

## Information Security Education & Awareness

Ministry of Electronics and Information Technology Government of India





Fun Time - Page 02 and 12 Concept - Page 03 Virus Alert - Page 10



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प्रगत संगणन विकास केन्द्र CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING इलेक्ट्रॉनिको और सुचना प्रौद्योगिको मंत्रालय को वैज्ञानिक संस्था, भारत सरकार A Scientific Society of the Ministry of Electronics and Information Technology, Government of India

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Acknowledgement HRD Division Ministry of Electronics & Information Technology

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ADDICTION	BULLYING	DETOX
GAMING	INSTAGRAM	MORPHING
POSTING	SOCIALMEDIA	TEXTING
TWITTER	YOGA	YOUTUBE

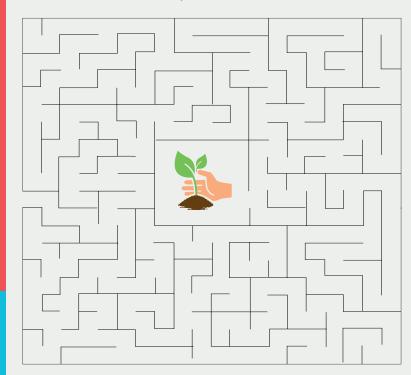
Instructions

- Words can go in any direction •
- Words and share letters as they cross over each other •

S	Y	0	G	A	Р	Z	С	Т	W	Ν	Ζ	Н	L	Q
0	Q	Е	E	N	С	0	Н	Х	0	L	А	E	Α	G
С	Μ	G	U	М	I	J	S	1	W	Y	D	К	Т	Н
1	G	А	U	S	J	Y	Т	Т	0	Ζ	Ζ	D	Y	Ν
Α	Ν	Q	R	А	Y	С	L	U	I	W	В	V	Т	Ι
L	I	S	J	G	I	А	Т	L	V	Ν	J	S	Z	В
M	М	Х	Μ	D	А	U	0	R	U	Т	G	N	L	G
E	А	Т	D	N	В	Т	S	К	W	В	В	S	Y	Ν
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N	S	E	F	G	Y	J	I	V	Т	U	Е	0	Х	R
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#### Find your way into the digital free zone





People today are seen to be hooked up to the digital gadgets right from the time they wake up till the end of the day, the usage continues even when they are lying on bed retiring to sleep. This continuous and intense usage of digital devices has led to digital intoxication or digital addiction. This scenario has raised the need to bring in intervention with conscious efforts on part of all the digital users to inculcate hygienic digital practices with limited or restricted usage and periods of digital detox.

Digital detox is a process that refers to a time period of conscious restrain in using digital devices like smartphones, televisions, computers, tablets and social media sites. It may include activities like avoiding scrolling social media and constant checking of mails, avoiding texting etc., The purpose of the effort is to avoid digital distractions to reconnect with the real world around you and relax yourself to enjoy the moment.

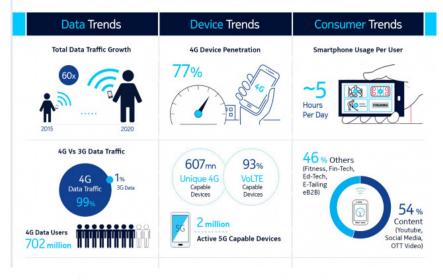
#### Background

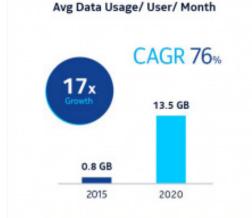
India is the world's second largest online market, with over 560 million internet users. Statistics show that there has been internet traffic growth by 6times in last 5 years(2015-20), with average data usage per month registering a Compound Annual Growth Rate of 76% reaching 13.5 GB in December 2020 from 0.8GB in 2015. It is estimated that on an average an individual spends 5 hours of daily time on smartphones in India. The country today stands as one of the highest consumers of data per day, surpassing China. The massive increase in online content consumption amid COVID-19 coupled with rising smartphone users clearly indicates the unparalleled and never seen before trends in digital device usage. While these figures indicate positive impact of technology in improving individual lives, influencing every sector and transforming economies, it also points out at the incoherent rate at which technology has been adopted by individual users and the incompatible ways in which the digital devices are being put to individual use.





