

Information Security Education & Awareness Team

C-DAC Bengaluru



Cyber Pandemic: Looking into Cyber Safety in Post Covid19 Era

Keep updating yourself and your family members in this tech driven world

> Dr. Mohammed Misbahuddin Joint Director

www.infosecawareness.in



INDIA JAN www. 2021 ESSENTIAL HEADLINES FOR MOBILE, INTERNET, AND SOCIAL MEDIA USE CHANGES TO DATA SOURCES FOR INTERNET USERS AND SOCIAL MEDIA USERS MEAN THAT VALUES ARE NOT COMPA awareness.in

TOTAL MOBILE INTERNET POPULATION CONNECTIONS USERS 2¢E सी डैक **€⊅∩€** 20

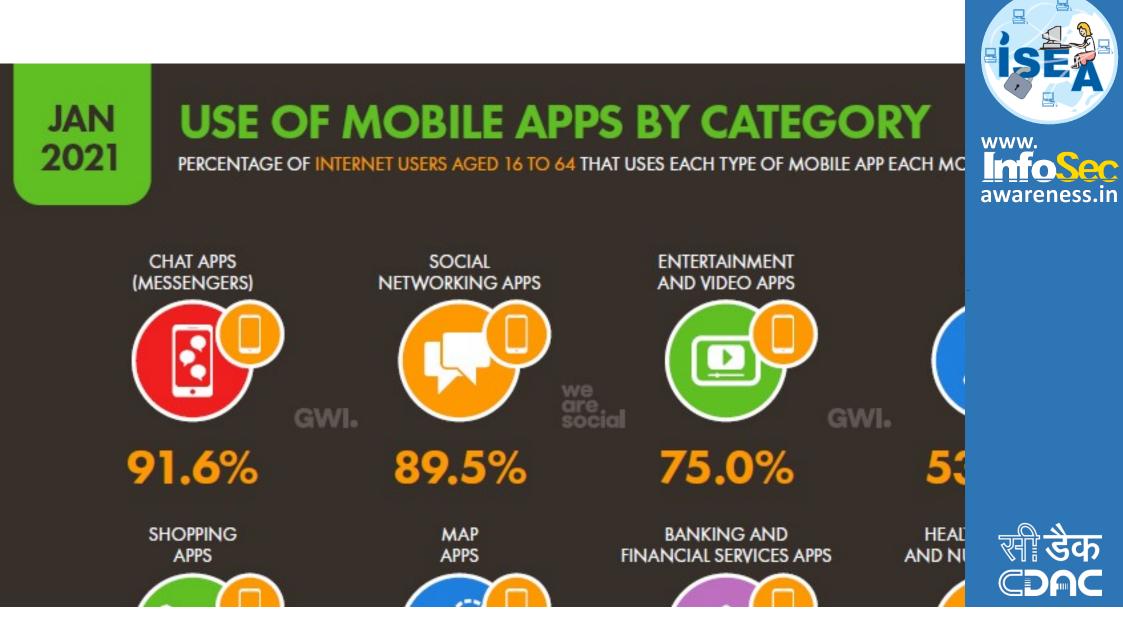


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In today's world, we depend on Internet at home, in school and at work place





ECOMMERCE SPEND BY CATEGORY

JAN

2021

THE TOTAL AMOUNT SPENT IN CONSUMER ECOMMERCE CATEGORIES IN 2020, IN U.S. DOLLARS CHANGES TO CATEGORY DEFINITIONS AND REVISIONS TO HISTORICAL DATA MEAN VALUES ARE NOT COMPARABLE V



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Surface / Deep / Dark Web

The Surface Web

The Surface Web is the portion of the World Wide Web that is readily available to the general public and searchable with standard web search engines.

The Deep Web

The Deep Web, invisible web, or hidden web are parts of the World Wide Web whose contents are not indexed by standard web search engines. The content of the deep web is hidden behind HTTP forms and includes many very common uses such as web mail, online banking, and services that users must pay for, and which are protected by paywalls.



