

UNIT 4

SOCIETAL IMPACTS

- Digital footprint, net and communication etiquettes,
- Data protection, intellectual property rights (IPR), plagiarism, licensing and copyright,
- Free and open source software (FOSS),
- Cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act.
- E-waste: hazards and management. Awareness about health concerns related to the usage of technology.

DIGITAL FOOTPRINT

A digital footprint – refers to the trail of data you leave while using the internet. It includes websites you visit, emails you send, and information you submit online. A digital footprint can be used to track a person's online activities and devices.

Internet users create their digital footprint either actively or passively. A passive footprint is made when information is collected from the user without the person knowing this is happening. An active digital footprint is where the user has deliberately shared information about themselves either by using social media sites or by using websites

Digital footprint examples

Online shopping

- Making purchases from e-commerce websites

Online banking

- Using a mobile banking app

Social media

- Using social media on your computer or devices
- Sharing information, data, and photos with your connections

Reading the news

- Subscribing to an online news source

Health and fitness

- Using fitness trackers
- Using apps to receive healthcare

NETIQUETTE

It is the abbreviation of **Internet etiquette** or **network etiquette**, refers to online manners while using internet or working online. While online you should be courteous, truthful and respectful of others. It includes proper manners for sending e-mail, conversing online, and so on.

Some basic rules of netiquette are:

- Be respectful
- Think about who can see what you have shared.
- Read first, then ask
- Pay attention to grammar and punctuation
- Respect the privacy of others
- Do not give out personal information

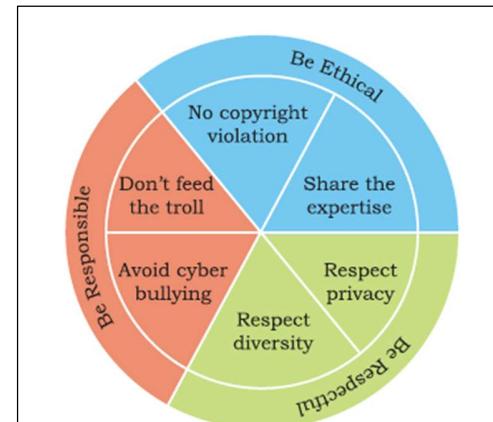


Figure 6.2: Net etiquettes

Data protection is a set of strategies and processes you can use to secure the privacy, availability, and integrity of your data. It is sometimes also called data security or information privacy. A data protection strategy is vital for any organization that collects, handles, or stores sensitive data.

Data Privacy v/s Data Protection

For data privacy, users can often control how much of their data is shared and with whom. For data protection, it is up to the companies handling data to ensure that it remains private. Data privacy is focused on defining who has access to data while data protection focuses on applying those restrictions.

How we can protect our personal data online

- Through Encrypt our Data
- Keep Passwords Private
- Don't Overshare on Social Networking Sites
- Use Security Software
- Avoid Phishing Emails
- Be Wise About Wi-Fi
- Be Alert to Impersonators
- Safely Dispose of Personal Information

INTELLECTUAL PROPERTY RIGHTS (IPR)

Intellectual Property (IP) – is a property created by a person or group of persons using their own intellect for ultimate use in commerce and which is already not available in the public domain.

Examples of Intellectual Property :- an invention relating to a product or any process, a new design, a literary or artistic work and a trademark (a word, a symbol and / or a logo, etc.)

Intellectual Property Right (IPR) is the statutory right granted by the Government, to the owner(s) of the intellectual property or applicant(s) of an intellectual property (IP) to exclude others from

exploiting the IP commercially for a given period of time, in lieu of the discloser of his/her IP in an IPR application.

Copyright laws protect intellectual property

Copyright It is a legal concept, enacted by most governments giving creator of original work exclusive rights to it, usually for a limited period.

Copyright infringement – When someone uses a copyrighted material without permission, it is called Copyright infringement.

Patent – A patent is a grant of exclusive right to the inventor by the government. Patent give the holder a right to exclude others from making, selling, using or importing a particular product or service, in exchange for full public disclosure of their invention.

Trademark – A Trademark is a word, phrase, symbol, sound, colour and/or design that identifies and distinguishes the products from those of others.

