



**MALAD KANDIVALI EDUCATION SOCIETY'S
NAGINDAS KHANDWALA COLLEGE OF COMMERCE,
ARTS & MANAGEMENT STUDIES & SHANTABEN NAGINDAS
KHANDWALA COLLEGE OF SCIENCE**
MALAD [W], MUMBAI – 64
(AUTONOMOUS)

**(Reaccredited 'A' Grade by NAAC)
(AFFILIATED TO UNIVERSITY OF MUMBAI)
(ISO 9001:2015)**

CERTIFICATE

Name: Mr./Ms. MISTRY ABHAY ARVIND

Roll No: - 45 Programme: BSc IT Semester: II

This is certified to be a bonafide record of practical works done by the above student in the college laboratory for the course **IT platforms, Tools and Practices** (Course Code:**2026UISTP**) for the partial fulfillment of Second Semester of BSc IT during the academic year 2020-2021.

The journal work is the original study work that has been duly approved in the year 2020-2021 by the undersigned.

**External Examiner
(Ms.Sweety Garg)**

Subject-In-Charge

Date of Examination: (College Stamp)

Sr. No.	DATE	TITLE	SIGN
1.	02/02/2021	INTRODUCTION and CONTRIBUTING TO WIKIPEDIA a) What is Wikipedia? b) Steps to Create Account on Wikipedia c) Creating Page on Wikipedia d) Edit your page	
2.	09/02/2021	Creating account, repository on GitHub and Cloning repository in GitHub Page	
3.	16/02/2021	BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE a) Describe Open-Source Software with Example. b) Describe Free Software with Example c) Difference between Free and Open-Source Software.	
4.	23/02/2021	WRITING EMAIL	
5.	25/02/2021	Using practical examples, describe green computing. List and explain the steps that you take to contribute to green computing	
6.	02/03/2021	WRITING BLOGS	
7.	09/03/2021	Implementing coding practices in Python using PEP8.	
8.	16/3/2021	PRESENTATION:- Value Added Network	

Practical No:-1

a) Description about Wikipedia and its features:-

A)Description of Wikipedia are as follow:-

1)Wikipedia is a free, multilingual open-collaborative online encyclopedia created and maintained by a community of volunteer editors using a wiki-based editing system. Featuring no advertisements, it is hosted by the Wikimedia Foundation, an American non-profit organization funded primarily through donations.

2)Wikipedia is a free, open content online en-cyclopedia created through the collaborative effort of a community of users known as Wiki-pedians. Anyone registered on the site can create an article for publication; registration is not required to edit articles. The site's name comes from wiki, a server program that enables anyone to edit Web site content through their Web browser.

3)Wikipedia was launched by Jimmy Wales and Larry Sanger. Sanger coined its name as a portmanteau of "wiki" and "encyclopedia". It was initially an English-language encyclopedia, but versions in other languages were quickly developed.

4)Wikipedia has been criticized for its uneven accuracy and for exhibiting systemic bias, including gender bias, with the majority of editors being male. Edit-a-thons have been held to encourage female editors and increase the coverage of women's topics.

B)Features of Wikipedia are as follow:-

1) Creation of page, you can set your title and can add your own texts, no need of coding just type and format text like an email ,when you done click on submit and its ready to view for everyone.

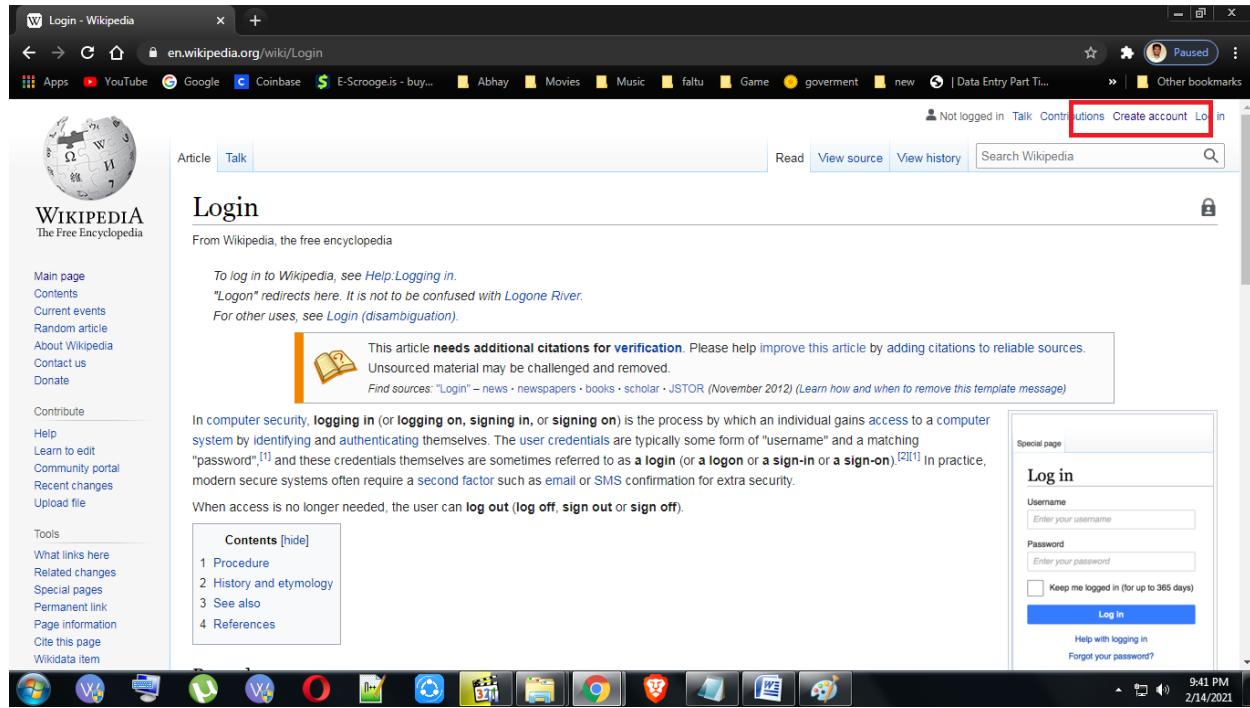
2) You can edit a public page if you find an outdated data , you can open editing screen and edit and then click on submit and

changes are made.

3)Links can be created between pages you can simply add brackets around another Wiki page's title (e.g. [Example Page Title]) to automatically link to that page.

b) Creating Account on Wikipedia:-

Step 1:-Open the wiki-pedia website and click on the "Create Account" on the upper right corner as shown in red box.



Step 2:- Fill in the required details and click on the “Create your account” button.

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Current events
Random article
About Wikipedia
Contact us
Donate

Contribute
Help
Learn to edit
Community portal
Recent changes
Upload file

Tools
Upload file
Special pages
Printable version

Languages

Special page

Your username will be public.

Please consider using an [anonymous username](#), and not your real name, unless you are comfortable with your identity being public for the entire internet to see and identify you.

Once an account has been created, it is essentially impossible to hide the original username should you later want to change it for privacy reasons.

Username (help me choose)
Abhay A Mistry

Username entered already in use.
Please choose a different name.

Password
.....

It is recommended to use a unique password that you are not using on any other website.

Confirm password
.....

Wikipedia is made by people like you.

1,002,039,809 edits

6,249,100 articles

148,564 recent contributors

After clicking the button the account will be created and this page will display.

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Current events
Random article
About Wikipedia
Contact us
Donate

Contribute
Help
Learn to edit
Community portal
Recent changes
Upload file

Tools
What links here
Related changes
Special pages
Permanent link
Page information
Wikidata item

Project page Talk

Wikimedia Wikimeet India 2021!
Registration open for Wikimedia Wikimeet India 2021 until 16 February 2021!
Main Event: February 19 - 21, 2021

This page documents an English Wikipedia policy.
It describes a widely accepted standard that all editors should normally follow. Changes made to it should reflect consensus.

This page in a nutshell: When choosing an account name, do not choose names which may be offensive, misleading, disruptive, or promotional. The username should represent one person; do not use your organisation's name.

To report blatant violations of the username policy, visit [Wikipedia:Usernames](#) for administrator attention (WP:UAA).

