orbital manoeuvres carry an inherent risk.

The Chandrayaan 2 mission is already quite complex even before the spacecraft becomes completely autonomous and the 15 minutes of terror actually begin. The landing sequence begins with the Vikram lander separating from the orbiter and beginning an autonomous descent. While two potential landing sites have been identified close to the south pole making it the farthest mission south, images from the high-resolution camera aboard the orbiter will help the lander in zeroing in on a safe spot to land. The lander's descent rate is controlled by 5 liquid thrusters which are autonomously turned off when the lander is several meters above the lunar surface and gets soft-dropped on the surface at a speed of 2m/s. The 6-wheeled Pragyaan rover then detaches from the lander and begins operations. Through the Indian Deep Space Network (IDSN), the orbiter is the only communication link between the ISRO engineers and the Vikram lander and Pragyaan rover. With Chandrayaan-2 and later Mangalyaan-2, ISRO would be ready to embark upon a more scientifically mature exploration of the solar system. Of course, the benefits of space exploration are not always immediate, but the quality of science output is directly impacted by how cutting-edge scientific instruments are as well as the mission duration.



Ref: <https://www.firstpost.com/tech/science/isros-chandrayaan-2-mission-is-a-stepping-stone-to-larger-more-complex-missions-to-the-moon-and-beyond-7035861.html>

- Mrs. Yogita Mane

Gold rush: All the races sprinter Hima Das has won in July

There is simply no stopping the golden girl of India, Hima Das as she continued her dream run by claiming her fifth gold of the month on Saturday. India's 'Dhing Express', as she is called, clinched her fifth gold when she returned to her pet 400m competition with a season-best time of 52.09 seconds at the Nove Mesto nad Metuji Grand Prix in Czech Republic on Saturday.

➤ **200m, Poznan Athletics Grand Prix, Poland**

Das's gold rush began on July 2 in the Poznan Athletics Grand Prix in Poland where she won her first competitive 200m race of the year. Hima, the world junior champion and national record holder in 400m, clocked 23.65 seconds on her way to the 200m gold.

➤ **200m, Kutno Athletics Meet, Poland**

The 19-year-old claimed her second international gold in women's 200m at the Kutno Athletics Meet in Poland on July 7, where she clocked 23.97 seconds to clinch the gold while VK Vismaya bagged the silver in 24.06.

➤ **200m, Kladno Athletics Meet, Czech Republic**

Her third international triumph in 11 days came at the Kladno Memorial Athletics Meet in Czech Republic on July 13, where the teenager clocked a much improved time of 23.43 seconds to win the gold. She has a personal best of 23.10 sec in 200m.

➤ **200m, Tabor Athletics Meet, Czech Republic**

Das clinched her fourth gold of the fortnight when she once again won the 200m race at the Tabor Athletics Meet in the Czech Republic on July 17. She won in 23.25 seconds, inching closer to her personal best of 23.10 secs. This was 19-year-old Hima's fourth gold since the start of July.

➤ **400m, Nove Mesto nad Metuji Grand Prix, Czech Republic**

Hima Das roared to her fifth gold of the month in her 400-metre race in Czech Republic on Saturday, recording 52.09 seconds on the clock on July 20. This timing is a season-best for Hima in the 400-metre event. Her season-best performance had been 52.88 seconds before Saturday. Her personal best is 50.79 seconds, recorded at the Asian Games last year.

➤ **Helping hand at home**

Hima also proved to be a shining light for Assam in their time of darkness when she announced that she would be donating half her monthly salary towards flood relief efforts in the state. She deposited her contribution in the Assam Chief Minister's Relief Fund.

Flood situation in our state Assam is very critical, 30 out of 33 districts are currently affected. So i would like to request big corporates and individuals to kindly come forward and help our state in this difficult situation.

Ref : <https://indianexpress.com/article/sports/sport-others/hima-das-five-gold-medal-athletics-5840465/>



- Mrs. Jesleena Gonsalves

Python Course

Department of Information Technology under ITSA presents, Python – A to Z Full Course for Beginners. This course is only for students of Department of Information Technology.

Objective of the Course: Learn Python 3, Python Programming, Python File Operations, Python advance concepts – real life.

Course Duration: 40 Hrs.

The course will be conducted by Prof. Jigar. M. Chauhan on all working Saturdays from 10:00 - 4:00 in Lab E-317.

Enrollment for the course is free of cost, Rs. 100 Deposit will be charged per participant which will be refunded along with the certificate after successful completion of the course.

Software Requirements:

1. PyCharm Community Edition.

Link for downloading : <https://www.jetbrains.com/pycharm/download/#section=windows>

2. Python

Link for downloading : <https://www.python.org/downloads/>

Registration Link:

https://docs.google.com/forms/d/e/1FAIpQLSf_yIAsGyLtpQNCHeyVO9ZwJWdDiBvptEVDofQQT6kRSMiDKw/viewform

Students' Achievement

The department of Information Technology heartily Congratulate the toppers of SE-IT and TE-IT Batch of year 2018-19. We Hope you the best for your future.

SE-IT:

1. Aparna Sudhir
SGPI : 8.92



2. Moksha Gala
SGPI : 8.73



TE-IT:

1. Rumit Jain
SGPI : 9.96



2. Gaurang Margaj
SGPI : 9.31

