Global IT Literacy – The need for the hour.

The world operates on the computer and digital gadgets. They have become an essential thing in everyday life shortly. World Computer Literacy Day is observed to promote the awareness about the computer and electronic devices. The celebration Day encourages people to use them efficiently with a range of skills ranging from primary use to the programming level and advanced problem-solving.

Computer literacy is the means of using computer programs and other applications associated with the computers. It is indeed vital to educate children about digital literacy. Literacy in Computer also means one's understanding of how computers execute. The concept of learning about the computer is just beyond the basic knowledge. One can quickly gain the plethora of knowledge in the computer by knowing about the in and out of these devices. The best way to make yourself a high profile is through learning about the computers in-depth. Learning about how to use the computers and knowing how computers are operating will let oneself come to know about the world of possibilities.

From solving a tiny mathematical problem to researching on world's biggest issues, computer 'Ices everything. Global IT Literacy Day has been celebrated since 17 years now. In 2018, it will be the 18 year when worldwide IT/ Computer literacy day will be celebrated. The day is specially declared and celebrated to encourage the importance of digitization in the world. As we have seen everything is done with computer only, it is important to literate people about computer and its uses. Diverse countries celebrate the day in different ways.

What is Digital Literacy?

Digital literacy, according to the 'American Library Association', is "the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills." When you read a book on a Kindle, consider the accuracy of a news report linked in your social media newsfeed, or create and share a YouTube video, you are displaying digital literacy. Digital literacy encompasses a wide range of "new" technology, even the technology you're using to access this lesson! Some signs of a digitally literate individual include being able to find the right tools like the internet, mobile tablets and smartphones to consume information and to share and create content for others.

Digital literacy is important because we live in a tech-dependent world. Today, you can buy movie tickets from your smartphone, read the news on a mobile tablet or take books with you to the beach on a digital e-reader.

We need to become digitally literate to keep up with the changing times. Encyclopedias, once a staple in an American home, have given way to Google searches. Making or confirming a doctor's appointment is now easier via text than calling him or her directly. Finding resources to help complete a homework assignment or discover what's happening in town over the weekend can all be done with the click of a mouse or the tap of a screen.

In past years , people communicated through written letters, and this required strong reading and writing skills. We now communicate through email and text, which not only still requires strong reading and writing skills, but also needs digital literacy skills as well. This makes digital literacy important not only for being successful in the workplace, but in society as well.

A LOOK BACK

Since 2001, World Computer Literacy Day is celebrated on 2" December every year, when the use of computer was accelerating across the globe. However not every countries had same access to computer or Internet! So it was needed to reduce the division or gap between the regions or countries that have computer literacy with the ones that haven't. In the year 2001 looking at the computer literacy rates in different countries across the world, the day has been announced officially.

On this day many countries and the organization or schools provide free Computer courses and basic knowledge to make them literate about computer uses and such.
During 20's when the country like Ireland has seen 76% of homes with computers, Ethiopia, Tanzania and Zambia data showed 1%, 3% and 2% use of Internet and computers respectively. The huge gap between Ireland and these three countries led to the division of regions on the basis of computer literacy. Apart from these countries Kenya too has low rate of Internet users, only 26% of the total population in the country which too rose from 10%. This digital divide has become a big constraint in job market in many developed economies.

IT Literacy campaign intents to provide computer knowledge in various ways to the people who are not familiar with the devices at all around the year. This literacy campaign focus not only computers but also devices like Smartphone, Tablets and Laptops which are considered to link people with technology and Internet.

What is Computer Literacy?

- By computer literacy it means that learning about computer and related devices and its usage
- This involves basic computer operating training.
- Training on programming languages and its application.
- Formal training on Internet operation.
- In developed nations such as United States. computer courses are being provided since kindergarten. As the country almost fully depends on digitization, use of computers or similar devices is a must. On the other hand, less developed nations or developing nations provide basic computer courses in school level but not as much as developed nations do.

IT Literacy and India- A case study

A developing nation like India where literacy rate is still quite low the computer literacy rate is low as well. During 2000s, the rate was 6.15%. However the rate has accelerated and reached at 23.2% in the year 2014. According to the report of India Social Consumption Education Survey 2014, Round 71 the rate has reached from 15% in mid 20s to 23.2% in the year 2014.

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It is said that computer literacy for any nation should be more than 35% in today's world where use of technology is at high peak. India, on the contrary. has only 23.2% which is even lower compared to neighboring countries like Sri Lanka. According to the data, the rate of computer literacy in Sri Lanka in the year 2014-15 was 26.7% which is more than India.