#### India Mobile Broadband Index MBiT 2021



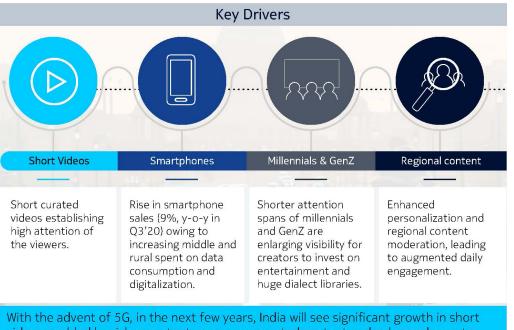


#### Importance

The unprecedented ways in which individuals are engaging themselves with the digital devices has made it a cause of concern for them from various perspectives. These concerns mainly relate to the users health & wellbeing and includes security issues related to user data, finance, network, system etc.,

These concerns need to be addressed on priority basis with immediate attention to avoid and reverse damaging or negative effects of unrestricted/inappropriate technology usage. Hygienic, Responsible and Conscious use of digital technology with awareness is the need of hour to not only protect ourselves, but also be able to guide and safeguard the future generations from the ill effects of excess or inappropriate use of digital technology.

Digital detox is a primary step in this direction which encourages digital users to make responsible and hygienic choices in proper usage of digital devices and data consumption, and inculcate healthy digital device practices the encourages the 'me time' and make time for connecting in real world rather than be hooked to virtual world.



videos enabled by richer content, consumer curated content and enhanced peer to peer communication.

Ref.: Nokia India Mobile Broad band Index 2021- MBiT Index report on mobile broadband performance in India.





#### Internet/Digital addiction- Causes and Dangers

Have you ever come across a scenario, where in while working on something, you just pick up your mobile to check a notification and then next thing you notice is that you have spent a whole 30-40 minutes on it, losing track of what you were actually upto.

# The time drain due to digital devices and internet use is real.

Today, we have come to heavily rely on digital technology for communicating with friends & family, shopping, travel, banking, entertainment, education, research and what not. While the technology and its application has facilitated or supported our daily lives and activities, this dependency on digital technology if continued to be used in unregulated ways can lead to digital addiction and intoxication also.

Internet/Digital addiction refers to continuous and uncontrolled use of digital devices by an individual, to the extent that it interferes with their daily routine, hampering their health and wellbeing.

It is also observed that some people cannot stop using their mobiles or digital devices, no matter what and derive meaning and satisfaction from their online activities. Excess and unregulated engagement with digital devices may it be with playing video games or compulsive online shopping or with social media plat-forms etc., can all be broadly categorized under digital or internet addiction.

Occasionally Digital/internet addiction can become a real cause of concern. When left unchecked it can take the form of disorder which is also referred to as Internet Addition Disorder or Compulsive Internet Use (CIU), Problematic Internet Use (PIU), or iDisorder. Theorized by Dr. Ivan Goldberg, MD in 1995\*, the disorder was compared by him to its original model to pathological gambling. Digital addiction has gained increasing attention from researchers, mental health counselors, doctors, media and the general public, because of its impact on a person's brain, health and overall wellbeing. In fact, a number of other countries — including India, Italy, Japan, China and Taiwan — have declared that digital addiction is a public health crisis.



Ref: \*https://www.psycom.net/



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#### Causes

As identified by mental health experts, the reasons be- hind internet addiction include -



#### **Pleasure factor**

The internet addiction seems to be related to the pleasure generation centre of the brain, as the addictive behavior triggers a release of dopamine to promote the pleasurable experience activating the release of chemical. If left unregulated, over time the individual's need for more such activity increases to induce similar pleasure response.



