

Digital Empowerment

VAC- Value Addition Course

(Undergraduate Courses)

University of Delhi

VAC Course Committee –Digital Empowerment

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Introduction to Value Addition Courses

- In pursuance of the objectives outlined in the National Education Policy 2020, the Value Addition Courses (VAC) seek to fulfil the mandate of providing holistic education to the students.
- The courses have a sound theoretical base as well as appropriate handson components.
- Designed to ignite the intellectual curiosity of the learners, the Value Addition courses will inspire and guide them in their journey of personal and professional development making them thoughtful, well-rounded, and creative individuals, with a sense of service and responsibility towards the nation.

Value Addition Courses

"The purpose of quality higher education is, therefore, more than the creation of greater opportunities for individual employment. It represents the key to more vibrant, socially engaged, cooperative communities and a happier, cohesive, cultured, productive, innovative, progressive, and prosperous nation."

National Education Policy 2020

The Value Addition Courses:

- will introduce students to the rich heritage of the nation as well as to important social concerns of the current times.
- will help students to make connections between what they learn and how they live.

Credit distribution, Eligibility and Pre-requisites of the Course

Course Title	Credits				Eligibility	Prerequisite of the
and Code		Course			Criteria	Course
Digital	02	Lecture	Tutorial	Practical/	Pass in Class	NIL
Empowerment				Practice	12th	
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Learning Objectives

The Learning Objectives of this course are as follows:

- Understand the digital world and need for digital empowerment
- Create awareness about Digital India.
- Explore, communicate and collaborate in cyberspace.
- Imparting awareness on cyber safety and security.

Learning Outcomes

The Learning Outcomes of this course are as follows:

- Use ICT and digital services in daily life.
- Develop skills to communicate and collaborate in cyberspace using social platforms, teaching/learning tools.
- Understand the significance of security and privacy in the digital world.
- Recognizing ethical issues in the cyber world.

Digital Empowerment Syllabus

\mathbf{U}_{1}	nit	Unit name	Topic		
	I	Digital inclusion and Digital Empowerment	Needs and challenges, Vision of Digital India		
			DigiLocker, E-Hospitals, e-Pathshala, BHIM, e-Kranti (Electronic Delivery of Services), e-Health Campaigns		
			Public utility portals of Govt. of India such as RTI, Health, Finance, Income Tax filing, Education		
	Communication and Collaboration in the Cyberspace	Electronic Communication: electronic mail, blogs, social media			
		Collaboration in the	Collaborative Digital platforms		
			Tools/platforms for online learning, Collaboration using file sharing, messaging, video conferencing		
			Online security and privacy		
	TTT	Towards Safe and Secure Cyberspace	Threats in the digital world: Data breach and Cyber Attacks		
	III		Blockchain Technology		
			Security Initiatives by the Govt of India		
	IV	Ethical Issues in Digital	Netiquettes		
		World	Ethics in digital communication, Ethics in Cyberspace		

Practicals / Activities Component

- The course should be conducted in an interactive mode through demonstration, using appropriate tools.
- Conduct workshops on-services initiated under Digital India.
- Spread digital literacy/awareness amongst the vulnerable groups and marginalized sections of the society like street vendors, domestic help, security guards, senior citizens.
- Students will take up team activities/ projects exploring digital services in the areas such as education, health, planning, farming, security, cyber security, financial inclusion, and justice, e-Kranti.
- Any other Practical/Practice as decided from time to time.

Operational Guidelines

• At least 5 Value Addition Courses from the pool of VACs may be offered in the College

• The Colleges shall make teaching arrangements for VACs by involving teachers belonging to the relevant/related discipline and/or having expertise/prior experience relevant to the course. Visiting/Special lectures, wherever required, may be arranged by the colleges for teaching the Courses.

Organizational Structure

At University Level

VAC COMMITTEE

 Body for making policy decisions on VACs

STEERING COMMITTEE

 For operation, implementation and monitoring of courses

COURSE COMMITTEES

• To ensure quality and uniformity in pedagogy

At College Level

NODAL OFFICER

• Will coordinate with University Level Committees

VAC COMMITTEE

- Three Members Committee
- Will oversee Implementation of VACs in the college.

Unit 1: Digital inclusion and Digital Empowerment

Unit	Unit name	Week No	Topic	Teaching Resources
		1	Needs and challenges, Vision of Digital India	https://www.digitalindia.gov.in
T	Digital inclusion and Digital Empowerment	2-3	DigiLocker, E-Hospitals, e- Pathshala, BHIM, e-Kranti (Electronic Delivery of Services), e-Health Campaigns	https://digilocker.gov.in/ https://nha.gov.in/ https://pmjay.gov.in/ https://diksha.gov.in/ https://swayam.gov.in/ https://digitalindia.gov.in/content/ekranti
1		4-5	Public utility portals of Govt. of India such as RTI, Health, Finance, Income Tax filing, Education	https://www.india.gov.in/ https://rtionline.gov.in/index.php https://www.bhimupi.org.in/ https://www.incometax.gov.in/iec/foportal https://nha.gov.in/ https://swayam.gov.in/ https://nptel.ac.in/

Unit 1: Digital Inclusion and Digital Empowerment

(Cont.)