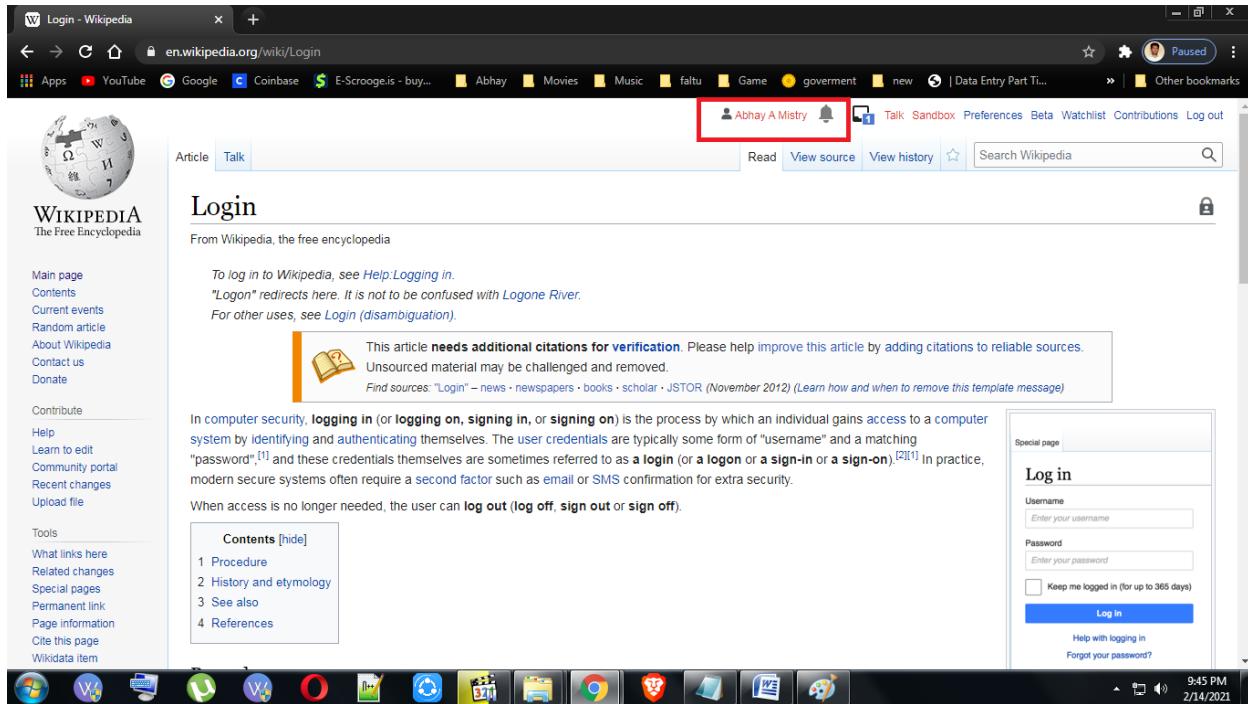
This policy describes what kinds of **usernames** are acceptable on the English Wikipedia and how unacceptable or doubtful usernames can be dealt with. It also specifies that a user account should be used only by one person, and that in most cases one person should use only one

Shortcuts
WP:U
WP:UN
WP:UPOL
WP:USERNAME
(See TMs)

Conduct policies

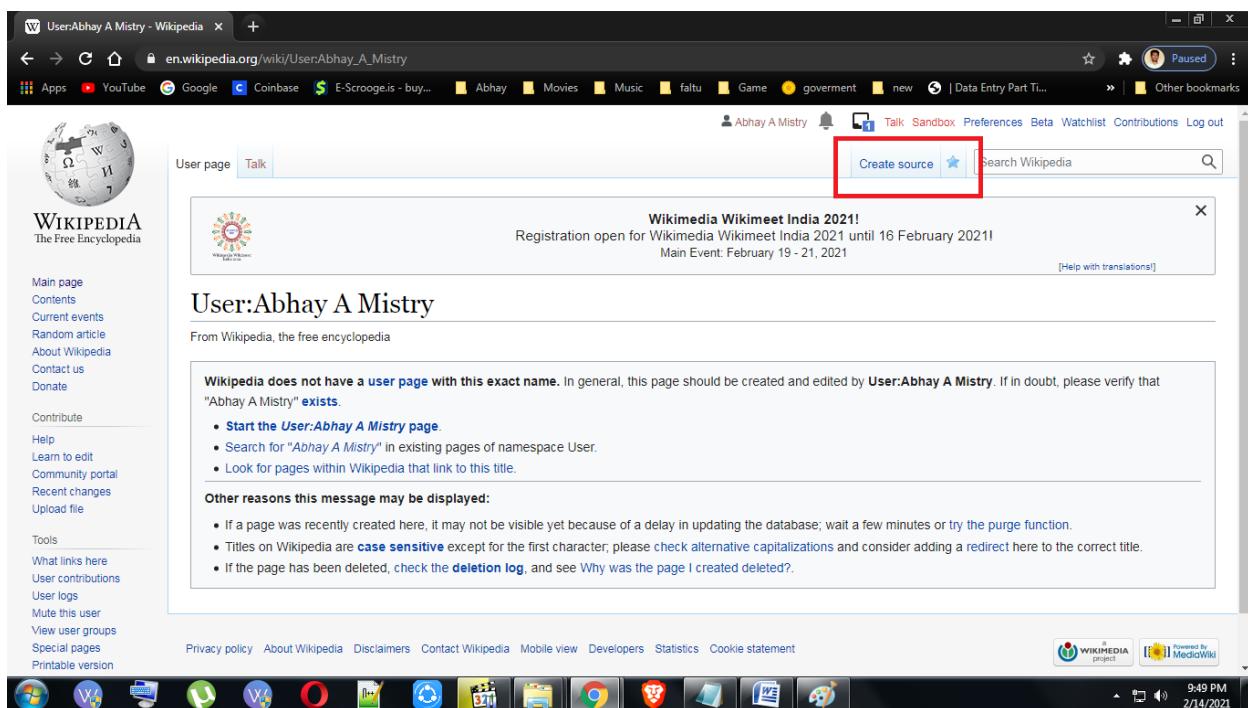
c) Creating your page on Wikipedia:-

Step 1:-After Login ,click on your username on the upper right corner.



The screenshot shows a web browser window for Wikipedia. The address bar displays 'en.wikipedia.org/wiki/Login'. The top navigation bar includes links for 'Talk', 'Sandbox', 'Preferences', 'Beta', 'Watchlist', 'Contributions', and 'Log out'. A red box highlights the user profile icon and the 'Talk' link. Below the header, there's a sidebar with links like 'Main page', 'Contents', 'Current events', etc., and a 'Special pages' section. The main content area is titled 'Login' and contains instructions for logging in. A note at the bottom of the page states: 'This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources.' To the right, a 'Log in' form is displayed with fields for 'Username' and 'Password', and a 'Keep me logged in' checkbox. The status bar at the bottom shows the time as 9:45 PM and the date as 2/14/2021.

Step 2:- Click on "create source" to start creating the page.



The screenshot shows a user profile page for 'User:Abhay A Mistry'. The address bar displays 'en.wikipedia.org/wiki/User:Abhay_A_Mistry'. The top navigation bar includes links for 'Talk', 'Sandbox', 'Preferences', 'Beta', 'Watchlist', 'Contributions', and 'Log out'. A red box highlights the 'Create source' button in the top right corner of the page. The main content area displays a message about the 'Wikimedia Wikimeet India 2021' event, which is open for registration from February 19 to 21, 2021. Below this, there's a section for creating a new user page with instructions and other reasons why a page might be created. The status bar at the bottom shows the time as 9:49 PM and the date as 2/14/2021.

Step 3:- Insert your data for the page you want to create in the given text window . After inserting the data, scroll down and click on the show preview option this will appear.

This is only a preview; your changes have not yet been saved! → Go to editing area

Hi

The Invisible Man (Movie) is a 2020 Australian-American science fiction horror film written and directed by Leigh Whannell . It follows a woman who believes she is being stalked and gaslit by her abusive and wealthy boyfriend even after his apparent suicide, and ultimately deduces that he has acquired the ability to become invisible. The film stars Elisabeth Moss, Aldis Hodge, Storm Reid, Harriet Dyer, Michael Dorman, and Oliver Jackson-Cohen.

The development of a new film based on Wells's 1897 novel began as early as 2006. The project was revived as part of Universal's shared cinematic universe in 2016, intended to consist of their classic monsters, with Johnny Depp attached to star in the title role. After The Mummy was released in 2017 to critical and financial failure, development was halted on all projects. In early 2019, the studio changed their plans from a serialized universe to films based on individualized story-telling and the project reentered development. Principal photography lasted from July to September 2019 in Sydney, Australia.

The Invisible Man was released in the United States on February 28, 2020, by Universal Pictures. The film received positive reviews from critics, with praise for Moss' performance, its inventive modernization of the novel's plot, and the combination of scares with "a smart narrative about how people can be manipulated and abused in harmful relationships". Due to the COVID-19 pandemic closing theaters across the world, Universal announced the film would be made available for digital rental just four weeks after it was released theatrically.

Step 5:- Click on the "Publish page" button to publish or create the page. Then your page will be published as shown below.

This is only a preview; your changes have not yet been saved! → Go to editing area

User page Talk

The page has been created.

User:Abhay A Mistry

From Wikipedia, the free encyclopedia

Hi

The Invisible Man (Movie) is a 2020 Australian-American science fiction horror film written and directed by Leigh Whannell . It follows a woman who believes she is being stalked and gaslit by her abusive and wealthy boyfriend even after his apparent suicide, and ultimately deduces that he has acquired the ability to become invisible. The film stars Elisabeth Moss, Aldis Hodge, Storm Reid, Harriet Dyer, Michael Dorman, and Oliver Jackson-Cohen.

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d) Editing your page on Wikipedia:-

Step 1:- Click on "Edit source".

This is only a preview, your changes have not yet been saved! → Go to editing area

User:Abhay A Mistry

From Wikipedia, the free encyclopedia

The Invisible Man (Movie) is a 2020 Australian-American science fiction horror film written and directed by Leigh Whannell. It follows a woman who believes she is being stalked and gaslit by her abusive and wealthy boyfriend even after his apparent suicide, and ultimately deduces that he has acquired the ability to become invisible. The film stars Elisabeth Moss, Aldis Hodge, Storm Reid, Harriet Dyer, Michael Dorman, and Oliver Jackson-Cohen.

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Step 2:- Make the required changes and click on the "Publish changes" button to finish the edit.

Content that violates any copyrights will be deleted. Encyclopedic content must be verifiable. Any work submitted to Wikipedia can be edited, used, and redistributed—by anyone—subject to certain terms and conditions.

The Invisible Man (Movie) is a 2020 Australian-American science fiction horror film written and directed by Leigh Whannell. It follows a woman who believes she is being stalked and gaslit by her abusive and wealthy boyfriend even after his apparent suicide, and ultimately deduces that he has acquired the ability to become invisible. The film stars Elisabeth Moss, Aldis Hodge, Storm Reid, Harriet Dyer, Michael Dorman, and Oliver Jackson-Cohen.