#### Variable reinforcement effects

As per the Variable Ratio Reinforcement Schedule (VRRS) theory, the cause of addiction may be multiple layers of rewards. That is, constant internet surfing leads to multiple unpredictable rewards. For example- addiction to Facebook provides a multiple and unpredictable layer of rewards in the sense that every time you sign on to read your updates, you get repeated and unexpected good news, updates, likes, shares which is never ending or not predictable and so you comeback for more.



#### **Anxiety and Depression**

It is observed that people suffering from anxiety or depression, may turn to the Internet to fill the void and relieve their suffering from these conditions. Similarly, shy individuals and those with social awkwardness might also turn to the Internet as it does not require interpersonal interaction and is emotionally rewarding.

#### Warning signs or Symptoms of Digital Addiction:

As identified by mental health experts, the reasons behind internet addiction include –

#### **Behavioral symptoms**

- Spending most of the time online
- No longer interested in real time activities/ hobbies



- Skipping daily routine and negligent grooming, to keep up with online activity
- Using mobile devices during wake up and bed time
- Agitation when not accessing digital devices
- Lying about your internet use
- Inability to Prioritize or Keep Schedules
- Time drain

#### Mental symptoms of internet addiction:

- Poor concentration
  - Attention Deficit disorders
- Anxiety and Depression
- Language issues in children
- Trouble distinguishing reality from fantasy
- Memory impairment
- Agitation and Mood swings

#### **Physical Symptoms**

- Fatigue
- nsomnia
- Bodily discomfort like backaches, headaches, mus-, cle pain, Carpal tunnel syndrome, eye strain etc.,
- Unintended weight loss or weight gain

#### Social symptoms of internet addiction:

- Irritable mood
- Social isolation and lonliness
- Employment problems
- Strained interpersonal relationships
- Academic difficulty









## Limit the time you spend on Internet



#### **Digital Detox and benefits**

Taking breaks from work during weekend and yearly holidays, gives you the much needed time to relax, refresh and rejuvenate and get back to task with renewed spirits. Similarly taking well planned, timely and conscious daily breaks from digital device usage, will aid in digital detox and will reward you with many health benefits, help you with better usage of time and will help promote better relations with work life balance.

#### **Benefits of Digital detox**

- Reduces stress and anxiety
- Better sleep
- Better work-life balance
- Promotes physical and mental health
- Helps unwind and relax
- Helps build healthy hobbies
- Productive and efficient usage of time
- Promotes healthy social life and better interpersonal relations





## Self-Assessment tool to assess yourself on your digital device usage habits:

Criteria for rating -'yes' - 1 and 'No' - 0

1. Do you use your digital devices longer than you 6. Do you prefer to be online and avoid socially actually plan to use?

Yes No

2. Do you lose track of time when using internet?



3. Do you tend to browse the net and check your mobile as coping mechanism when you are stressed, bored, anxious or depressed?



4. Do you find it challenging to restrict yourself from using the internet connected devices?



5. Do you spend lot of your time playing online games or interacting with friends on social media Platforms?

> Yes No

engaging activities like sports, social get-togethers, spending time with family etc., ?



7. Do you find that your online activity is interfering with your daily routine like food time, study time, sleep time, personal grooming etc.,?

> Yes No

8. Do you tend to check your mobile for text messages, social media updates, mails etc., first thing after waking up?

9. Do you feel anxious, stressed and fear missing out on things, when do not have you mobile with you?

10. Do you tend to hide or lie about your online activity and amount of time spent?



#### **Read your scores:**

hile

do

Score of 0	You are in complete control, w
	using your digital devices and not use it in excess.
	not use it in excess.

Score of 1-3 You are mostly in control of your digital habits, but very rarely/ sometimes allow yourself to indulge in digital device usage.

Score of 4-6

You are in border line and if you do not gain control over your digital usage habits, it can lead you to deterioration of your health and wellbeing due to digital addiction or intoxication.

Score of 7-10 You have almost no control over your usage of digital device usage and tend to be hooked online. This calls for immediate attention and action at your end to improvise and consciously make efforts to digitally detox yourself.