Introduction to basic terminology:

- Digital world
- Digital citizen
- Digital inclusion
- Digital divide
- Digital empowerment

Need

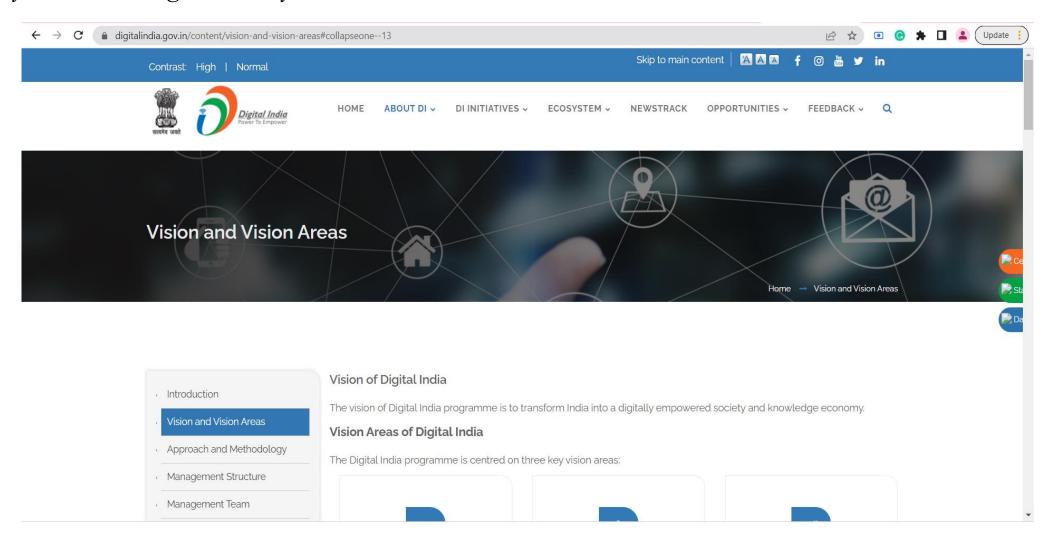
- Sustainable economy
- Healthcare
- Educational Achievements
- Efficient Civic Engagements

Challenges

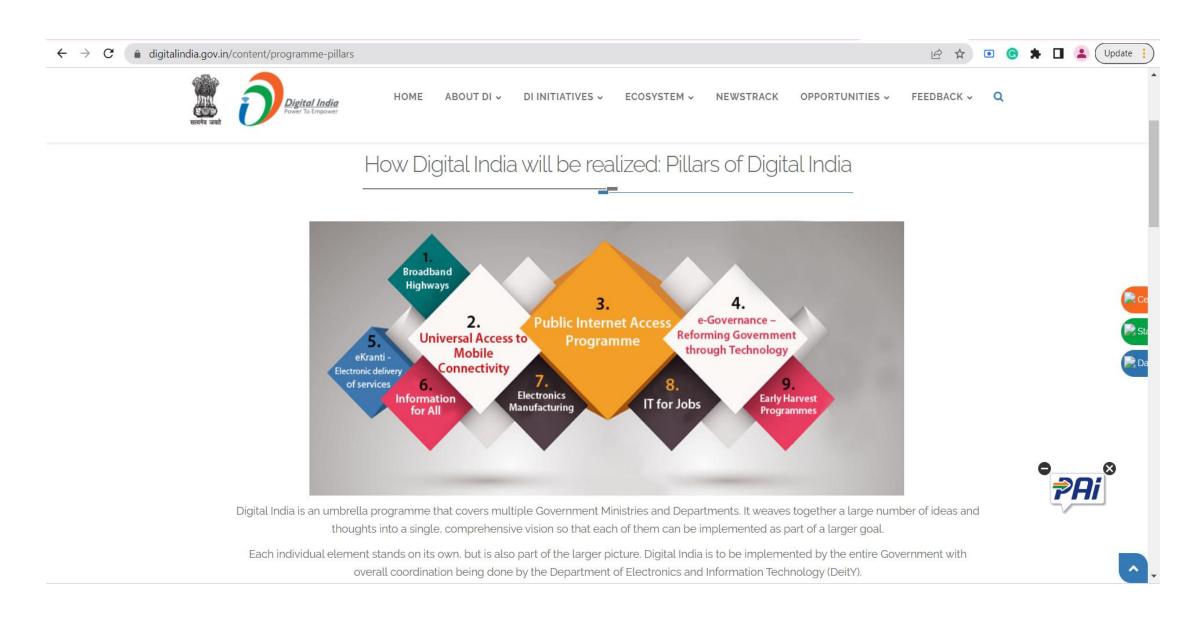
- Digital literacy among vulnerable groups
- ICT infrastructure
- Data Security
- e-Waste management