PLAGIARISM

Plagiarism It is stealing someone's intellectual work and representing it as your own work without citing the source of information.

Any of the following acts would be termed as Plagiarism:

- Using some other author's work without giving credit to the author
- Using someone else's work in incorrect form than intended originally by the author or creator.
- Modifying /lifting someone's production such as music composition etc. without attributing it to the creator of the work.
- Giving incorrect source of information.

LICENSING AND COPYRIGHT

Licenses are the permissions given to use a product or someone's creation by the copyright holder.

Copyright is a legal term to describe the rights of the creator of an original creative work such as a literary work, an artistic work, a design, song, movie or software etc.

FREE AND OPEN-SOURCE SOFTWARE (FOSS)

OSS refers to Open Source Software, which refers to software whose source code is available to customers and it can be modified and redistributed without any limitation.

Free and open-source software (FOSS) is software that can be classified as both free software and open-source software. That is, anyone is freely licensed to use, copy, study, and change the software in any way, and the source code is openly shared so that people are encouraged to voluntarily improve the design of the software.

CYBER CRIME

Any criminal or illegal activity through an electric channel or through any computer network is considered as cyber crime.

Eg: Cyber harassment and stalking, distribution of child pornography, types of spoofing, credit card fraud, etc

CYBER LAW

It is the law governing cyberspace which includes freedom of expression, access to and usage of internet and online privacy.

The issues addressed by cyber law include cybercrime, e-commerce, IPR and Data protection.

HACKING:

It is an act of unauthorised access to a computer, computer network or any digital system.

Hackers usually are technical expertise of hardware and software.

- Hacking when done with a positive intent is called as **Ethical hacking or White hat**.
- Hacking when done with a negative intent is called as **Unethical hacking or Black hat**.

PHISHING:

It is an unlawful activity where fake websites or emails appear as original or authentic. This sites when clicked by the user will collect sensitive and personal details like usernames, password, credit card details etc.

CYBER BULLYING:

It is the use of technology to harass, threaten or humiliate a target.

Example: sharing of embarrassing photos or videos, posting false information, sending mean text, etc.

OVERVIEW OF INDIAN IT ACT:

The Government of India's – Information Technology Act, 2000 (also known as IT Act), amended in 2008, provides guidelines to the user on the processing, storage and transmission of sensitive information

E-waste - HAZARDS AND MANAGEMENT:

Various forms of electric and electronic equipment which no longer satisfy their original purpose are termed as Ewaste. This includes Desktop, Laptop, Projectors, Mobiles, etc

- **HAZARDS:** It consists of mixtures of various hazardous organic and inorganic materials which when mixed with water/soil may create threat to the environment.
- **MANAGEMENT:** Sell back, gift/donate, reuse the parts giveaway to a certified e-waste recycler

ABOUT HEALTH CONCERN RELATED TO THE USE OF TECHNOLOGY:

There are positive as well as negative impact on health due to the use of these technologies.

• POSITIVE IMPACT

- Various health apps and gadgets are available to monitor and alert
- Online medical records can be maintained

• NEGATIVE IMPACT

- One may come across various health issues like eye strain, muscle problems, sleep issues, etc
- Anti social behaviour, isolation, emotional issues, etc.

OBJECTIVE TYPE QUESTIONS(1 mark)

1. A copyright is automatically granted to authors or creators of content. (True/False)
2. In FOSS source code is usually hidden from the users. (True/False)
3. The practice of taking someone else's work or ideas and passing them off as one's own is known as _____
4. A mail or message sent to a large number of people indiscriminately without their consent is called _____
5. Receiving irrelevant and unwanted emails repeatedly is an example of _____.
6. The generally recognized term for the government protection afforded to intellectual property (written and electronic) is _____.
7. A software which can be freely accessed and modified is called _____
8. Freeware is copyrighted software that is freely available to use. (True/False)
9. _____ is a secure technique to protect data being transmitted over a network.
10. _____ are the etiquettes that are to be followed while communicating online.