## Few ways and means of Digital Detox



Assess yourself to set gradual and timely goals

Know where you stand in your digital device usage habits and accordingly set your goals for necessary corrective action in that direction setting timely goals with required commitment.



#### Set limits and make it work for you

Know that a digital detox is a personalized plan and it can vary from person to person depending on individual usage, needs and goals. You may want to try what works for you. For example you may like to consider i) a complete digital fast – which is avoid devices completely for certain period, or ii) go on specific detox by avoiding/restricting some specific app/game/tool etc., or iii) restrict on using social media platforms, or iv) plan avoid usage of devices during specific times in a day like wakeup, mid-day and sleep to give breaks etc.,



#### **Consider long term benefits**

Focus on achieving long term benefits of developing an healthy body and mind, better interpersonal relations, efficient time management etc., as a goal and keep working on accordingly managing your digital device usage habits by gathering support



#### Gather support from like minded people

Gather required support from family members, close friends to encourage you and provide accountability. Share your goals with like-minded and supportive people. You can share ideas on how to stop your targeted behavior.



#### Assess your progress and move forward

Evaluate your progress toward achieving hygienic digital usage practices regularly, asses the benefits and barriers you experienced during the digital detox, and appropriately regulate your actions on any aspect of the change moving forward.



#### Manage features on your mobile

Look into putting in practice some tips for effective time management like – deleting time-consuming apps and disabling distracting features like notification alerts, auto-push notifications, setting screen to gray scale to keep you from waking at night, creating a screen lock with questions like 'what is the need?' ; Why now? Etc.,



#### Create digital free zones

Have digital device/ mobile free zones and make it a practice to keep it out of sight during bed time, food time and family time. For example You may plan to have a charge your phone outside your bedroom.



#### Indulge in healthy hobbies/pass time activities

Develop healthy hobbies that you really like and feed your soul giving yourself the 'me time', it may include things like making time for quite walks, playing board games with family, outing with family, cooking, gardening, painting , meeting up with friends, reading good books, volunteering etc.,

Digital detox is all about taking charge and control of how you manage or spend your time, energy and what you give your attention to. It helps you realize what you want more and less of so you can break unhelpful habits and create new ones that are more meaningful.





denial-of-service (DoS) attack

<ul> <li>2022-0102 Multiple vulnerabilities in F5 Products </li> <li>Software Affected <ul> <li>BIG-IP (all modules) version prior to 16.1.2 in Perl and Expat Library</li> <li>BIG-IQ Centralized Management version prior to 8.0.0-8.1.0 in Perl and Expat Library</li> <li>F5OS-A version prior to 1.0.0 in Perl</li> <li>F5OS-C version prior to 1.2.0-1.3.1 in perl and Expat Library</li> <li>Traffix SDC version prior to 5.2.0 in perl and Expat Library</li> </ul> </li> </ul>	buffer over flow and cause denial- of-service (DoS) attack on the targeted system. Description 1. Denial of services Vulnerability (CVE-2020-10878) This vulnerability exists in F5 products in Perl before 5.30.3due tointeger overflow related to mishandling of a "PL_regkind[OP(n)] == NOTHING" situation. A remote attacker could exploit this vulnerability by sending crafted regular expression that may lead to malformed bytecode with a possibility of instruction injection.	<ul> <li>on the target system.</li> <li><b>Buffer Over Read Vulnerability</b> (CVE-2019-15903) This vulnerability exists in F5 product in libexpat before 2.2.8 due to improper parsing of XML input. A remote attacker could exploit this vulnerability by sending specially crafted XML. Successful exploitation of this vulnerability could allow the remote attacker to buffer over-read and cause denial-of-service (DoS) attack on the target system.</li> <li>For more details visit: https://cert-in.org.in/LCODE=CIVN-2022-0102</li> </ul>
Overview Multiple vulnerabilities have been reported in F5 Products which	Successful exploitation of this vulnerability could allow the remote attacker to perform	LCODE=CIVN-2022-0102
CERT-In Vulnerability Note CIVN- 2022-0103 Privilege Escalation Vulnerability in UpdraftPlus plugin for Word- Press Software Affected	A vulnerability has been reported in UpdraftPlus plugin for WordPress which could allow an attacker to gain elevated privileges on the targeted system. <b>Description</b>	vulnerability by sending a specially crafted request. Successful exploitation of this vulnerability could allow an attacker to gain elevated privileges on the targeted system
<ul> <li>UpdraftPlus plugin for WordPress versions between 1.16.7 and 1.22.2.</li> <li>Overview</li> </ul>	This vulnerability exists in UpdraftPlus plugin for WordPress due to improper input validation. An attacker could exploit this	For more details visit: https://cert-in.org.in/ TES01&VLCODE=CIVN-2022-0103
CERT-In Vulnerability Note CIVN- 2022-0104 Multiple Vulnerabilities in Sie- mens SIMATIC Industrial Products Software Affected • SIMATIC Drive Controller family: All versions prior to v2.9.4 • SIMATIC ET 200SP Open Controller CPU 1515SP PC2 (incl. SIPLUS variants): All versions • SIMATIC S7-1200 CPU family	<ul> <li>(incl. SIPLUS variants): versions 4.5.x prior to v4.5.2</li> <li>SIMATIC S7-1500 CPU family (incl. related ET200 CPUs and SIPLUS variants): versions 2.9.2 and versions prior to v2.9.4</li> <li>SIMATIC S7-1500 Software Controller: All versions</li> <li>SIMATIC S7-PLCSIM Advanced: All versions</li> <li>TIM 1531 IRC (incl. SIPLUS NET variants): All versions after v2.2</li> </ul>	Overview Multiple vulnerabilities have been reported in Siemens SIMATIC Industrial Products which could allow a remote attacker to execute arbitrary code, bypass security restrictions or cause denial of service condition on the targeted system. For more details visit: https://cert-in.org.in/ ES01&VLCODE=CIVN-2022-0103