Digital India (https://www.digitalindia.gov.in)

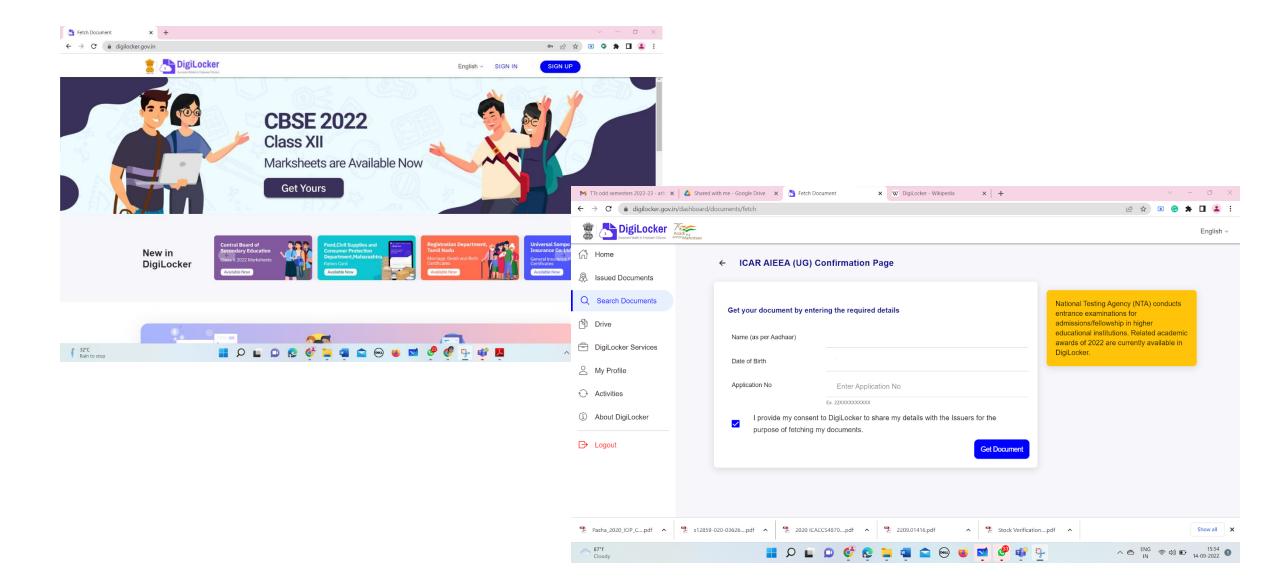
Vision: "The vision of Digital India programme is to transform India into a digitally empowered society and knowledge economy."



Digital India (https://www.digitalindia.gov.in)

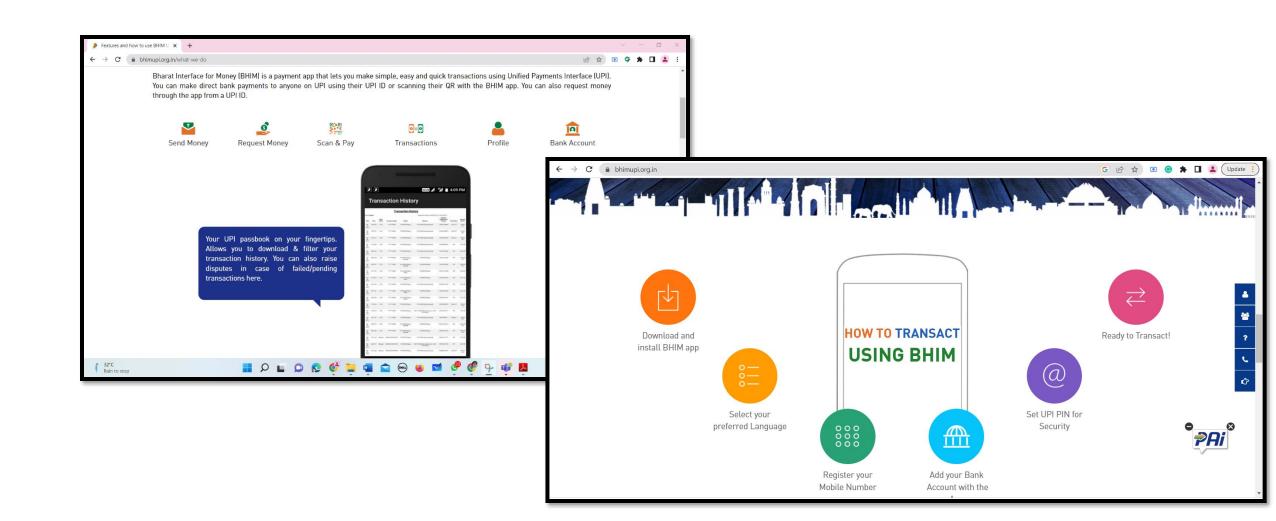


DigiLocker (https://www.digilocker.gov.in/)