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India Decoded Morning Brief Podcast Economy - Industry Politics Company - Defence - International - More -

Business News > News > Company > Corporate Trends > Crimes too went digital in the pandemic, up 12%

Crimes too went digital in the pandemic, up 12%

By Kiran Kabtta Somvanshi & Sachin Dave, ET Bureau 🔹 Last Updated: Sep 29, 2021, 02:41 PM IST

SHARE FONT SIZE SAVE PRIN

D*C***L**Technologies

Synopsis

Uttar Pradesh pipped Karnataka to emerge as the state with the highest number of cybercrimes reported in 2020 - constituting over a fifth of the total 50,035 crimes registered in the country.



Like most organisations, crime also went digital during the pandemic. As per the <u>National Crime Records</u> <u>Bureau (NCRB)</u> report for the year 2020 cyber crime surged 12% across the





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Special Offe

Recent Incidents



Home » Hyderabad » OLX becomes fraudsters' hotspot, says police

OLX becomes frauds

Identity Theft - Incidents in India







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COVID related Crimes



You are a Victim!!

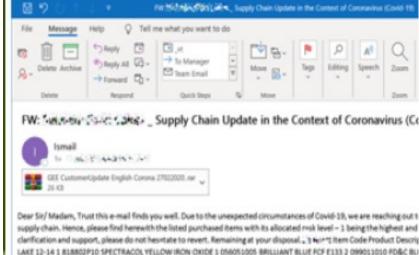
- Cyber Criminals are taking advantage of COVID-19 Pandemic to launch variety of attacks
- Exploiting the fear of Corona to trap the victims into Cyber Attacks
- This new trend of Cyber Attacks in the context of COVID-19 is termed as
 "Fearware"





Malware, Fraudulent Email and SMS





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Home / Chandigarh / Beware of SMS claiming to provide free covid relief package: Cyber C

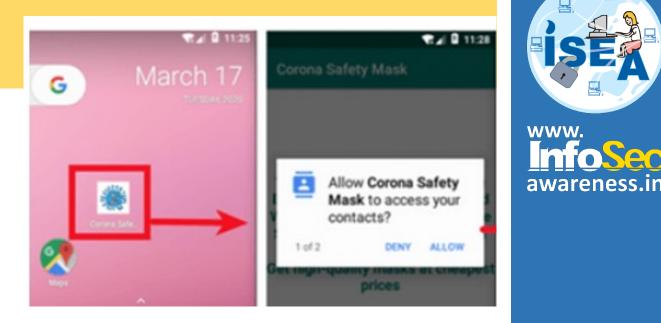
Doward of CMC claiming to provide







Fake Mobile Apps

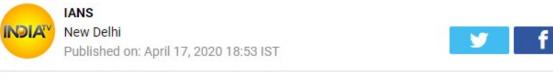


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Coronavirus Android, iOS apps like Spymax mig

As many people have started work from home and students log in for studies followi are using COVID-19 apps such as 'Spymax, Corona Live 1.1' to steal confidential data





Fake UPI Id

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Home / Technology / Tech / PM CARES FUND Take UPT Id scam: Make sure you donate to

PM CARES FUND fake UF sure you donate to the co

The latest scam using UPI revolves around the PM CARES I need to make sure they donate to the correct PM CARES Fi



By: Tech Desk | New Delhi | Updated: April 4, 2020 12:23:00 pm









SBI BE KIND, BE W

In these tough times, many fra scamming people in the most c

LOOK WHERE YOU DOI



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Fake Vaccine Registration App





Covid19 related Fake Emails

	Singapore Specialist : Corona Virus Safety Measures
⑦ Re: Cancel shipment due to corona virus_New Shipping schedule details - Mozilla Thunderbird - - × Eile Edit View Go Message Tools Help - ✓ ✓ ✓ ✓ Tag ∨ Ξ	Tuesday, 28 January 2020 at 03:51
From Subject Re: Cancel shipment due to corona virus_New Shipping schedule details 02/11/2020, 9:13 PM 02	Dear Sir,
Dear We are planning to ship the following orders next week but due to the corona virus we have postponed below shipment. Please check details attached new shipping info and the shipping instructions and advice if we should still proceed If you are no problem with above shipment time, we will proceed the shipment. Thanks & Best Regards,	Go through the attached document on safety measures regarding the spreading of corona virus. This little measure can save you. Use the link below to download <u>Safety Measures.pdf</u>
Tokyo tinplate sales department Trade team Export Ando Import Dept.	Symptoms Common symptoms include fever, cough, shortness of breath, and breathing difficulties. I Regards Dr
> 🕼 1 attachment: Shippig instructions_BL_INVOICE-PLace 390 KB	Specialist wuhan-virus-advisory