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This is a minor edit Watch this page Permanent I acknowledge that I agree to the Terms of Use, and you irrevocably agree to release your contribution under the CC BY-SA 3.0 License and the GFDL. You agree that a hyperlink or URL is sufficient attribution under the Creative Commons license.

Publish changes Show preview Show changes Cancel

As we can see the changes has been made.

User:Abhay A Mistry - Wikipedia

en.wikipedia.org/wiki/User:Abhay_A_Mistry

Apps YouTube Google Coinbase E-Scrooge.is - buy... Abhay Movies Music Game goverment new Data Entry Part Ti... Other bookmarks

Paused

User page Talk Read Edit source View history Search Wikipedia

Abhay A Mistry Talk Preferences Beta Watchlist Contributions Log out

WIKIPEDIA The Free Encyclopedia

Main page Contents Current events Random article About Wikipedia Contact us Donate Contribute Help Learn to edit Community portal Recent changes Upload file Tools What links here Related changes User contributions User logs Mute this user View user groups Special pages

This page was last edited on 14 February 2021, at 18:32.

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Privacy policy About Wikipedia Disclaimers Contact Wikipedia Mobile view Developers Statistics Cookie statement

WIKIMEDIA project Powered by MediaWiki

12:03 AM 2/15/2021

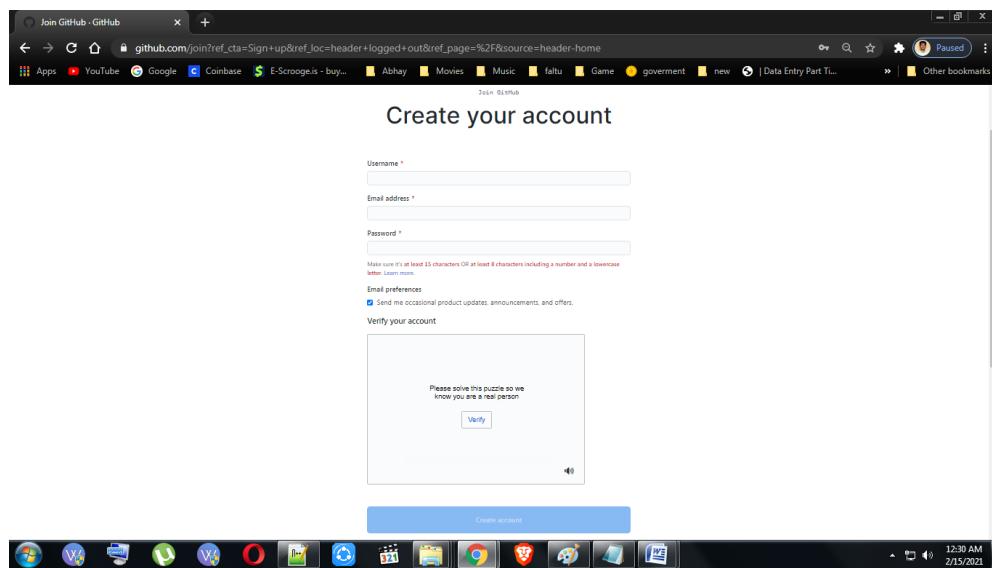
The screenshot shows a Wikipedia user page for 'User:Abhay A Mistry'. The page title is 'User:Abhay A Mistry'. The main content discusses the 2020 science fiction horror film 'The Invisible Man'. It mentions the film's plot, cast, and release details. Below the main content, there is a note about the page's last edit and a link to the Creative Commons Attribution-ShareAlike License. At the bottom, there are links to various Wikipedia policies and a footer with the Wikimedia logo and powered-by Mediawiki text. The browser interface includes a toolbar with various icons and a search bar at the top.

Practical No:-2

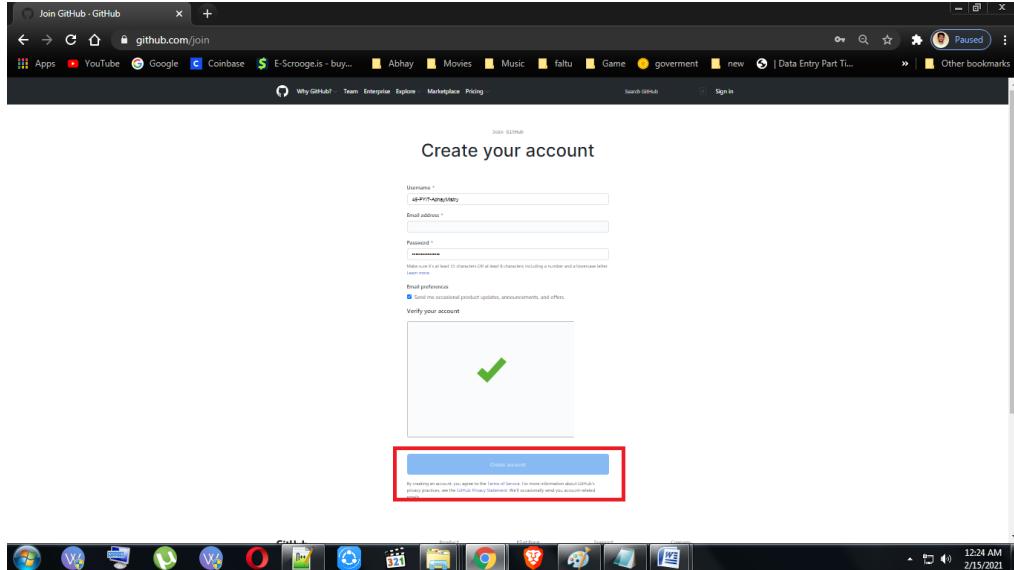
Creating account, repository on Github and Cloning repository in Github.

a) Creating account on Github:-

Step 1:- Go to <https://github.com/join> in a web browser. You can use any web browser on your computer, phone or tablet to join.



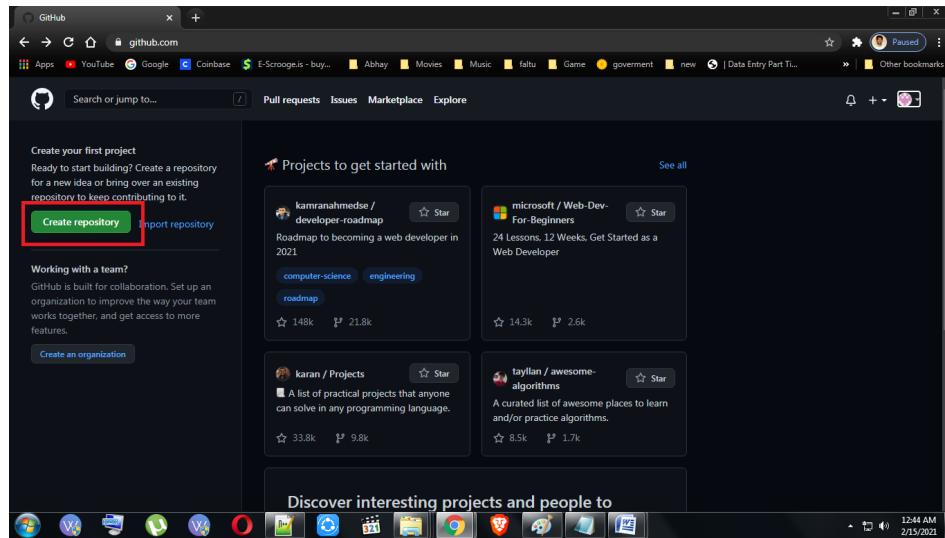
Step 2:-Enter your personal details and complete the CAPTCHA puzzle. Then click on the "Create account" button below the form as shown in red box.



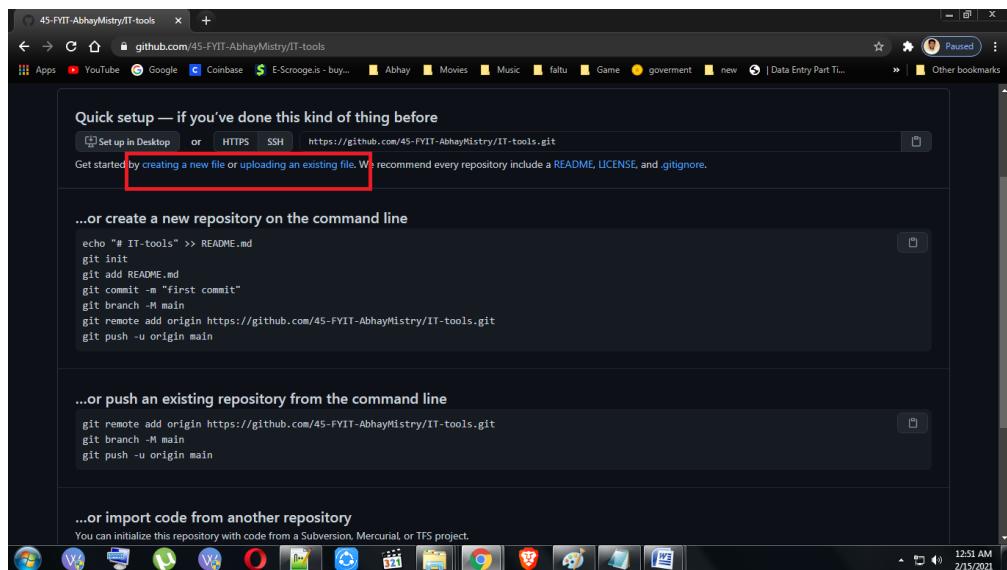
Step 3:- Select your preferences and click on "Complete Setup". Then Verification code will come to your email . This confirms your email address and returns you to sign up process and once the email is verified the account will be created.