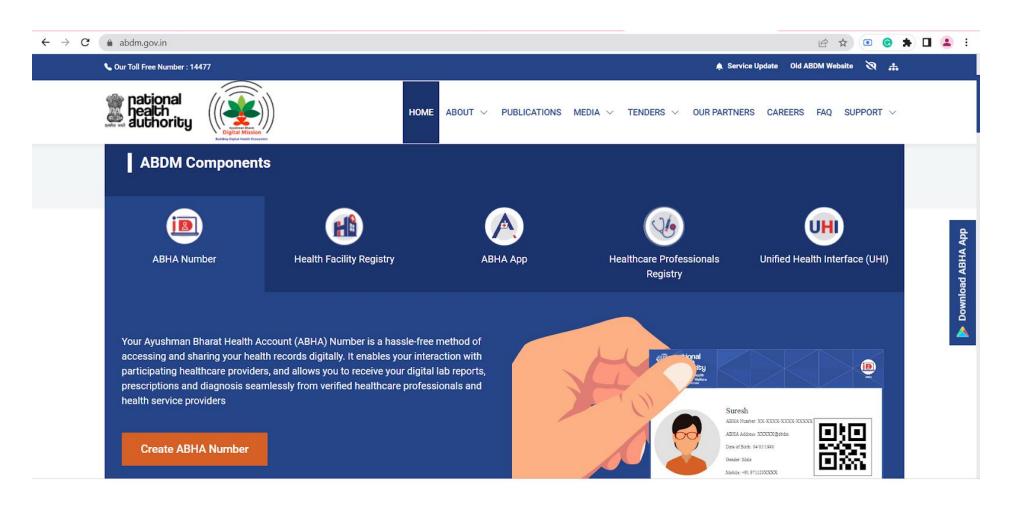
Digital Services

Online Banking and BHIM App (https://www.bhimupi.org.in/)