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BIOLOGICAL PANDEMIC

INFECTION RATE



Virus infection rate (R_n) (source: WHO) The average number of people that one person with a virus infects:

Flu: 1.3, SARS: 2-4, Corona: 2.5, Ebola: 1.6-2, Zika: 2-6.6, Measles: 11-18

INFECTION PREVENTION



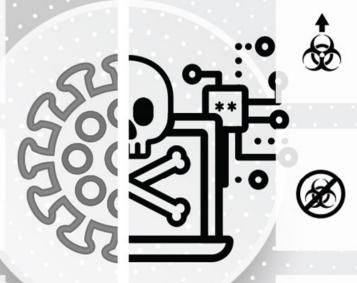
Best treatment: Vaccination Dealing with Infection Best Practices: 1) Quarantine, Shelter-in-Place 2) Isolation 3) Contact Tracing



SAFETY BEST PRACTICES

Common treatment (until vaccination): 1) Mask

- 2) Hygiene
- 3) Social Distancing



CYBER PANDEMIC

INFECTION RATE

Malware infection rate (R_0) The average number of hosts that one host with a malware infects: Cyber attack: >27 (source: WEF, NSTU) Slammer: Doubled in size every 8.5 seconds Code Red: 2,000 new hosts per minute

INFECTION PREVENTION

Best treatment: Real Time Prevention

- Best Practices: Continuous process of:
- 1) Quarantine: Sandboxing, Micro-Segmentation
- 2) Isolation: Zero Trust, Segregation
- 3) Tracing: Threat Intelligence, AI, SOC, Posture Management



SAFETY BEST PRACTICES

- 1) Awareness: Think before you click...
- 2) Cyber Hygiene: Patches, Compliance...
- 3) Asset Distancing: Network Segmentation, Multi-Factor Authentication...

SOURCE: CHECK POINT SOFTWARE 2020

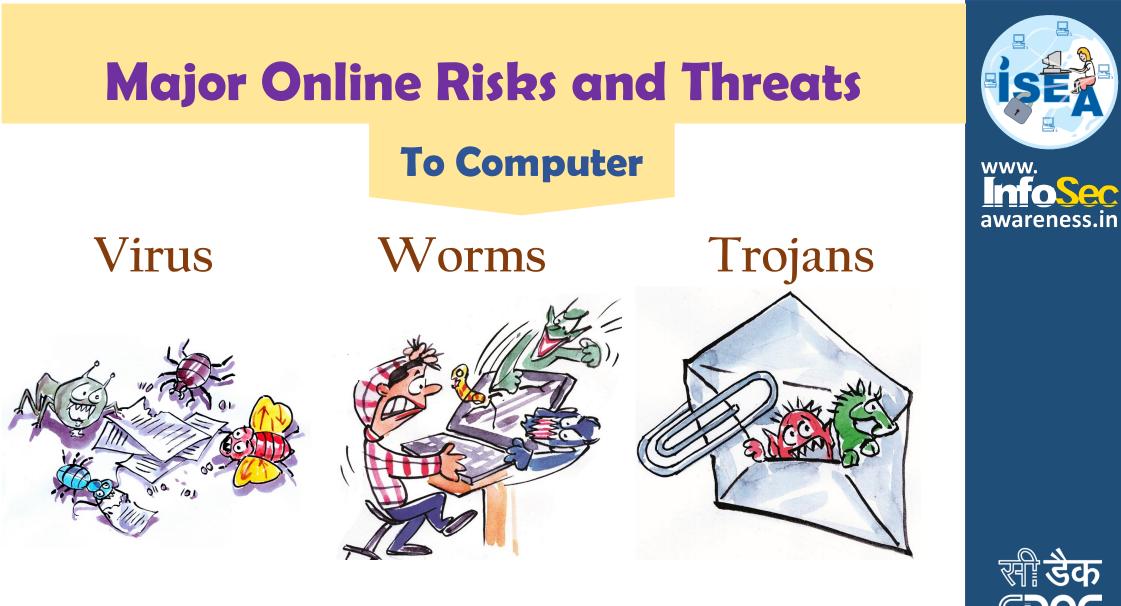
Ask your self whether trusting "*EVERYTHING*" in the Cyber World is safe or not ??