Indian government has launched Digital India in the year 2014 under which most of the activities such as banking, paying utility bills, education and such will be done through digital mode only. Many of the sectors followed digitization and converted their manual system to digital system. However the digital literacy among the senior people is recorded only 14.4% in the year 2017. Most of the senior people, from urban as well as rural don't have any idea what computer literacy is. As a whole around 85.6% people are yet to be computer literate in India (data collected from Economic Times).

Why is computer literacy vital to succeed in today's world?

Computer Literacy is the knowledge and understanding of computer concepts, limitations and ability to use computers and technology efficiently. Computer literacy also refer to the comfort level someone has with using computer programs and other applications that are associated with computers.

The level of computer literacy one must achieve to gain an advantage over others depends both on the society one is in and one's place in the social hierarchy.

The use of computers has become a way of life in the modern world, making it important for just about everyone to learn basic computer skills. Almost all workplaces and businesses have embraced the use of computers in one way or another. In short it is almost impossible not to encounter a computer in everyday life.

Computer literacy is important for many reasons. To know how much impact it has on being successful in this technology rich world. There are several reasons why computer literacy or digital literacy plays an important role. Below are the most vital ones.

The Growth of technology and computer related task

As technology continues to advance, computer has become a part of everyday life. Thus, many people believe that computer literacy is vital to success in today's world. Computer literacy, also known as digital literacy, involves having a current knowledge and understanding of computer and their uses. Because the requirements that determine computer literacy change as technology changes, you must keep up with these changes to remain computer literate.

Profession or job hunt:

First world and developing countries consider computer literacy to be a very vital skill to acquire. Employers desire their workers to possess basic computer skills because their companies are becoming more technologically advanced. Computers help them to run their companies efficiently and cost effectively. With the influence and essentially of becoming computer literate individuals, people now regard that living without computer skills would now be unimaginable. People rely much on computers on the amount of work they can accomplish. Everyone needs a computer to do basic tasks such as reports, documentation of records, etc.

Education:

Computers are just as common as a pen and paper for writing, especially among youth. For many applications, especially communicating, computers are preferred over pen, paper, and typewriters because of their ability to duplicate and retain information and ease of editing.

As personal computers become common place and they become more powerful, the concept of computer literacy is moving beyond basic functionality to more powerful applications under the heading of literacy.

Where computers are widespread, they are also a part of education. Computers are used in schools for many applications such as writing papers or searching the Internet information. Computer skills are also a subject being specifically taught in many schools, especially from adolescence onward - when the ability to make abstractions forms.

The seven elements of digital literacies

Media literacy
Critically read and creatively produce academic and professional communications in a range of media

Information literacy
Find, interpret, evaluate, manage and share information

Communications and collaboration
Participate in digital networks for learning and research

Digital scholarship
Participate in emerging academic, professional and research practices that depend on digital systems

Career & identity management
Manage digital reputation and online identity

Learning skills
Study and learn effectively in technology-rich environments, formal and informal

ICT literacy
Adopt, adapt and use digital devices, applications and services

How is Digital Literacy Day Celebrated?

World IT/Computer Literacy Day is celebrated in many countries in several ways. Most common way to celebrate the day is to provide computer knowledge to the people who are from backward communities or educationally weaker group. Many schools/professional colleges and Universities extend training in camps to common public, especially the ones who are economically and socially backward. Similarly G-TEC Group of Institution provide scholarships and fee waive offs on its courses to enable the socially and economically backward students to take up IT Literacy. The waived off part is borne by G-TEC team as a part of Social commitment. Apart from waive offs, a lot of not-for-profit NGOs are supported with free training or near to zero cost is charged, especially one which involve women and senior citizens. Along with training easy to follow study materials are also provided.

As far as the new ideas are concerned, a country like India where adult digital literacy rate is quite low the opportunity is just infinite and the possibilities of its impact quite unpredictably huge.

Summing Up-

Use of computer and technology has increased a lot and almost all the people are depending on technology for even their day-to-day affairs. Unfortunately many people don't have any idea what digital literacy or computer literacy is. It is important for the people who know about it to teach rest of the world about the same. Educational institutions, computer centres and government of the nations are and must take initiative to provide knowledge and skill to the people who are not aware of IT/computers' use as well as to the people living in backward economy.