b) Creating repository on Github:-

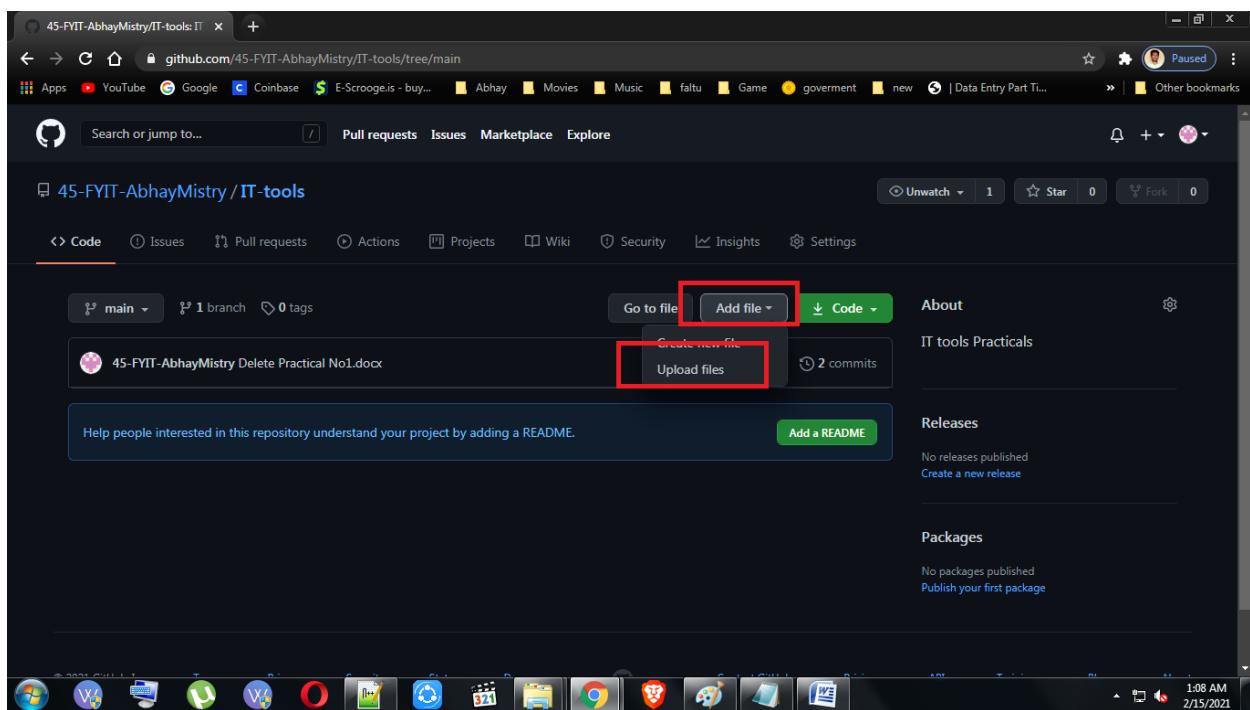
Step 1:- Click on the "Create Repository" button given on the left side.



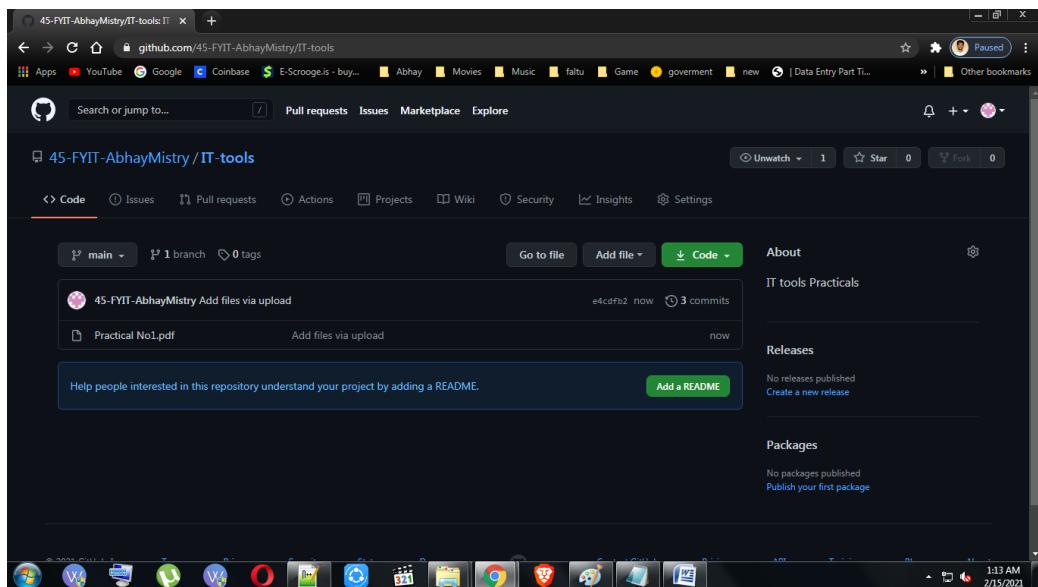
Step 2:- Fill the details and click on the "Create repository" button below. Then after clicking on create repository this below page will be displayed .There you can also create or upload files in your repository from your system as given below.



Step 3:-Now click on "Add file" and then on upload file and choose file and upload it .Then scroll down and click on "commit changes"

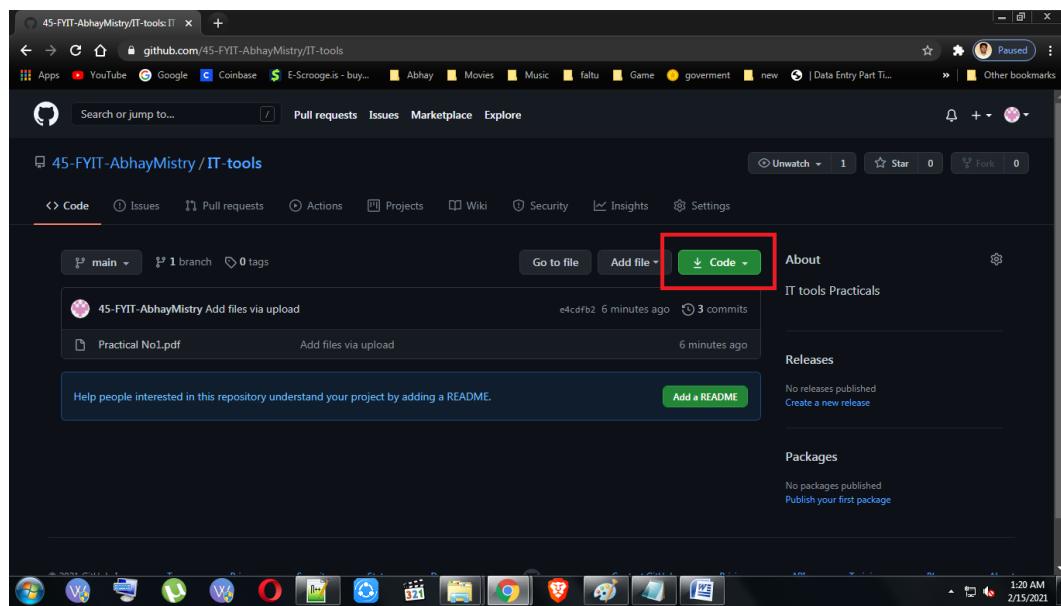


Then this will appear .Your file has been uploaded and also repository has been created.

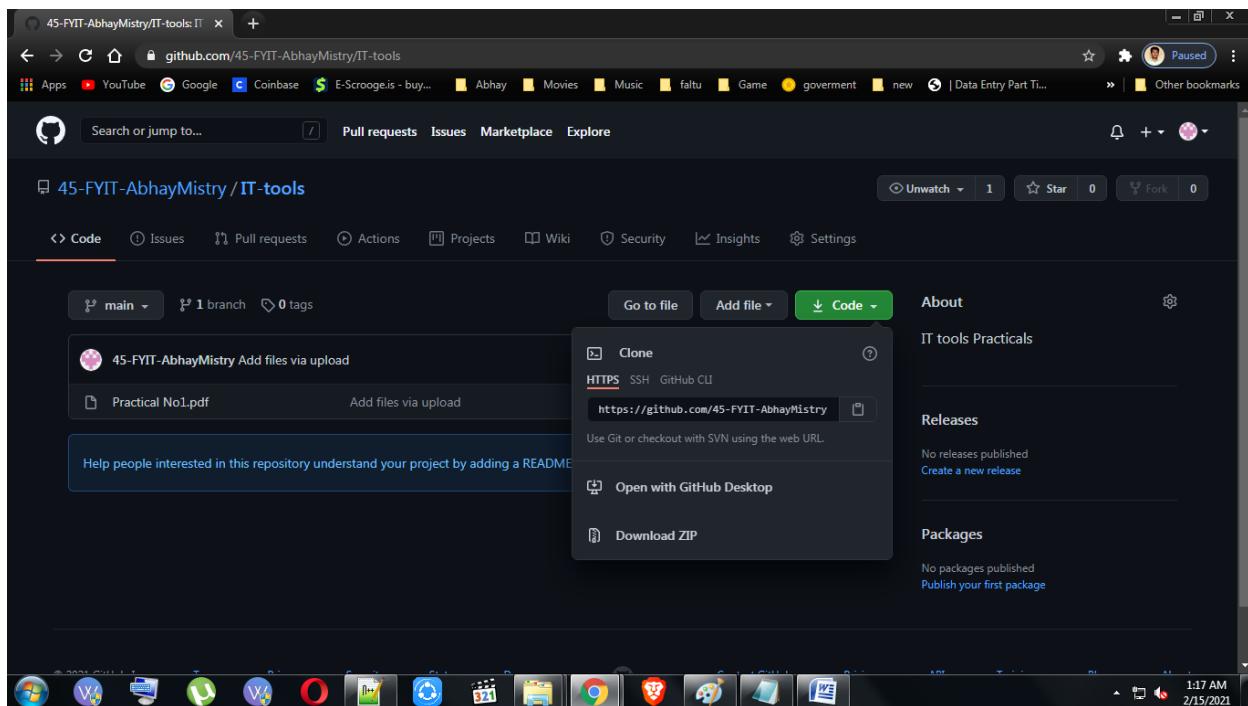


c) Cloning repository on Github:-

Step 1:- Click on the "Code" button as mentioned below.