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What are cyber frauds?

- Any unlawful activity where **cyberspace** is used as a tool, target or both.
 - Credit card frauds
 - Theft of Source Code
 - Hacking
 - Email spoofing
 - Forgery
 - Defamation
 - Data Diddling (Modification)
 - Cyber terrorism
 - Denial of Service Attacks
 - Salami Attacks

- Email Bombing
- Online gambling
- Cyber Pornography
- Virus, Worms, Trojan Attacks
- Cyber stalking
- Phishing, Vishing, SMShing
- Intellectual Property crimessoftware piracy, copyright infringement, trademarks violations.





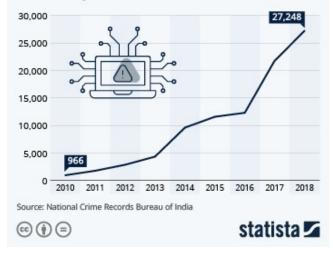
Cyber Crime rate in INDIA

Under Information Technology Act during the year**

Year	Cyber Crimes
2014	9622
2015	11592
2016	12317
2017	21,796
2018	27,248
2019	59,807

Sharp Increase of Cyber Crime in India During Last Decade

Recorded cyber crime cases in India (2010-2018)



**As per cyber crime data maintained by National Crime Records Bureau



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Courtesy: Cert-in



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Key areas to focus





- Mobiles
- Social Engineering





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Identity

- Identity Theft
- > ATM Frauds
- Credit / Debit Card Frauds
- Aadhaar Misuse

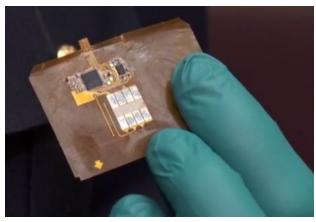


Credit / Debit Card Data on Sale on Dark Web

NEW NEW THE ECONOMIC TIM LATEST **INC42 PLUS** WTF: STARTUP EQUIT English Edition | E-Pa **NEWS** Home ETPrime Markets News Industry RISE Politics Wealth MF Tech Domino's India Data Bre Tech & Internet Funding Startups Tech Bytes Newsletters - Blogs & Opinion User Records Being Sold usiness News -> Tech -> Tech & Internet -> 10 crore Indians' card data selling on Dark Web: Researcher NEWS LIVE TV india.com HOME INDIA NEWS EN HOME 🖉 MY FEED INDIA WORLD BUSINESS TECH MOVIES News / Technology / News / BigBasket user data allegedly leaked on dark World States Videos Tech Switch to हिंदी | मराठी BigBasket user data allegedly I Data of 70 Lakh Indian Debit, web, including email IDs, numb