MULTIPLE CHOICE QUESTIONS

1. Online posting of rumours, giving threats online, posting the victim's personal information, comments aimed to publicly ridicule a victim is termed as _____
 - a. Cyber bullying
 - b. Cyber crime
 - c. Cyber insult
 - d. All of the above
2. Ankit made a ERP - Enterprise resource planning solution for a renowned university and registered and Copyrights for the same. Which of the most important option; Ankit got the copyrights.
 - a) To get society status
 - b) To get fame
 - c) To get community welfare
 - d) To secure finance protection

3. Which of the following is not an example of Social media platform?

- a. Facebook
- b. Pinterest
- c. Google+
- d. Social channel

4. A responsible netizen must abide by _____

- a. Net etiquettes
- b. Communication etiquettes
- c. Social media etiquettes
- d. All of the above

5. A _____ is some lines of malicious code that can copy itself and can have detrimental effect on the computers, by destroying data or corrupting the system.

- a. Cyber crime
- b. Computer virus
- c. Program
- d. Software

6. Which of the following activity is an example of leaving Active digital footprints?

- a) Surfing internet
- b) Visiting a website
- c) Sending an email to a friend
- d) None of the above

7. You are planning to go for a vacation. You surfed the internet to get answers for following queries.

- a) Places to visit
- b) Availability of air tickets and fares
- c) Best hotel deals
- d) All of these

Which of the above-mentioned actions might have created a digital footprint?

8. Legal term to describe the rights of a creator of original creative or artistic work is called.....

- a) Copyright
- b) Copyleft
- c) GPL
- d) BSD

9. Intellectual Property is legally protected through _____

- a) copyright
- b) patent
- c) registered trademark
- d) All of the above

10. _____ includes any visual symbol, word, name, design, slogan, label, etc., that distinguishes the brand from other brands.

- a) Trademark
- b) Patent
- c) Copyright
- d) None of the above

11. Gaining unauthorised access to a network or computer and digital files with malicious intentions, is

called _____

- a. Cracking
- b. Hacking
- c. Banging
- d. Phishing

12. Legal term to describe the rights of a creator of original creative or artistic work is called

- a. Copyright
- b. Copyleft
- c. GPL
- d. None of these

13. OSS stands for

- a. Open system security
- b. Open system source
- c. Open software and security
- d. Open source software

14. Any fraudulent business practice that extracts money from an unsuspecting, ignorant person is called _____

- a. Stealing
- b. Scam
- c. Violation of copyright
- d. Digital footprint

15. _____ means no price is to be paid for the software.

- a. Free software

- b. Freeware
- c. shareware
- d. Open source software

16. Any work / information that exist in digital form idea on internet or on an electronic device, is known as _____ property.

- a. Licence property
- b. digital property
- c. source code property
- d. software property

17. Discarded electrical or or electronic devices are known as _____.

- a. E waste
- b. Software Waste
- c. Hardware waste
- d. Computer waste

18. The least restrictive open source licence is _____ licence.

- a. Apache Licence
- b. MIT licence
- c. GNU licence
- d. BSD licence

19. The original code written by programmers for a software is known as _____

- a. Object code
- b. Source code
- c. Python code
- d. Language code

20. _____ means freedom to use the software.

- a. Plagiarism
- b. Freeware
- c. Open software
- d. Free software

21. IAD means _____

- a. Internet advanced data
- b. Internet addiction disorder
- c. Internet advanced digitalization
- d. Internet aggregate data

22. The _____ is the Digital trail of your activity on the internet.

- a. Copyleft
- b. Digital footprint

- c. Digital data
- d. Internet property

23. The _____ the are the permissions given to use a product or someone's creator by the copyright holder.

- a. Source code
- b. Licence
- c. Software authority
- d. Digital rights

24. _____ is a licence that gives right opposite to copyright.

- a. Left copy
- b. Digital copy
- c. Copyleft
- d. IPR

25. A software that can be freely accessed and modified is called

- a. synchronous software
- b. package software
- c. open source software
- d. middleware.

26. Which of the following is an advantage of open source software?

- a. You can edit the source code to customise it
- b. you need to be an expert to edit code
- c. you have to pay
- d. can sometimes be generic for specialist purposes.

27. Which of the following is a disadvantage of open source software?

- a. high quality software with lots of features.
- b. not as customizable
- c. may not have been tested as much as proprietary software so might have bugs.
- d. you can add the source code to customize it

28. Which of the following is an advantage of proprietary software?

- a. It is usually free
- b. thoroughly tested because people are paying to use it.
- c. Not as customizable.
- d. Can sometimes be generic for specialist purposes.