Step 2:- Click on the clipboard icon as mentioned to copy the url. It will create a clone of your repository.



PRACTICAL NO:-3

BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE

a) Describe Open Source Software with Example?

1)Open-source software (OSS) is a program that has publicly available code which anyone with technical expertise can use, modify and distribute.

2)It is any computer software that's distributed with its source code available for modification. That means it usually includes a license for programmers to change the software in any way they choose.

3)They can fix bugs, improve functions, or adapt the software to suit their own needs.

4)It is the part of the software that most computer users don't ever see; it's the code computer programmers can manipulate to change how a piece of software (a program or an application) works. Programmers who have access to a computer program's source code can improve that program by adding features to it or fixing parts that don't always work correctly.

5)It was released through a specific kind of license that makes its source code legally available to end-users. The source code can be repurposed into other new software, meaning anyone can take source code and distribute their own program from it.

6) It includes ten-criteria, relating to matters such as:-

1. Software redistribution
2. Source code availability and integrity
3. Distribution and properties of licenses
4. Derived works
5. Anti-discrimination

7)Some examples of Open source software are as follow:-

- Linux,
- Open office,
- Chromium,
- Android,
- Python ,etc.

b) Describe Free Software with Example?

1)Free software (or libre software) is computer software distributed under terms that allow users to run the software for any purpose as well as to study, change, and distribute it and any adapted versions.

2)It is a matter of liberty, not price, all users are legally free to do what they want with their copies of a free software (including profiting from them) regardless of how much is paid to obtain the program.

3)Computer programs are deemed "free" if they give end-users (not just the developer) ultimate control over the software and, subsequently, over their devices.

4)It is computer software distributed under terms that allow users to run the software for any purpose as well as to study, change, and distribute it and any adapted versions.

5)Roughly, it means that the users have the freedom to run, copy, distribute, study, change, and improve the software. Thus, free software is a matter of liberty, not price.

6)Today, free software covers just about every field of computer applications. Because of their high quality and openness, several free software programs have become leaders in their field or comprise the core of an entire industry.

7) A program is free software if the program's users have the four essential freedoms are as follow:-

1. The freedom to distribute copies of your modified versions to other. By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition to this.
2. The freedom to study how the program works, and change it so it does your computing as you wish. Access to the source is a precondition for this.
3. The freedom to run the program as you wish , for any purpose.
4. The freedom to redistribute copies so you can help others.

8)Some examples of Free software are as follow:-

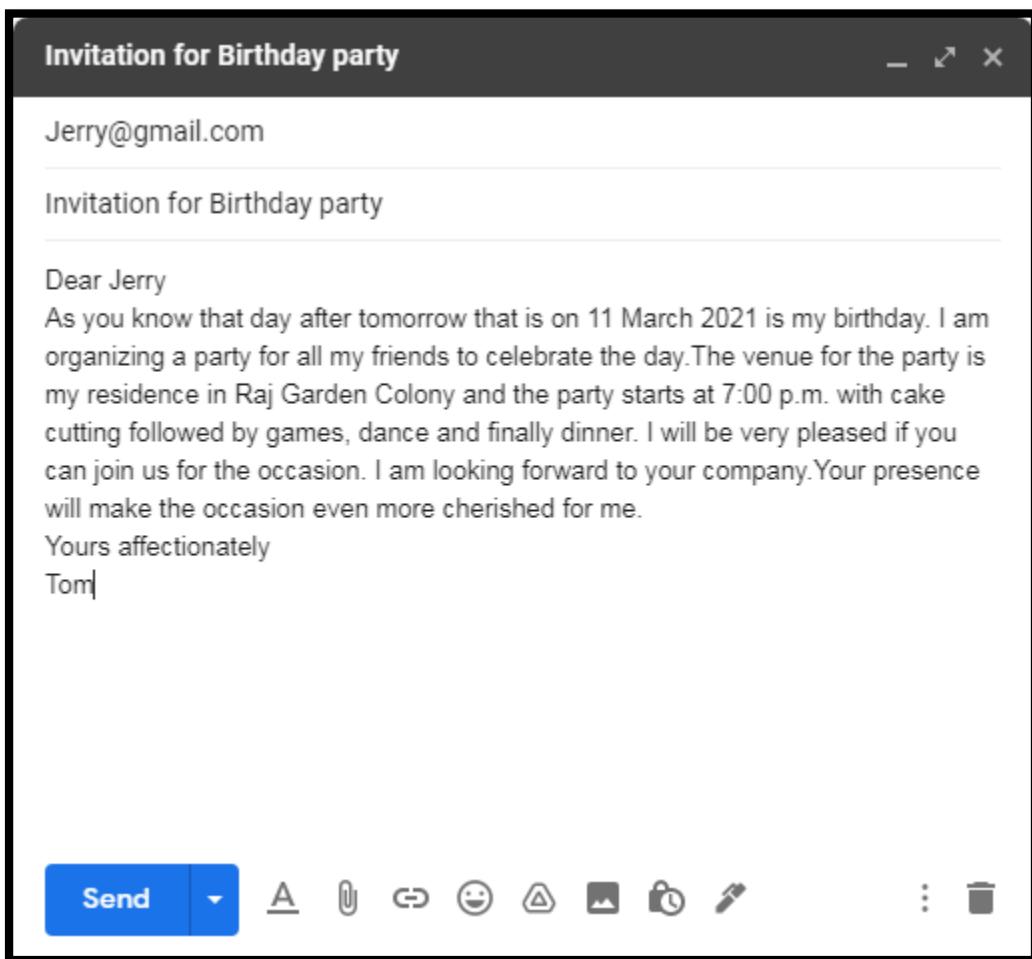
- Mozilla firefox
- Libre office
- Shotcut (video editor)
- GIMP
- Inkscape

c) Difference between Free Software and Open Source Software are as follow:-

Free Software	Open Source Software
<ul style="list-style-type: none">➤ Free software means software that respects users' freedom and community. Roughly, it means that the users have the freedom to run, copy, distribute, study, change and improve the software. The term free software is sometimes misunderstood it has nothing to do with price. It is about freedom.➤ Software freedom translates to social freedom.➤ Software is an important part of people's lives.➤ Freedom is a value that is more important than any economical advantage.➤ Examples:-The Free software Directory maintains a large database of free- software packages. Some of the best- known examples include the Linux kernel, the BSD and Linux operating systems, the GNU Compiler Collection and C library; the MySQL relational database; the Apache web server; and the Send-mail mail transport agent.	<ul style="list-style-type: none">➤ Open Source Software is something which you can modify as per your needs, share with others without any licensing violation burden. When we say Open Source, source code of software is available publicly with Open Source licenses like GNU (GPL) which allows you to edit source code and distribute it.➤ Freedom is not an absolute concept. Freedom should be allowed, not imposed.➤ Ethics are to be associated to the people not to the software.➤ Software is just software. There are no ethics associated directly to it.➤ Examples:- Prime examples of open-source products are the Apache HTTP Server, the e-commerce platform OS-Commerce, internet browsers Mozilla Firefox and Chromium (the project where the vast majority of development of the freeware Google Chrome is done)

Practical-4

1) WRITING AN EMAIL TO FRIEND:-



Practical no :-5

A)Describe green computing?

Green computing is the environmentally responsible and eco-friendly use of computers and their resources. In broader terms, it is also defined as the study of designing, engineering, manufacturing, using and disposing of computing devices in a way that reduces their environmental impact. Many IT manufacturers and vendors are continuously investing in designing energy-efficient computing devices, reducing the use of dangerous materials and encouraging the recyclability of digital devices. Green computing practices came into prominence in 1992, when the Environmental Protection Agency (EPA) launched the Energy Star program. Green computing is also known as green information technology (green IT). Green computing aims to attain economic viability and improve the way computing devices are used. Green IT practices include the development of environmentally sustainable production practices, energy-efficient computers and improved disposal and recycling procedures.

To promote green computing concepts at all possible levels, the following four approaches are employed as follow:-

- 1)Green use:- Minimizing the electricity consumption of computers and their peripheral devices and using them in an eco-friendly manner,
- 2)Green disposal:- Repurposing existing equipment or appropriately disposing of, or recycling, unwanted electronic equipment,
- 3)Green design:- Designing energy-efficient computers, servers, printers, projectors and other digital devices,
- 4)Green manufacturing:- Minimizing waste during the manufacturing of computers and other subsystems to reduce the environmental impact of these activities, etc.

B)List and explain the steps that you take to contribute to green computing?