ATM Frauds - Skimmers / Shimmers











Rogue POS Device













Rogue vs Genuine POS Device





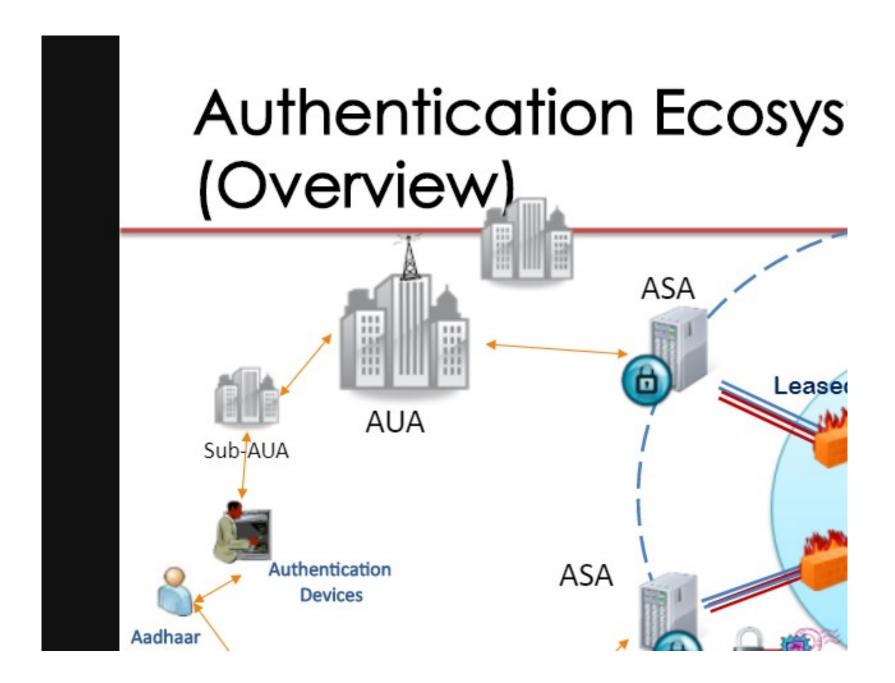


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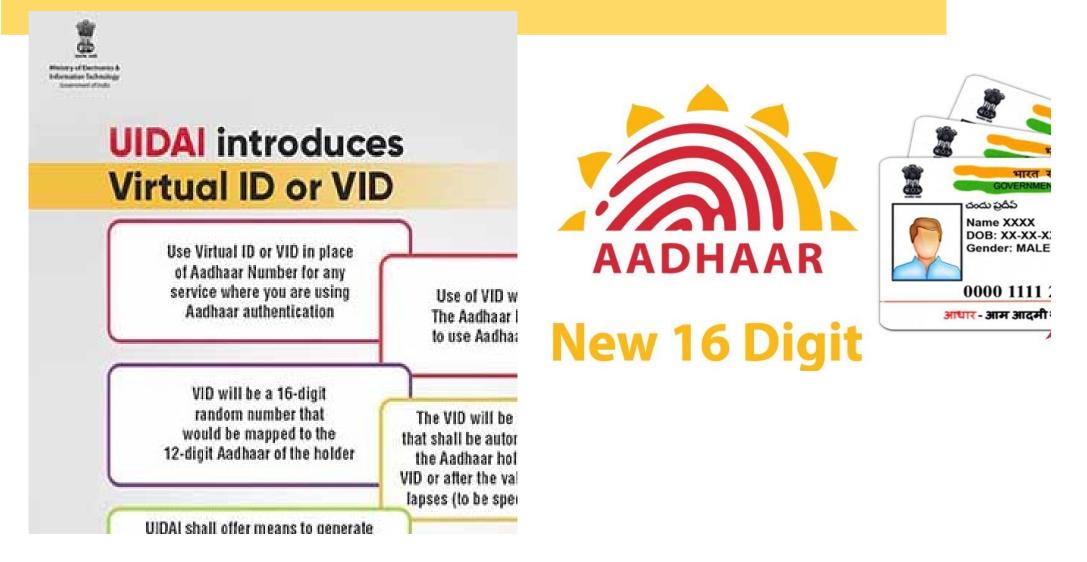


How much Secure are Aadhaar Servers?





Aadhaar Misuse ... Are you Scared ?



Aadhaar Misuse ... Are you Scared ?



mAadhaar

Unique Identification Authority of India T

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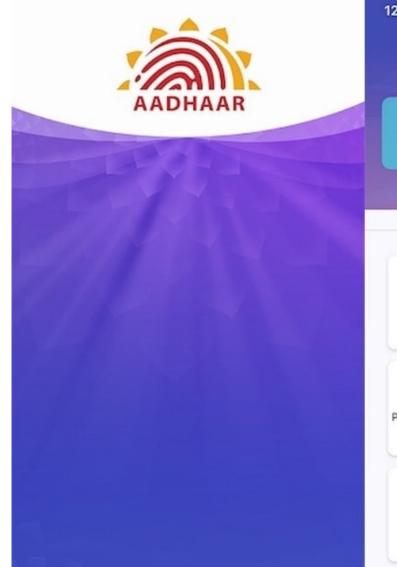
This app is compatible with all of your d