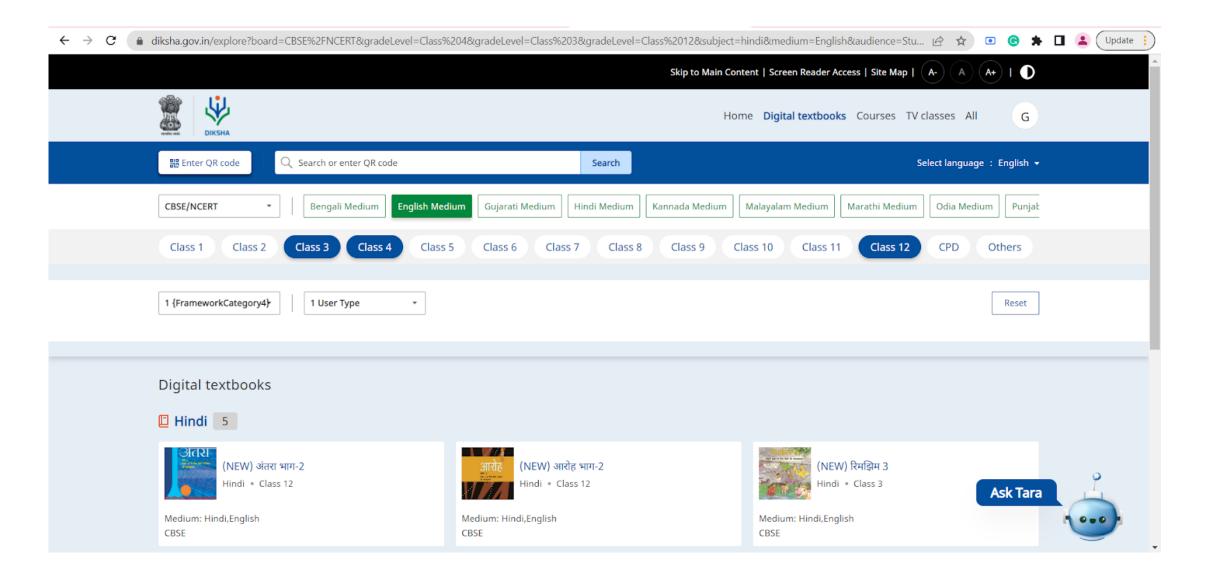


Public Utility portals of Government of India

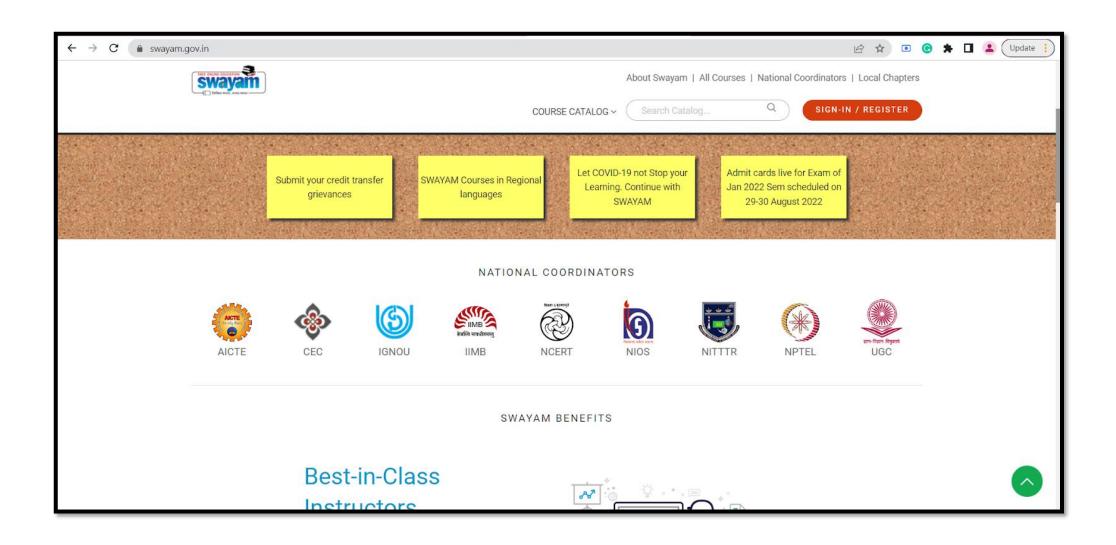
ABDM (https://abdm.gov.in/)



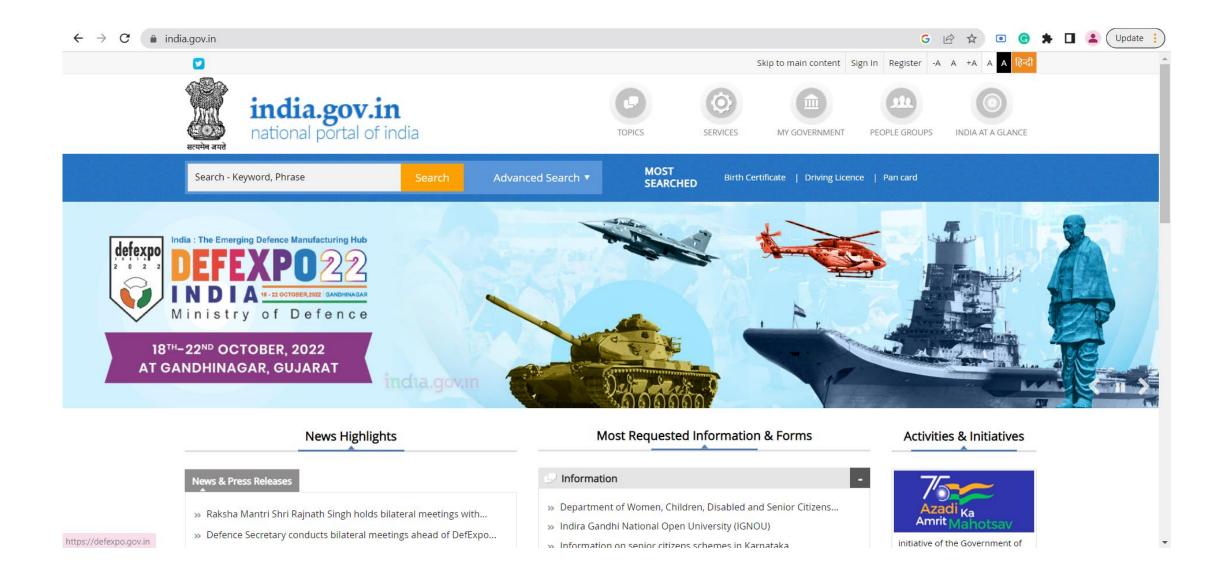
Digital Infrastructure for Knowledge Sharing (DIKSHA) (https://diksha.gov.in/)



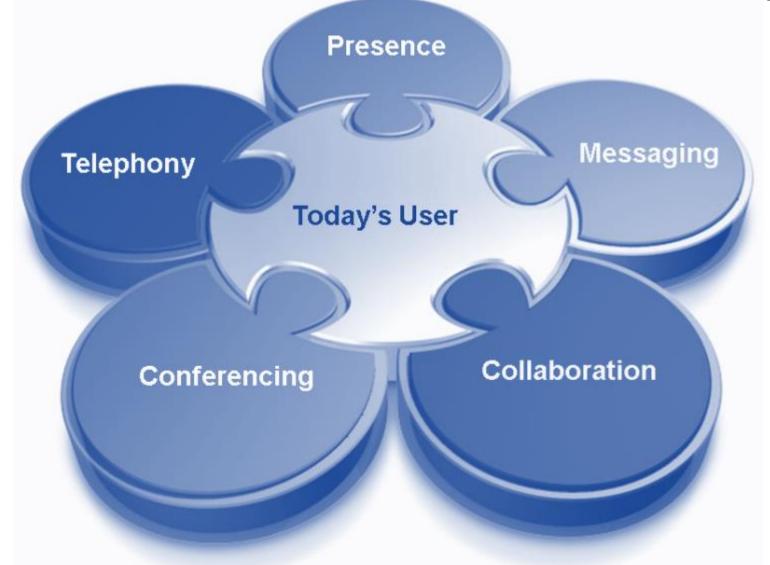
Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) Portal (https://swayam.gov.in/)