29. Which of the following is a disadvantage of proprietary software?

- a. You need to be an expert to edit code.
- b. You have to pay for this type of software.
- c. It's licensed.

d. It is launched after proper testing.

30. The generally recognized term for the government protection afforded to intellectual property written and electronic is called _____

a. Computer security law.

b. Aggregate information.

c. Copyright law

d. Data security standards.

31. Which of the following would be a creative work protected by copyright?

a. A list of all Indian President names

b. A Portrait of your family

c. A song you wrote

d. The name of your pet dog

32. Which of the following is not done by cyber criminals?

a. Unauthorised account access

b. Mass Attack using trojans as botnets

c. Email spoofing and spamming

d. report vulnerability in any system

33. What is the name of the IT law that India is having in the Indian legislature?

a. India's Technology IT Act 2000

b. India's Digital information technology DIT Act, 2000

c. India's Information Technology IT Act, 2000

d. The technology act, 2008.

34. What is meant by the term cybercrime?

a. Any crime that uses computers to jeopardize or attempt to jeopardize in national security

b. The use of computer networks to commit financial or identity fraud

c. The theft of Digital information

d. Any crime that involves computers and networks

35. Every activity you perform on the internet is safe for how long?

a. 1 month

b. 1 year

c. As per my setting

d. Forever

36. A _____ is an injury or disorder of muscles, nerves, tendons, ligaments and joints.

a. Repetitive Strain injury

b. Muscle injury

c. Nervous breakdown

d. Joint pain

37. _____ is a technology related health condition affecting eyesight.

- a. Computer vision strain
- b. Computer vision syndrome
- c. Eyesight syndrome
- d. Vision imbalance

CASE STUDY BASED QUESTIONS

1. After practicals, Atharv left the computer laboratory but forgot to sign off from his email account. Later, his classmate Revaan started using the same computer. He is now logged in as Atharv. He sends inflammatory email messages to few of his classmates using Atharv's email account. Revaan's activity is an example of which of the following cyber crime?

- a) Hacking
- b) Identity theft
- c) Cyber bullying
- d) Plagiarism

2. Rishika found a crumpled paper under her desk. She picked it up and opened it. It contained some text which was struck off thrice. But she could still figure out easily that the struck off text was the email ID and password of Garvit, her classmate. What is ethically correct for Rishika to do?

- a) Inform Garvit so that he may change his password.
- b) Give the password of Garvit's email ID to all other classmates.
- c) Use Garvit's password to access his account.

3. Suhana is down with fever. So, she decided not to go to school tomorrow. Next day, in the evening she called up her classmate, Shaurya and enquired about the computer class. She also requested him to explain the concept. Shaurya said, "Mam taught us how to use tuples in python". Further, he generously said, "Give me some time, I will email you the material which will help you to understand tuples in python".

Shaurya quickly downloaded a 2-minute clip from the Internet explaining the concept of tuples in python. Using video editor, he added the text "Prepared by Shaurya" in the downloaded video clip. Then, he emailed the modified video clip to Suhana. This act of Shaurya is an example of

- a) Fair use
- b) Hacking
- c) Copyright infringement
- d) Cyber crime

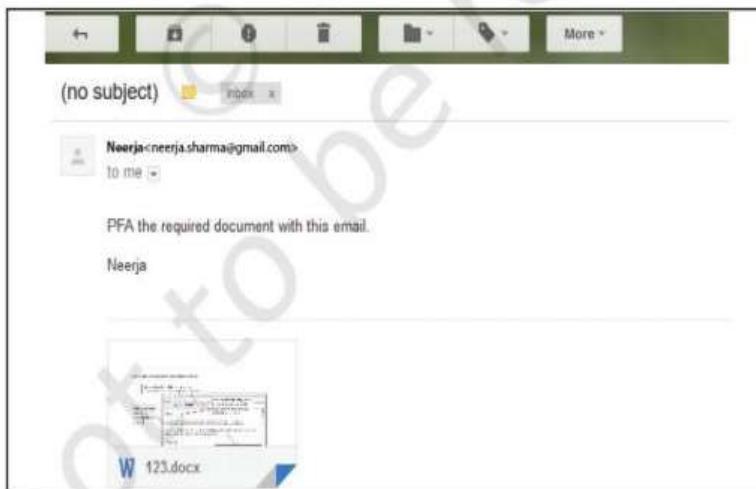
4. After a fight with your friend, you did the following activities. Which of these activities is not an example of cyber bullying?