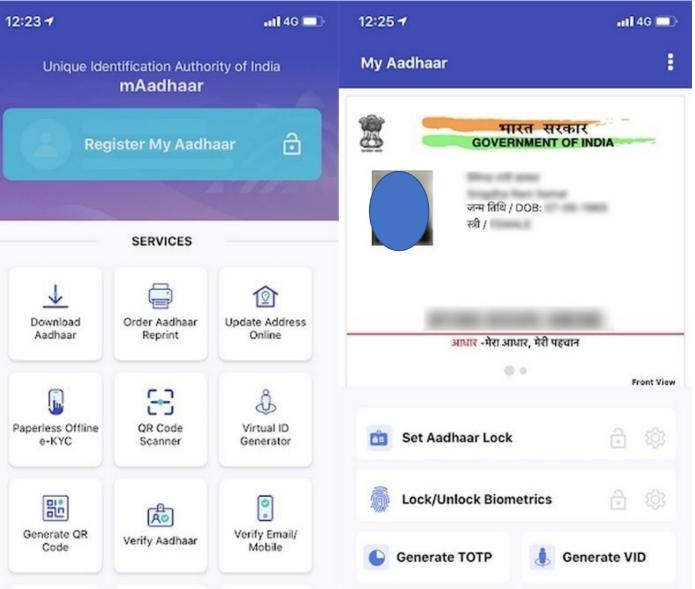
ANNOUNCING mAadhaar App

Lock/Unlock











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Password

Password Strength
 Password Attacks
 Other Secrets



Strong Password ?

Use at least 8 characters

- Use special characters
- Avoid using the words from dictionary
- It must be easy to remember difficult to guess
 - Example of Pass phrase I Love Working at CDAC Bangalore
 - Password: 1Lw@cdacB
- How Secure is my Password ?





Password Attacks

Brute force attack 🖗





Take care about shoulder surfing



Dictionary attack

Password Clip



www.

awarene

Password Tips to REMEMBER

- Password should be DIFFERENT for each e-service
- DO NOT SHARE Passwords / Passphrase / PIN / Pattern etc.
- CHANGE your secrets at regular intervals
- Check the password strength CAREFULLY







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Mobile Security



Mobile Security

- Mobile Security
- WhatsApp Security
- <u>SIM Swap</u>
- Wi-Fi Security
- <u>Vishing</u>
- <u>SMShing</u>
- Rogue Apps
- Payment Apps



Mobile Security Tips to REMEMBER

- Doing these simple tips with help keep your phone protected from vulnerabilities
 - Set Password Protection for Important Apps
 - Update Anti-virus Software
 - Update Operating System
 - Use Trusted Source to download Apps
 - Disable Wi-Fi, Bluetooth when not in use
 - Backup your data







Sending Offensive Messages

- Covers following sent by SMS / Email:
 - grossly offensive
 - menacing
 - false information sent for causing annoyance, inconvenience, danger, obstruction, insult, injury, criminal intimidation, enmity, hatred or ill will
 - Phishing, Email Spoofing
 - BEWAKOOF vs WEBAKOOF





Obscene SMS/ Emails

- The punishment for spreading obscene material by email, websites, sms has been reduced from 5 years jail to 3 years jail.
- This covers acts like sending 'dirty' jokes and pictures by email or SMS.







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Social Engineering



What is Social Engineering ?

Social Engineering is an approach or method used to gain access to information through misrepresentation or false identity by using various methods few are as follows

- Careless talking is one of the reason for social engineering
- Careless talking about business, the office, home, personal and the people and discussing with those who not authorized to talk.
- The widely used Social Engineering techniques by attackers are Phishing, Vishing & Smishing