National portal of India (https://www.india.gov.in/)



Unit	Unit name	Week No	Topic	Teaching Resources
	Communication and Collaboration in the Cyberspace	6	Electronic Communication: electronic mail, blogs, social media	https://static.vikaspedia.in/media/files_en/educatio n/Digital%20Litercy/Email5.pdf https://www.nidirect.gov.uk/articles/email-internet- and-social-media
II		7	Collaborative Digital platforms	https://en.wikipedia.org/wiki/Digital_collaboration
			Tools/platforms for online learning, Collaboration using file sharing, messaging, video conferencing	https://vikaspedia.in/education/interactive- resources/digital-learning-resources https://www.prodigygame.com/in-en/blog/virtual- learning-tools/ https://dexteredward.com/secure-collaboration/



- Electronic mail
 - Gmail
 - Outlook
 - Yahoo!
- Blogs
 - www.wordpress.org
 - www.blogger.com
- Social media
 - Facebook
 - Twitter
 - Instagram
 - Snapchat

- Tools/platforms for online learning, Collaboration using file sharing, messaging, video conferencing
 - Zoom
 - MS Teams
 - Various Google products
 (https://about.google/products/#all-products)
 - Webex
 - JioMeet

Staying safe while communicating and collaborating in the Cyberspace:

- For teachers
 - Where ever possible create separate accounts for demonstrations during classes
- For all
 - Log out of accounts on all the websites be it email account, your account on Digi locker, etc. when logged in through some system that is not yours
 - Be careful about the content that you post / share on the online media.
 - think about its consequences in future
 - data on the Internet becomes 'immortal'
 - At the end of the lab class, delete all the important files (from recycle bin/trash also) that you have downloaded during the lab class

Unit-3: Towards Safe and Secure Cyberspace

Unit	Unit name	Week No	Topic	Teaching Resources
	Towards Safe and Secure Cyberspace	10	Online security and privacy	https://safety.google/security-privacy/
		11	Threats in the digital world: Data breach and Cyber Attacks	https://www.csoonline.com/article/3541148/the-biggest-data-breaches-in-india.html https://www.secureworld.io/industry-news/top-10-data-breaches-of-all-time https://onlinedegrees.und.edu/blog/types-of-cyber-security-threats/
		12	Blockchain Technology	https://blockchain.gov.in/ https://blockchain.gov.in/assets/docs/blockchain_infor matics.pdf https://blockchain.gov.in/assets/docs/Whitepaper_30ja n.pdf
		13	Security Initiatives by the Govt of India	https://safety.google/ https://www.aicte-india.org/CyberSecurity https://www.niti.gov.in/sites/default/files/2019- 07/CyberSecurityConclaveAtVigyanBhavanDelhi_1.pd f

Unit-3: Towards Safe and Secure Cyberspace

Online Security	Online Privacy
Protect Your Phone, Personal Information and Data From Hackers	Protect Your Privacy on Apps
Recognize, Remove, and Avoid Malware	Protect Your Privacy Online
Recover Your Hacked Email or Social Media Account	Secure Your Voice Assistant and Protect Your Privacy
Remove Your Personal Information Before You Get Rid of Your Phone and/or Computer	Stalking Apps: What To Know
Secure Your Home Wi-Fi Network and Safely Use Public Wi-Fi Networks	What To Do if You're the Target of Revenge Porn
Use Two-factor Authentication to Protect Your Accounts	What To Do if You're the Target of Revenge Porn

Threats in the digital world

- Data breach: A data breach is a theft of data by a malicious actor. Motives for data breaches include crime (i.e. identity theft), a desire to embarrass an institution (e.g. Edward Snowden or the DNC hack), and espionage.
- Cyber Attacks: A cyber attack is an attack that is mounted against us (meaning our digital devices) by means of cyberspace.