**CERT-In Vulnerability Note CIVN-** could allow an attacker to perform



## V I R U S A L E R T

#### **BotenaGo Malware**

It has been reported that surfaced newly malware а written in Google's open-source programming language Golang, is targeting Linux-embedded routers and Internet of Things (IoT) devices through botnets. The malware is utilizing 33 different exploits to compromise routers and IoT devices. It works by creating a backdoor to the device and then waits to either receive a target to attack from a remote operator through port 19412 or from another related module running on the same machine.

#### Infection Mechanism:

The new Golang-based malware • botnet incorporates more than 30 exploits for a variety of routers, modems, and Network-attached • Storage (NAS) devices. As listed by Alien Labs, the vulnerabilities with CVE numbers, which can • be exploited by new BotenaGo malware are listed below. In addition, some of the vulnerabilities have also been disclosed without • CVE.

The malware botnet deploys a backdoor on the compromised device, and then waits for commands – either from a remote operator or a malicious module on the device – to initiate an attack. As part of a typical BotenaGo attack, the malware first maps potential targets to attack functions, then queries the target with a GET request, after which it searches the returned data, and only then it attempts to exploit the vulnerable target.

On a compromised device, the

malware creates two backdoor
ports: 31412 and 19412, and
starts listening on port 19412 to
receive the victim's IP. Then, it
loops through mapped exploit
functions to execute them with
the supplied IP. Once BotenaGo
gains access, it will execute remote
shell commands to recruit the
device into the botnet. Depending
on which device is targeted, the
malware uses different links to
fetch a matching payload.

## Best practices and remedial • measures:

- It is recommended to keep the software up to date with latest security updates.
- Install the latest firmware and use a properly configured firewall.
- Ensure minimal exposure to the Internet on Linux servers and IoT devices.
- Monitor network traffic, outbound port scans, and unreasonable bandwidth usage.
- It is advised to carry out timely patching of internet-connected devices to avoid becoming a victim of BotenaGo or any other IoT botnets.

Additional measures for securing IOT devices:

- Restrict Web Management Interface access of IoT devices to authorized users only and change default username/ passwords
- Always change Default login credentials before deployment in production.
- Change default credentials at device startup and ensure that passwords meet the minimum

complexity.