Some of the steps that we can take to contribute to green computing are as follow:-

- 1)Using power saving features:- All computers include power saving options. Using these features you can command the computer to do various energy-saving tasks automatically, including shutting off unused hard disks, powering off a monitor after a given time or even placing the computer into sleep mode when not in use. This is very useful on laptop to help preserve battery life. If you don't need super-fast computing power then look out for energy efficient components when buying a new computer, such as green hard drives and low-energy processors. While performance is slower they can use remarkably less power. Purchasing an energy saving power supply unit for a desktop PC can help the environment and save money. They're often quieter too.

2)Buy “Energy Star” labelled monitors, desktops, laptops and printers:-The “Energy Star” devices can be programmed to “power-down” to a low power state when they are not in use, helping you save energy and run cooler which helps them last even longer. The Energy Star specification for computers was revised on October 20, 2006 and goes into effect July 20, 2007. The specification includes new performance requirements to qualify for the Energy Star rating for desktop and notebook computers, workstations, integrated computers, desktop-derived servers and game consoles. Now you can feel good about that upgrade!

3)Buy the new “Smart Strip” power strip:-The Smart Strip actually senses how much power your computer peripherals use. And when the Smart Strip senses that you've turned your computer off, it automatically shuts off your peripherals, too, preventing them from drawing an idle current, which is the current drawn even after equipment is shut off.

4)Power off when not in use:-Seems simple but many of us leave computers powered up for a long time. When not in use a large sum of power is being wasted, so it is better to turn OFF computers and other equipment when not in use. If you don't want to shut down, just use sleep or hibernation mode. This will help save energy and keep the system to its current state when you need it again. In fact, computers were designed to be turned off and back on.

5)E-cycle used computer equipment:-E-cycle used computer equipment. Find a recycler in your area. Also, Staples, the office supply retailer, has now started a recycling program. They will accept any brands of used desktop and notebook computers, monitors, printers, fax machines and all-in-one devices with a fee of \$10. Smaller items like keyboards, mice and speakers are free to drop off.

Practical no:-6

Link for the blog:- <https://45-abhaymistry.blogspot.com/2021/03/trip-to-mahabaleshwar-mahabaleshwar-is.html>



← Trip to Mahabaleshwar



bilimgmala waterfall.

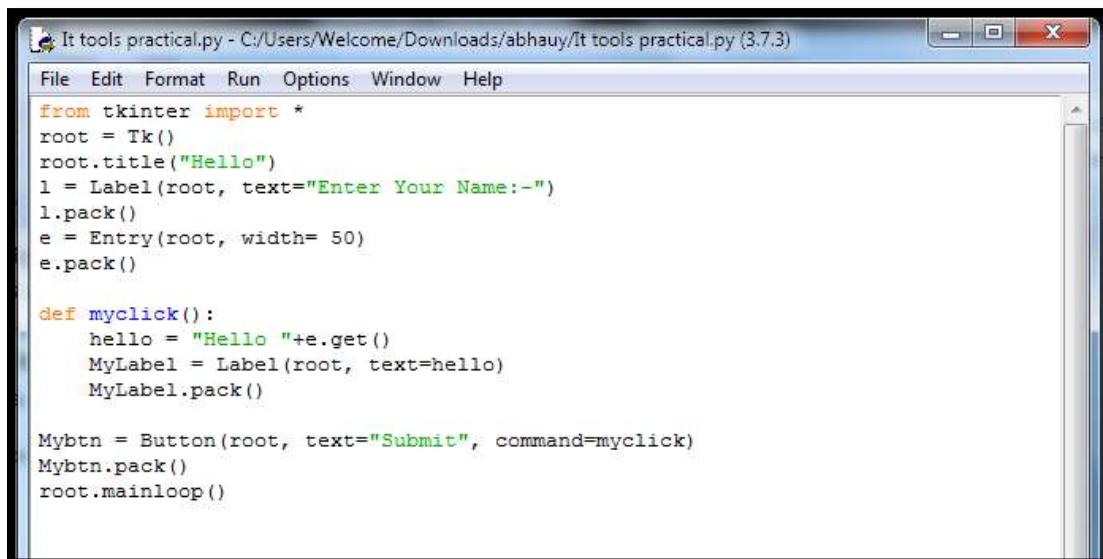


Next day , we had planned to go to the Mahabaleshwar temple at Old Mahabaleshwar and also visit some nearby viewpoints. After reaching the Elephantaon point, we parked our vehicle at the designated parking lot. The parking lot was quite big. Only a handful of vehicles were there. The Elephantaon point was discovered in 1830 by Dr. James Murray. On a clear day, it offers the views of Koyana valley on the left, Savni valley on the right, and Pratapgad Fort in front. There are various view points like Marjorie viewpoint, Savni Point, Hunting Point, Echo Point, Tiger Spring Point, etc. We have visited all the view point. After visiting Old Mahabaleshwar which was 7 km from Mahabaleshwar, my dad decided to leave for Mumbai because my holiday were getting over.

Practical no:-7

- 1)PEP-8 stands for Python Enhancement Protocol, and there are several types of them. A PEP is a document that describes new Features proposed for Python and documents aspects of Python, like design and style, for the community.
- 2)It is a acronym for Python Enhancement Protocol 8, which is a set guidelines publish for python programming language.
- 3)PEP-8 guidelines may seem pedantic, but following them can improve your code especially when it comes to sharing your code, whether it is your potential employer or open-source contributor or during group projects.
- 4)PEP 8 is a document that provides guidelines and best practices on how to write Python code. It was written in 2001 by Guido van Rossum, Barry Warsaw, and Nick Coghlan. The primary focus of PEP 8 is to improve the readability and consistency of Python code.

1)Code:-



The screenshot shows a Windows Notepad window titled "It tools practical.py - C:/Users/Welcome/Downloads/abhauy/It tools practical.py (3.7.3)". The window contains the following Python code:

```
from tkinter import *
root = Tk()
root.title("Hello")
l = Label(root, text="Enter Your Name:-")
l.pack()
e = Entry(root, width= 50)
e.pack()

def myclick():
    hello = "Hello "+e.get()
    MyLabel = Label(root, text=hello)
    MyLabel.pack()

Mybtn = Button(root, text="Submit", command=myclick)
Mybtn.pack()
root.mainloop()
```

Output:-



2)Code:-

```
table = int(input("Enter the table you want "))
for i in range(1,11):
    print(str(table) + " X " + str(i) + " = " + str(table*i))
```

Output:-

```
↳ Enter the table you want 10
10 X 1 = 10
10 X 2 = 20
10 X 3 = 30
10 X 4 = 40
10 X 5 = 50
10 X 6 = 60
10 X 7 = 70
10 X 8 = 80
10 X 9 = 90
10 X 10 = 100
```

VALUE ADDED NETWORK



MEMBERS

- ABHAY MISTRY
- ABHISHEK PATIL
- ARAV
- ASHVANI KUMAR
- BECHULAL GUPTA
- PRATHAMESH POTE
- RAHUL SHAH
- ROHIT GHADGE
- SATYENDRA GUPTA
- SHIVANG VYAS

- 45
- 62
- 146
- 145
- 18
- 65
- 78
- 12
- 22
- 101

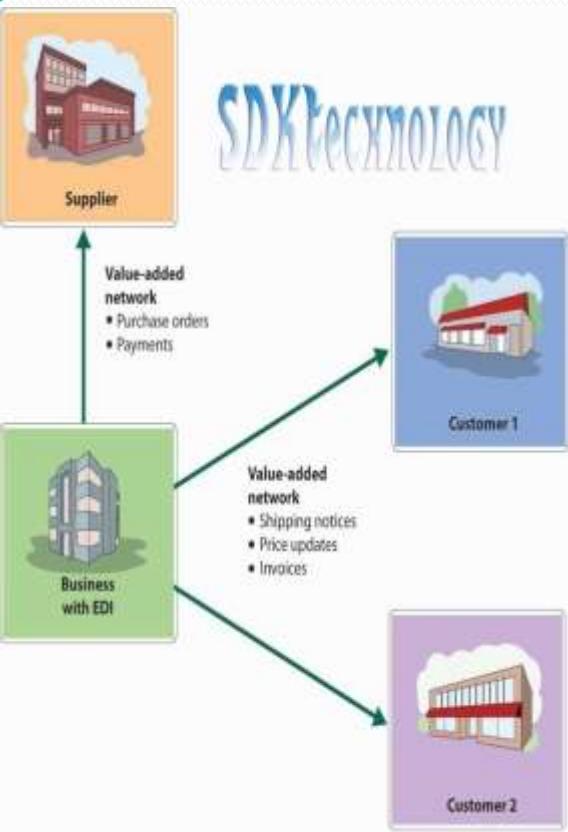


INTRODUCTION TO VAN



- Introduction:





A value-added network (VAN) is a private, hosted service that provides companies with a secure way to send and share data with its counterparties. Value-added networks were a common way to facilitate electronic data interchange (EDI) between companies. As the Internet created competition for this service with the advent of secure email, VANs responded by expanding their service offerings to include things like message encryption, secure email, and management reporting.

A value-added network simplifies the communications process by reducing the number of parties with which a company needs to communicate. The VAN accomplishes this by acting as an intermediary between business partners that share standards-based or proprietary data. VANs are set up with audit capabilities so that the data being exchanged is formatted correctly and validated before it is transferred to the next party. VANs are sometimes referred to as added-value networks or turnkey communications lines.

Value-added networks are generally used by large companies for efficient supply chain management with their suppliers, or by industry consortiums or telecommunications companies

VANs usually operate in a mailbox setting, wherein a company sends a transaction to a VAN, and the VAN places it in the receiver's mailbox. The receiver contacts the VAN and picks up the transaction, and then sends a transaction of its own.