- a) You sent an email to your friend with a message saying that “I am sorry”.
- b) You sent a threatening message to your friend saying “Do not try to call or talk to me”.
- c) You created an embarrassing picture of your friend and uploaded on your account on a social networking site.

5. Sourabh has to prepare a project on “Digital India Initiatives”. He decides to get information from the Internet. He downloads three web pages (webpage 1, webpage 2, webpage 3) containing information on Digital India Initiatives. Which of the following steps taken by Sourabh is an example of plagiarism or copyright infringement?

- a) He read a paragraph on “Digital India Initiatives” from webpage 1 and rephrased it in his own words. He finally pasted the rephrased paragraph in his project.
- b) He downloaded three images of “Digital India Initiatives” from webpage 2. He made a collage for his project using these images.
- c) He downloaded “Digital India Initiative” icon from web page 3 and pasted it on the front page of his project report.

6. Neerja is a student of Class XI. She has opted for Computer Science. Neerja prepared the project assigned to her. She mailed it to her teacher. The snapshot of that email is shown below.



Find out which of the following email etiquettes are missing in it.

- a) Subject of the mail
- b) Formal greeting
- c) Self-explanatory terms
- d) Identity of the sender
- e) Regards

7. You are planning to go on a vacation to Kashmir. You surfed the internet for the following:

- i) Weather conditions
- ii) Availability of air tickets and fares
- iii) Places to visit

iv) Best hotel deals

Which of the above mentioned acts might have left a digital footprint?

- a) i and ii
- b) i, ii and iii
- c) i, ii and iv
- d) all of these

8. Naveen received an email warning him of closure of his bank accounts if he did not update his banking information as soon as possible. He clicked the link in the email and entered his banking information. Next he got to know that he was duped.

i) This is an example of _____.

- a. Online Fraud
- b. Identity Theft
- c. Phishing
- d. Plagiarism

ii) Someone steals Naveen's personal information to commit theft or fraud, it is called _____

- a. Online Fraud
- b. Identity Theft
- c. Phishing
- d. Plagiarism

iii) Naveen receiving an Unsolicited commercial emails is known as _____

- a. Spam
- b. Malware
- c. Virus
- d. worms

iv) Naveen's Online personal account, personal website are the examples of?

- a. Digital wallet
- b. Digital property
- c. Digital certificate
- d. Digital signature

v) Sending mean texts, posting false information about a person online, or sharing embarrassing photos or videos to harass, threaten or humiliate a target person, is called _____

- a. Eavesdropping
- b. cyberbullying
- c. Spamming
- d. Phishing

9. Prathyush has to prepare a project on “**Cyber Jaagrookta Diwas**”. He decides to get information from the Internet. He downloads three web pages (webpage1, webpage 2, webpage 3) containing information on the given topic.

1. He read a paragraph from webpage 1 and rephrased it in his own words. He finally pasted the rephrased paragraph in his project. And he put a citation about the website he visited and its web address also.
2. He downloaded three images of from webpage 2. He made a collage for his project using these images.
3. He also downloaded an icon from web page 3 and pasted it on the front page of his project report.

(i) Step1 is an act of.....

- (a) Plagiarism
- (b) copyright infringement
- (c) Intellectual Property right
- (d) None of the above

(ii) Step 2 is an act of _____.

- (a) plagiarism
- (b) copyright infringement
- (c) Intellectual Property right
- (d) Digital Footprints

(iii) Step 3 is an act of _____.

- (a) Plagiarism
- (b) Paraphrasing
- (c) copyright infringement
- (d) Intellectual Property right

(iv) _____ is a small piece of data sent from a website and stored in a user’s web browser while a user is browsing a website.

- (a) Hyperlinks
- (b) Web pages
- (c) Browsers
- (d) Cookies

(v) The process of getting web pages, images and files from a web server to local computer is called

- (a) FTP
- (b) Uploading
- (c) Downloading
- (d) Remote access