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Phishing

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▼ Folders Add ■ CDAC ■ Docs Downloads ■ IEEE CSDA ■ InfoSec Module ■ Journals - Conferences ■ MANUU ■ My Folder ■ Patent ■ Ph.D. ■ Student Projects	 We recently reviewed your account, and we are suspecting that your Internet Banking account may have been accessed from an unauthorized computer. This may be due to changes in your IP address or location. Protecting the security of your account and of the Bank of India network is our primary concern. We are asking you to immediately login and report any unauthorized withdrawals, and check your account profile to make sure no changes have been made. To protect your account please follow the instructions below: * DO NOT SHARE YOUR PASSWORD WITH OTHER USERS
Applications C Calendar My Drive My Photos Notepad	* LOG OFF AFTER USING YOUR ONLINE ACCOUNT Please click on the following link, to verify your account activity: http://www.bankofindia.com/web/internetbank.aspx We apologize for any inconvenience this may cause, and appreciate your support in helping us maintaining the integrity of the entire Bank of India system. * * * TODAY: MON, 18/1 * Martin Luther King Day ents TUE, 19/1 * MON, 1/2 No events TUE, 2/2 * Groundhog Day WED, 3/2 * THU, 11/2 No events FRI, 12/2 * Lincoln's Birthday SAT, 13/2 No events
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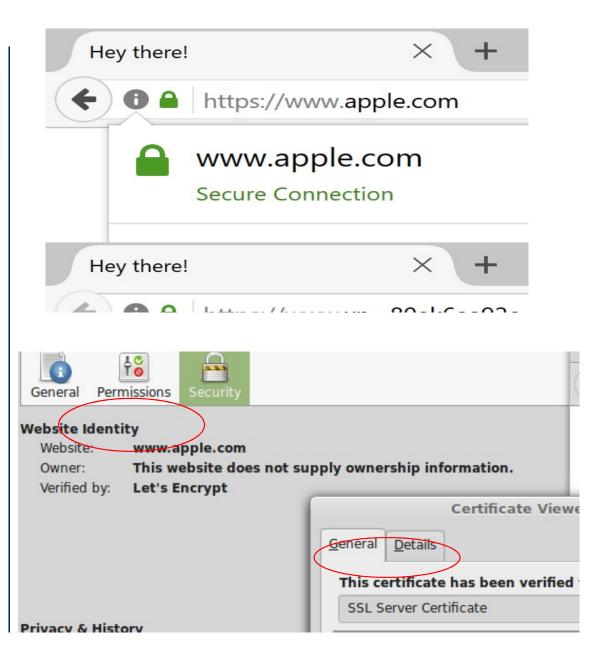
★★★★★ Rating for amazon.com: 4.7 - Email reply time: 3 hours Buy Devices, Apparel, Books, Music & More Free Shipping on Qualified Orders

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Amazon.com: Online Shopping for Electronics, Apparel, Computers ... https://www.amazon.com/ -

Online shopping from the earth's biggest selection of books, magazines, music, DVDs, videos, electronics, computers, software, apparel & accessories, shoes, jewelry, tools & hardware, housewares, furniture, sporting goods, beauty & personal care, broadband & dsl, gourmet food & just about anything else.

Store - Products - Support	support.windows.com says:
	** Windows Warning Alert **
	Malicious Spyware/Riskware Detected
	Error # 0x80072ee7
	Please call us immediately at: +1-888-853-6372
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	If you close this page, your computer access will be disabled to prevent
	further damage to our network.
Call for support:	Your computer has alerted us that it has been infected with a Spyware and
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Homograph Characters

Appearance	Character	Emulated	Source Language (example)	Main Lanuage	Upper	Lower	Unicode (upper)	Unicode (lower)
Look the same	аA	aA	Russian	English	x	x	410	430
Look the same	В	в	Russian	English	x		412	
Look the same	eE	еE	Russian	English	x	x	415	435
Look the same	кК	kK	Russian	English	x	x	41A	43A
Looks similar	мM	mM	Russian	English	x	x	41C	43C
Look the same	н	н	Russian	English	x	5	41D	
Look the same	00	00	Russian	English	x	x	41E	43E
Looks similar	п	n	Russian	English		x		43F
Look the same	pP	pР	Russian	English	x	х	420	440
Look the same	cC	cC	Russian	English	x	x	421	441
Look the same	т	т	Russian	English	x		422	
Looks similar	уУ	уY	Russian	English	x	x	423	443
Look the same	xХ	хX	Russian	English	x	x	425	445
Looks similar	ь	b	Russian	English	x		42C	
Looks similar	r	r	Russian	English		x		433
Look the same	sS	sS	Macedonian	English	x	x	405	425
Look the same	il	iL	Ukrainian	English	x	x	406	426
Look the same	١	ιί	Serbian	English	x	x	408	428
Look the same	qQ	qQ	Kurdish	English	x	x	51A	51B
Look the same	wW	wW	Kurdish	English	x	x	51C	51D

Other Social Engineering Methods

- Instant messaging
- Baiting
- Persuasion
- Social Networking sites
- Whaling
- Shoulder surfing
- Dumpster diving
- Key Logging







If your Answer is safe



If your Answer is Unsafe





hOw MuCH Secure Are You ?? Think About Security Awareness



Thank You