Recent Data breaches in India

Source: https://www.secureworld.io/industry-news/top-10-data-breaches-of-all-time

- Air India data breach highlights third-party risk, May 2021
- CAT burglar strikes again: 1,90,000 applicants' details leaked to dark web, May 2021
- Hacker delivers 180 million Domino's India pizza orders to dark web, April 2021
- Trading platform Upstox resets passwords after breach report, April 2021
- Police exam database with information on 500,000 candidates goes up for sale, February 2021
- COVID-19 test results of Indian patients leaked online, January 2021
- User data from Juspay for sale on dark web, January 2021
- BigBasket user data for sale online, October 2020
- Unacademy learns lesson about security, May 2020
- Hackers steal healthcare records of 6.8 million Indian citizens, August 2019
- Local search provider JustDial exposes data of 10 crore users, April 2019
- SBI data breach leaks account details of millions of customers, January 2019

International Data breaches

Source:https://www.secureworld.io/industry-news/top-10-data-breaches-of-all-time

- Yahoo data breach (2013)
- First American Financial Corporation data breach (2019)
- Equifax data breach (2017)
- Marriott International data breach (2018)
- Adult FriendFinder Networks data breach (2016)
- Facebook data breach (2019)
- Target data breach (2013)
- U.S. Office of Personnel Management data breach (2015)
- MySpace data breach (2013)
- LinkedIn data breach (2012)
- Adobe data breach (2013)
- SolarWinds supply chain data breach (2020)

Cyber Attacks Examples

- Malware– Malicious software to disrupt computers
- Viruses, worms, ...
- Theft of Intellectual Property or Data
- Hactivism– Cyber protests that are socially or politically motivated
- Mobile Devices and applications and their associated Cyber Attacks
- Social Engineering—Entice Users to click on malicious links
- Spear Phishing—Deceptive Communications (e-mails, texts, tweets)
- Domain Name System (DNS) Attacks
- Router Security-Border Gateway Protocol (BGP) Hijacking
- Denial of Service (DoS)— blocking access to websites

Blockchain Technology (https://blockchain.gov.in/)

Source: https://blockchain.gov.in/assets/docs/blockchain_informatics.pdf

- A business involves transactions and information exchange among various stakeholders. Since most of the existing systems are centralized, there is greater risk to security, and this necessitates a secure and shareable system to help stakeholders interoperate efficiently.
- Blockchain is a distributed system where transaction records are bundled in blocks and linked with previous ones.
- Transaction data within a block is secure because it is encrypted and digitally signed.
- Bitcoin network is a peer to peer payment network, and it is an application of blockchain technology.

Security Initiatives by the Govt of India

• cert-in.org.in



• https://www.csk.gov.in/



https://infosecawareness.in/





- Twitter
- Instagram
- Facebook
- LinkedIn
- You Tube
- Public

https://infosecawareness.in/

Governments Initiatives

- Cyber Crime Awareness Booklet on Cyber Security Awareness
- Cyber Hygiene for cyber space
- Handbook on Cyber Safety for Students
- ▶ UGC Public Notice regarding: Initiatives for promoting Cyber Hygiene/Cyber Security in HEIs
- ▶ Steps taken by Central Governments to spread awareness on prevention of Cyber Crime
- ▶ Photo Gallery
- ▶ Radio Jingles

https://infosecawareness.in/

Steps taken by the Central Government to spread awareness on prevention of cyber crime

- MHA's has launched '@CyberDost' twitter handle to spread awareness on cybercrime prevention and tweeted over 1066 cyber safety tips through short videos, images and creatives. It has more than 3.64 lakh followers.
- ii. Radio campaign.
- iii. Sent more than 100 crore SMSs on cybercrime awareness to public.
- iv. Publicity at regular interval on prevention of cyber crime and cyber safety tips through various Videos/GIFs initiated on various platforms as under:

Twitter https://twitter.com/Cyberdost	
Facebook	https://www.facebook.com/CyberDostI4C
Instagram	https://www.instagram.com/cyberdosti4c
Telegram	https://t.me/cyberdosti4c

- v. MyGov has been engaged by the I4C for the publicity on the topic of prevention of cyber crimes through multiple mediums.
- vi. Published 'Handbook for adolescents/students on cyber safety'.
- vii. Published 'Information Security Best practices' for the benefit of Government Officials.
- viii. Organized of Cyber Safety and Security Awareness weeks through the C-DAC in association with Police Department in different States.
- ix. 148 Cyber Crimes Advisories have been shared by the I4C with States/UTs, Ministries/Departments as a preventive measure.
- x. Issued alerts/advisories to States/UTs from time to time.
- Delhi Metro has been requested to publicize the National Cyber Crime Reporting Portal and National Toll-Free Helpline Number '1930'.
- xii. Two bilingual Manuals on "Cyber Hygiene for Cyber Space Do's and Don'ts" (Basic and Advanced version) released in January, 2022 to provide basic cyber hygiene regarding internet safety, email, mobile safety, etc.
- xiii. States/UTs have been requested by the MHA to organize "Cyber Jaagrookta Diwas" on first Wednesday of every month at 11 am on cyber hygiene commencing from 6th October 2021 (Wednesday) onwards and launch mass awareness campaign in vernacular languages for all schools/colleges. Also requested to prepare 'Annual Action Plan' in this regard.
- xiv. The Ministry of Education has been requested to commence Curriculum in cyber security and cyber hygiene from 6th to 12th standards for all the streams, so as to provide basic awareness to all students in schools for all CBSE schools at Central/State/UT level.
- xv. Quarterly Newsletter of I4C (1st and 2nd Edition) launched in January, 2022 to share information to counter the menace of cyber crime to Law Enforcement Agencies and Policymakers. The Newsletter comprises of latest cyber crimes trends, cyber crime statistics, National/International developments relating to prevention of cyber crimes, etc.
 https://infosecawareness.in/