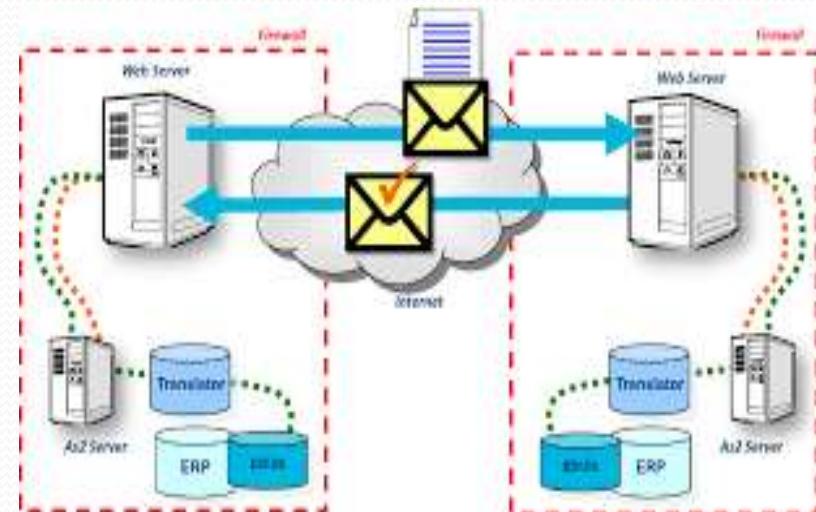
The large-scale allocation of network services by private companies was in conflict with state-controlled telecommunications sector. To be able to gain a license for telecommunication service provision to customers, a private business had to "add value" to the communications line in order to be a distinguishable service. Therefore, the notion of "value-added network services" was established to allow for operation of such private businesses as an exemption from state control.

What is a 'Value Added Network' aka 'VAN'?



In today's world there are various issues related to privacy protection, due to which exchanging critical/sensitive information via internet is risky. Hence 'VAN' was introduced.

- 1) 'VAN' is a private, hosted service that provides companies with a secure way to exchange data between its counterparties.
- 2) Value-added networks were a common way to facilitate electronic data interchange(EDI) between companies.



- 3) A ‘VAN’ simplifies the communications process by reducing the number of parties with which a company needs to communicate.
- 4) But how does ‘VAN’ accomplish this feat? They do it by acting as an intermediary between business partners that share standard-based or proprietary data.
- 5) ‘VAN’ is similar to an email, except that it is used for standardized structured data rather than unstructured text.
- 6) VAN’s are considerably less used these days and are on a gradual decline due to the flourishing of the internet.

Types of VAN



Three types of Value Added Network,
based on how the computers in the network
are connected:

1. One to One
2. One to Many
3. Many to Many

One to One

- The one-to-one network is a connection between two businesses exchanging data.

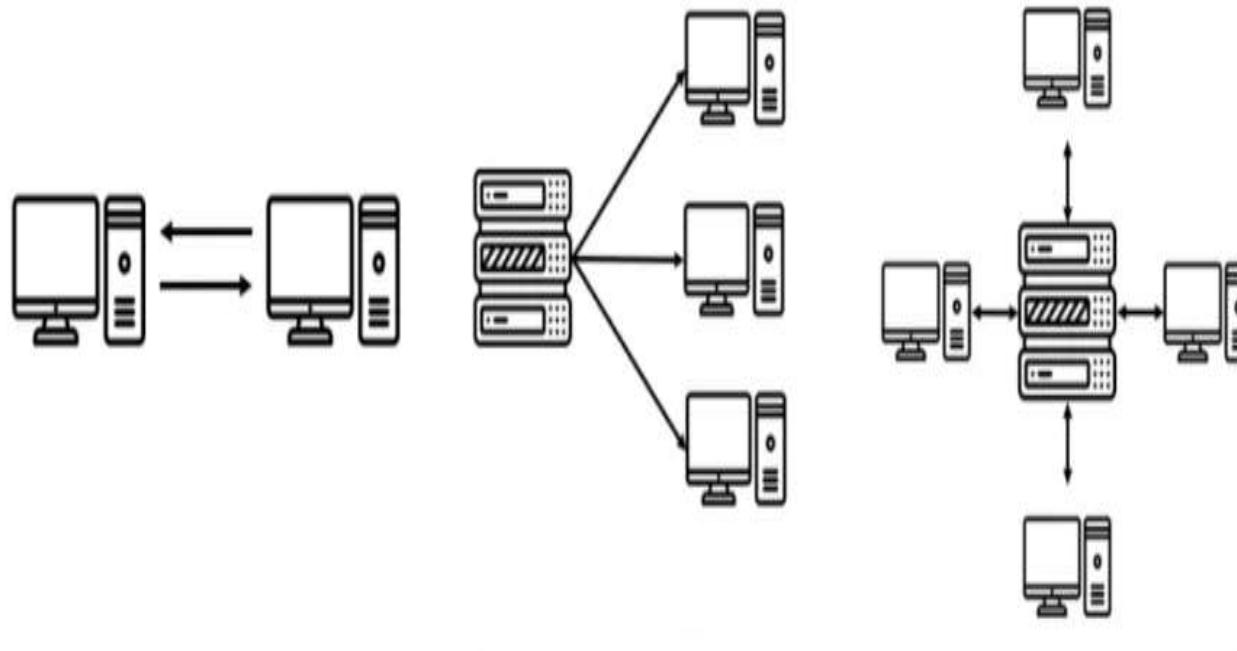
One to Many

- A single business connected to multiple other businesses, e.g., a major retailer connected to its different suppliers.

Many to Many

- Multiple businesses connected to one another. This is the most common type of network used in the financial markets since there are many market participants connected to each other via a single venue.

Types of Value Added Networks

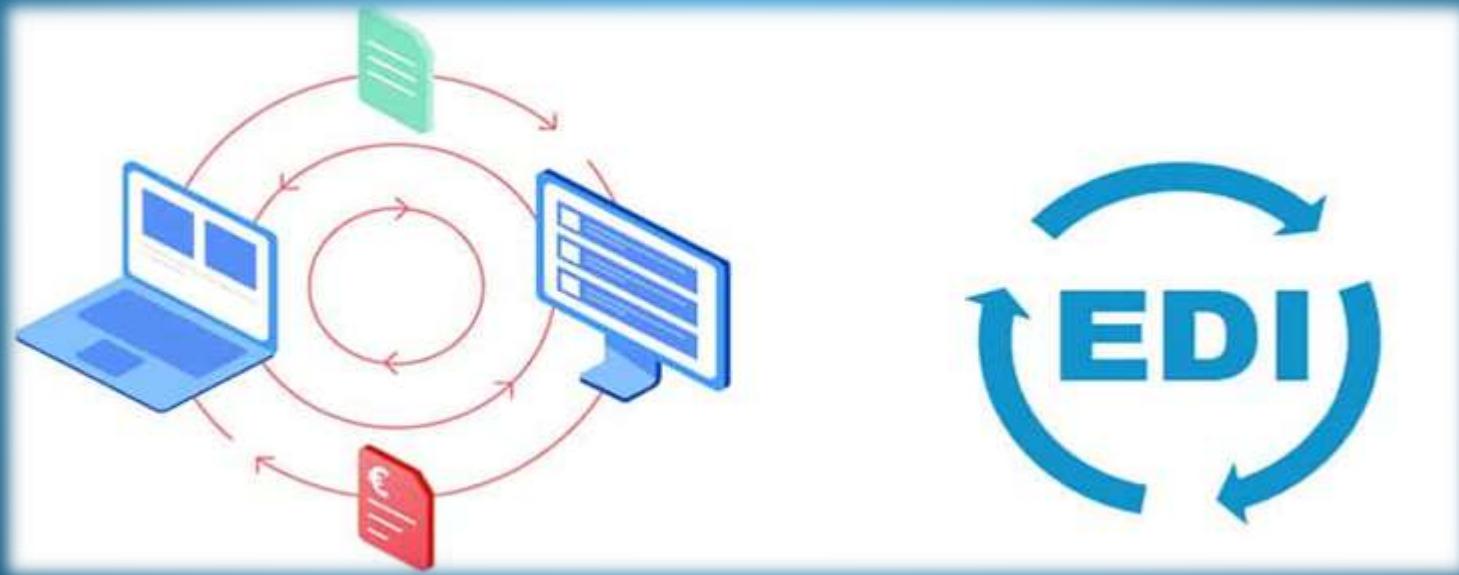


One-to-One

One-to-Many

Many-to-Many

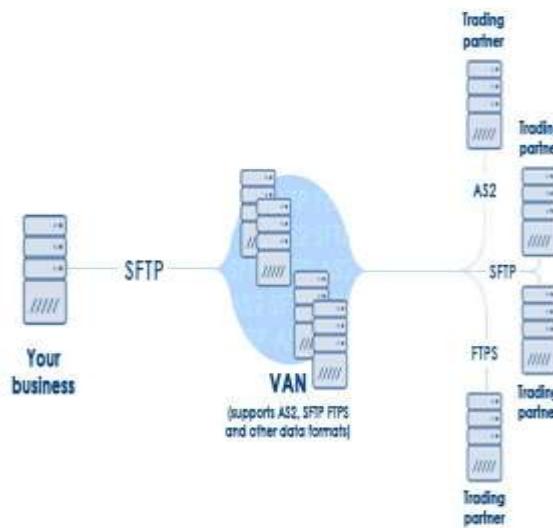
Components of Value Added Network (VAN)