- Disable Universal Plug and Play (UPnP) on IoT devices unless absolutely required.
- Users should be aware of the installed devices and their capabilities.
- If a device comes with a default password or an open Wi-Fi connection, users should change the password and only allow it to operate on a home network with a secured Wi-Fi router.
- Control the access to devices with Access ListConfigure devices to "lock" or log out and require a user to re-authenticate if left unattendedIdentify systems with default passwords and implement abovementioned measures.
- Some the systems that need to examined are Routers, switches, web applications and administrative web interfaces, ICS systems, Telnet and SSH interfacesImplement account lockout policies to reduce the risk of brute forcing attacks.
- Telnet and SSH should be disabled on device if there is no requirement of remote managementConfigure VPN and SSH to access device if remote access is required.
- Configure certificate based authentication for telnet client for remote management of devices
- Implement Egress and Ingress filtering at router level.

For more details visit: https://www.csk.gov.in/a

https://www.csk.gov.in/alerts/ BotenaGo.html





# Find the different picture









Match the security tips provided to the related images provided and fill in the blanks









- Never upload pictures that show which school/group you belong to
- Don't give out other people's phone numbers without asking them
- Don't give your address on social media
- Never meet anyone you met online without a trusted adult





# **InfoSec**

Three things to keep safe

## What are the three things you should remember while leaving your house?

1			
2			
3	-	Π	

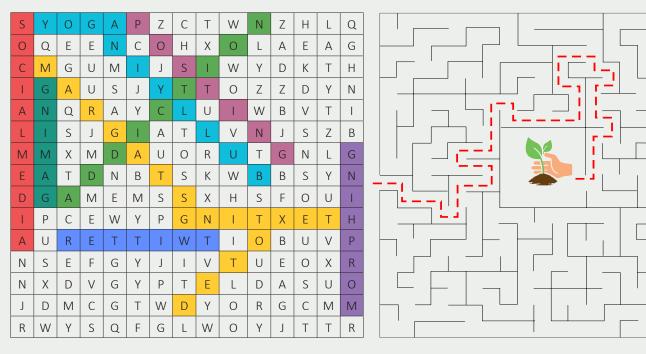
# What are the three things you should remember while using a computer?





# InfoSec PUZZLE

# InfoSec M A Z E



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#### About ISEA

Looking at the growing importance for the Information Security, Ministry of Electronics & Information Technology has identified this as a critical area. Information Security Education and Awareness (ISEA) Project was formulated and launched by the Govt. of India. One of the activities under this programme is to spread Information Security Awareness among children, teachers, home users, IT and non-IT professionals throughout the country. C-DAC Hyderabad has been assigned the responsibility of executing this project by Ministry of Electronics & Information Technology, Government of India. As part of this activity C-DAC, Hyderabad has been preparing Information Security Awareness material, coordinating with Participating Institutes (PI's) in organizing the various Information Security Awareness events all over India.

### About C-DAC

C-DAC established its Hyderabad Centre in the year 1999 to work in Research, Development and Training activities embracing the latest Hardware & Software Technologies. The centre is a Knowledge Centre with the components of Knowledge Creation, Knowledge Dissemination and Knowledge Application to grow in the areas of Research & Development, Training and Business respectively. The R & D areas of the centre are e-Security, Embedded Systems, Ubiquitous Computing, e-Learning and ICT for Rural Development. The centre has developed over a period of time a number of products and solutions and has established a number of labs in cutting edge technologies. In line with these R&D strengths, the centre also offers Post Graduate level diploma courses. Centre is also actively involved in organizing faculty training programs. The centre regularly conducts skill based training and information security awareness programmes. InDG portal is hosted and maintained to facilitate rural development through provision of relevant information, products and services in local languages.







प्रगत संगणन विकास केन्द्र CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING इलेक्ट्रॉनिकी और सुचना प्रोद्योंगिकी मंत्रालय की वैज्ञानिक संस्था, भारत सरकार A Scientific Society of the Ministry of Electronics and Information Technology, Government of India

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