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3 EMERGING PROGRAMMING LANGUAGES WITH A BRIGHT FUTURE

Kotlin

Kotlin is a statically typed language that targets the JVM and JavaScript. Kotlin was born out of need at JetBrains, which was looking for a new language in which to write its tooling, which was mostly written in Java. Something that would allow it to leverage its existing codebase and at the same time resolve some of the issues it had with Java. And it was precisely common pitfalls that one encounters when writing software that shaped much of Kotlin's characteristics.

·**Conciseness:** Reduce the amount of boilerplate code necessary to express certain constructs.
·**Versatile:** Create a language that is suitable for any type of industrial application development, be it web, mobile, desktop, or server-side.
·**Safe:** Let the language handle some of the common pitfalls made with issues such as null reference exceptions.
·**Interoperable:** Permit the language to interoperate with existing Java codebases, libraries, and frameworks, allowing for gradual adoption and leveraging existing investments
·**Tool-enabled:** JetBrains makes tools and it does so out of the belief that many routine tasks can be automated and lead to more efficient and productive development. As such, the language has to easily allow for tooling.
Kotlin has and will always be about pragmatism seeing common issues we encounter frequently when writing code and trying to help address these. This surfaces through various language features such as:
·**Null**-safe by default: Kotlin types by default are not nullable, avoiding annoying null reference or pointer exceptions.
·**First**-class delegation: The ability to delegate functionality of a class member to an external function, thus allowing for reuse and better composition.
·**Conventions:** A series of conventions that allow for writing expressive code, giving way to creating a strongly typed domain-specific language that provides better discoverability and easier refactoring.

Kotlin 1.0 was released in February 2016 after more than five years in development and extensive testing in real-world projects. Currently, over ten products at JetBrains use Kotlin, as do companies such as Amex, NBC Digital, Expedia, and Gradle.

elm

Elm is a usability-focused functional programming language that compiles to high-performance JavaScript. You can use it with or without JavaScript to build user interfaces on the web. Elm's primary benefits compared to JavaScript are reliability, maintainability, and programmer delight. More specifically:

·**No runtime exceptions:** Production Elm code has a reputation for never throwing runtime exceptions. A far cry from "undefined is not a function."

·**Legendarily helpful compiler:** Elm's compiler is widely praised for having the most helpful error messages in the business. "If it compiles, it typically just works," is a common sentiment, even after a serious refactor. This makes large Elm code bases much nicer to maintain than large JS ones.

·**Semantic versioning** automatically enforced: elm-package enforces semantic versioning automatically. If a package author tries to make a breaking API change without bumping the major version number, elm-package will detect this and refuse to publish it. No other known package manager enforces semantic versioning this reliably.

·**Fast and functional:** Elm is a pure functional programming language, which guarantees no mutations or side effects. Not only do these guarantees make Elm code scale nicely, but they also help it render application UIs faster than React, Angular, or Ember.

·**Powerful tooling:** elm-format formats source code according to a community standard. No more arguing over style conventions. Just hit Save in your editor of choice and your code becomes beautiful. elm-test ships with batteries-included support for both unit testing and fuzz testing. elm-css lets you write Elm code that compiles to a .css file, so you can share code between application and stylesheets to guarantee your constants never get out of sync.

Elm code can also interoperate with JavaScript, meaning you can introduce it in small doses to your JS code base so that you can still leverage the enormous JS ecosystem and avoid reinventing the wheel.

Smile Corner

"I don't wake up at night to check my e-mail. I automatically have it forwarded to the people in my dreams and they read it to me"

Rust Programming Language

Rust is a systems programming language that combines C-like efficiency and control over memory with functional language features such as strong static typing and type inference. It has three primary design goals:

·**Safety:** Many C-like languages open the door to memory errors resulting from manual memory management (e.g., dangling pointers or double-frees). Rust takes best practices from modern C++ such as RAII and smart pointersand makes them language requirements, systematically ensuring that pure Rust code is memory-safe.
·**Speed:** Nearly all languages run slower than C because they provide abstractions that make software development easier but with substantial runtime overhead (e.g., garbage collection and dynamic dispatch). Rust focuses on "zero-cost abstractions," or methods of making programming easier that don't cost anything at runtime. For example, Rust manages memory at compile time and uses static dispatch for generics (similar to C++ templates, but more type-safe).
·**Concurrency:** Concurrent code in systems languages is often fragile and error-prone, given the tricky nature of programming with threads. Rust tries to alleviate these issues by providing type-level guarantees for what kinds of values can be shared between threads and where.

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