Unit-4: Ethical Issues in Digital World

Unit	Unit name	Week No	Topic	Teaching Resources
		14	Netiquettes	https://www.kaspersky.com/resource- center/preemptive-safety/what-is-netiquette https://www.britannica.com/topic/netiquette
IV	Ethical Issues in Digital World	15	Ethics in digital communication, Ethics in Cyberspace	https://onlinelibrary.wiley.com/doi/book/10.1002/9 781118968888 https://iccopr.com/wp- content/uploads/2017/10/Ethics-in-Digital- Communications-Guidelines.pdf https://link.springer.com/chapter/10.1007/978-90- 481-2370-4_1

Unit-4: Ethical Issues in Digital World

NETIQUETTES







Ethics in digital communication

- 1. Contribute to society and human being
- 2. Avoid harm to others
- 3. Be honest and trustworthy
- 4. Be fair and take action not to discriminate
- 5. Honor property rights including copyrights and patents
- 6. Give proper credit for intellectual property
- 7. Respect the privacy of others
- 8. Honor confidentiality

Ethics in Cyberspace

- Do not use a computer to harm other people.
- Do not interfere with other people's computer work.
- Do not snoop around in other people's files.
- Do not use a computer to steal.
- Do not use a computer to bear false witness.
- Do not use or copy software for which you have not paid.
- Do not use other people's computer resources without authorization.
- Do not appropriate other people's intellectual output.
- Do think about the social consequences of the program you write.
- Do use a computer in ways that show consideration and respect.

- 1. Identify few people of different age groups among family members, domestic help, neighborhood etc. Find out digital literacy among these groups. For example Usage of Smart phones, Internet, computer systems, and awareness of accessing an app.
- 2. Access your Digi Locker account. Fetch and use any three important documents from the Digi Locker such as class 10th certificate, 12th certificate, Aadhaar card, Driving License and vaccination certificate etc.
- 3. Students will explore digital services in the areas such as e-Kranti: education, health, planning, farming, security, financial inclusion, and justice. (any one site)
- 4. Explore the Digital India website (https://www.digitalindia.gov.in). List down any four achievements of the government towards the realization of the Digital India vision.
- 5. Prepare 2-3 page report on 9-pillars of Digital India.

6. Create an email account, if you don't have one and explore it. Perform the following activities on your existing / new email account:

Create a group of your friends and post a welcome message on it.
Share a google document with your friends and give edit rights to a few of them.
Make changes to the account settings such that every outgoing email has your name, designation (if any) and your contact number.

• Draft a mail and schedule it to be sent to some acquaintance the next day at

11am.

- If you cannot attend to the emails for some days due to some urgent work, then change the settings such that an automatic reply mail is sent to the sender during those days.
- 7. Create an account on Twitter, if you don't have one and explore it. Perform the following activities on your existing / new Twitter account:
 Follow the official handles of your college (@ your_college), University of Delhi (@UnivofDelhi), or any other relevant entity

• Send a message to someone you are following

• Retweet a message

Create an account on Facebook, if you don't have one and explore it. Perform the following activities on your existing / new Facebook account:

• Follow the official page of your college, University of Delhi, or any other

relevant authority.

Manage your privacy to limit who can interact with you and what you share.
Control who can see what you share on Meta.

- 9. Write a blog about your experience on your first day in the college.
- 10. Identify at least three collaborative digital platforms that can be used for group study. List their advantages and disadvantages, if any. Out of these platforms, which one you would like to use and why? Prepare 2-3 slides and present them.
- 11. Schedule a video meeting with your friend in the digital platform of your choice. After joining the meeting, send message, chat, and share a file.

- 12. Students need to explore various blogs/ social media. Students may share their experiences through 10-15 minutes audio-visual presentation.
- 13. Students need to explore any one of the digital platform related to financial or banking or education sector.
- 14. Create your account in the NPTEL/ SWAYAM education portal. Enroll in any course of your choice.
- 15. Prepare a small report on either a data breach or a cyber attack.

- 16. Browse the Govt blockchain website "blockchain.gov.in". Explore and present any one case study present on the website.
- 17. Explore the site "https://www.csk.gov.in/".
- 18. When students' online behavior draws criticism from others, what kind of guidelines help us as a society determine what is acceptable in cyberspace?
- 19. Do important people in your life talk with you about the dangers of certain online behavior?
- 20. Do young people fully understand the consequences of their online activity? Why or why not?



Thank you for your attention!