Components of value added network

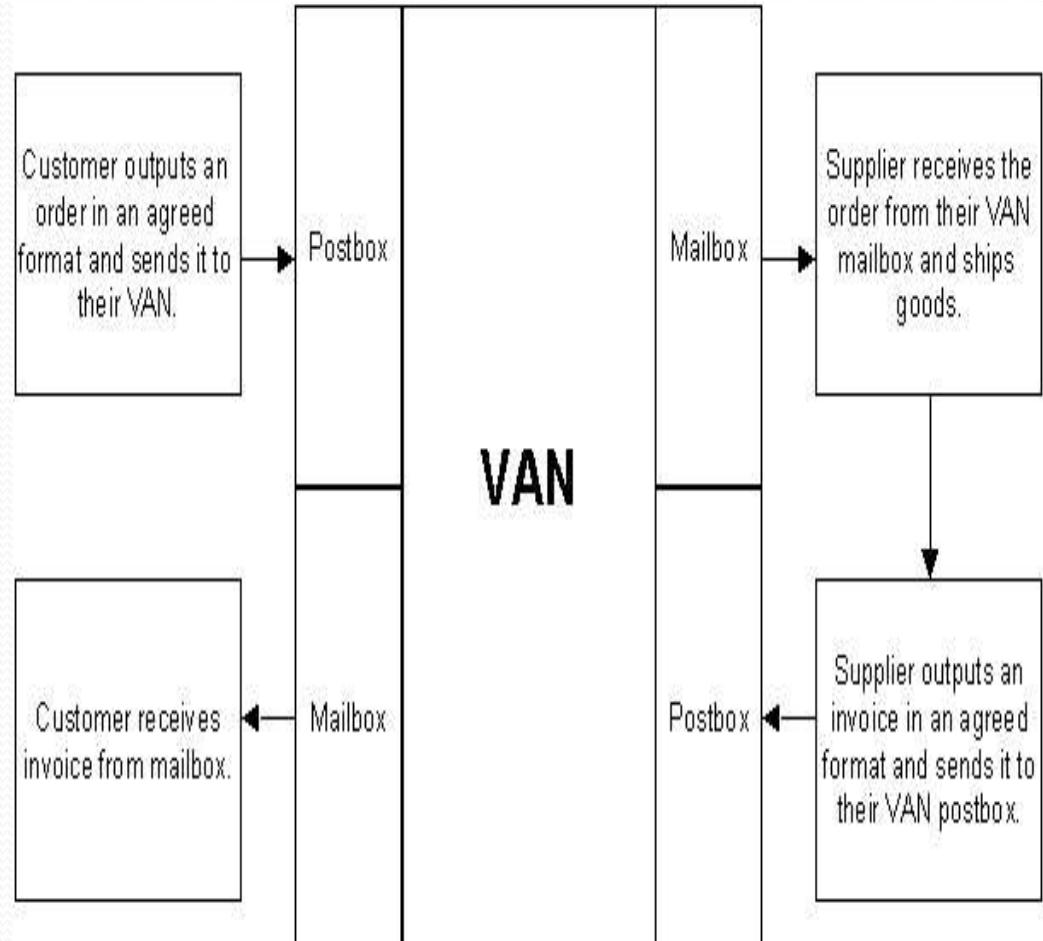
EDI

- An EDI VAN (Value Added Network) offers a B2B (business to business)network of electronic communications, a network which includes an array of 'value added' services, as well as facilitated communication protocols that otherwise would not be available when going through the Internet or regular phone

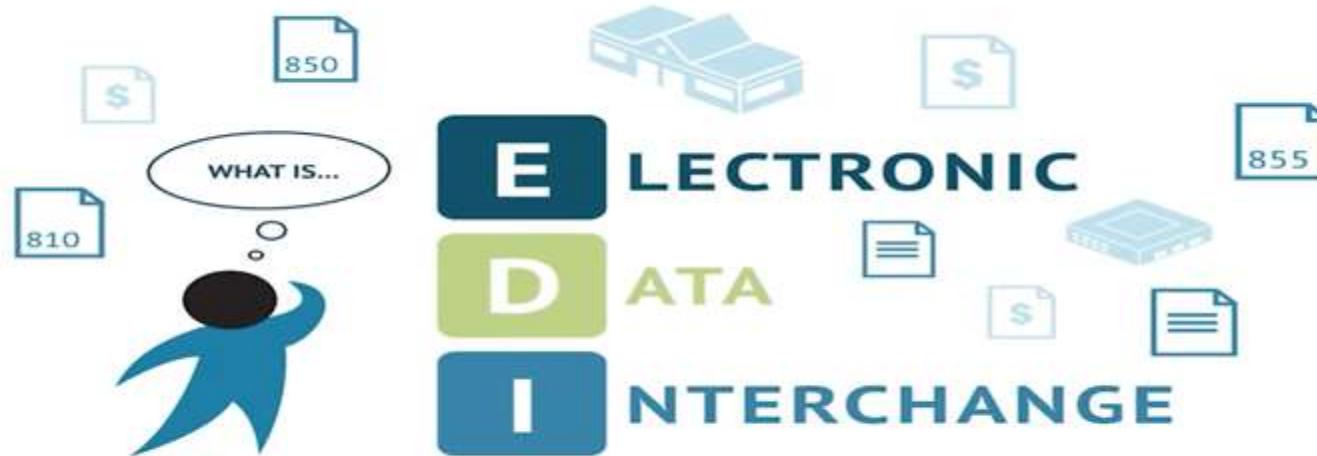


Components of value added network (Mail box)

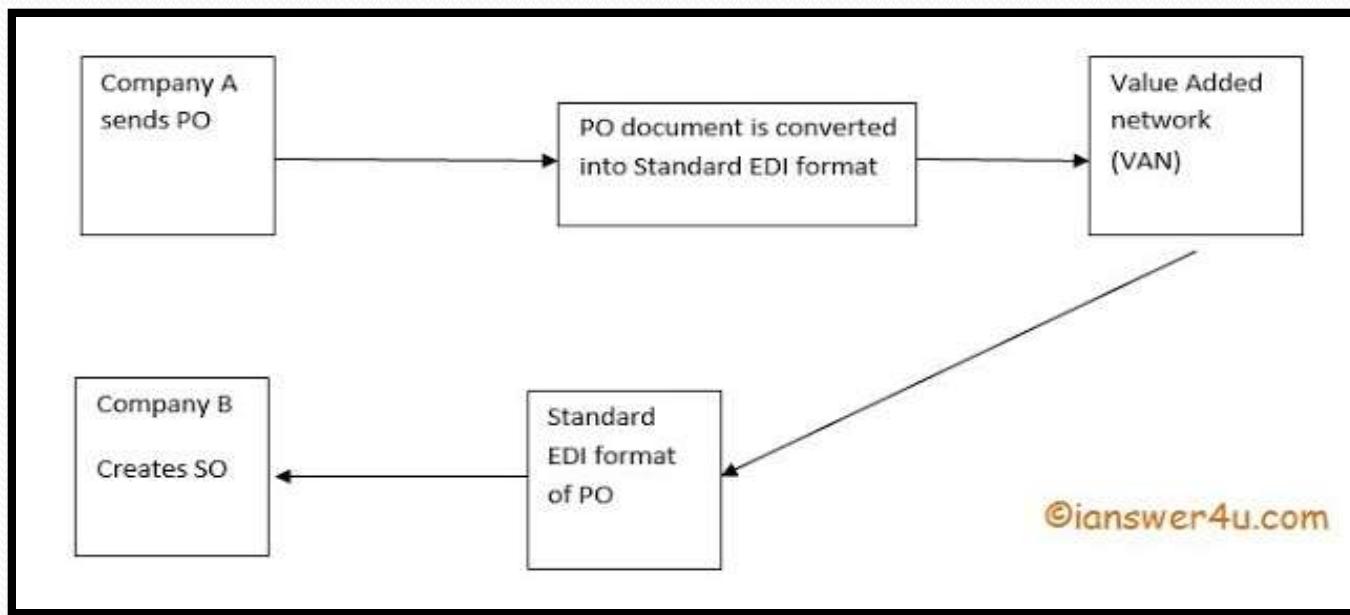
Users of a VAN (Value Added Network) can send messages to and retrieve messages from a mailbox. This is a specialized subscriber service that will hold messages until the subscriber requests them. company is assigned a mailbox. communications adaptor initiates a connection to that VAN mailbox and uploads the EDI files to the VAN mailbox.



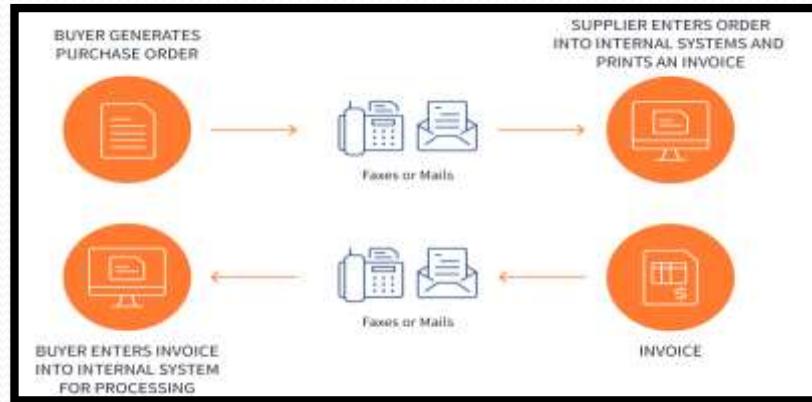
ELECTRONIC DATA INTERCHANGE (EDI)



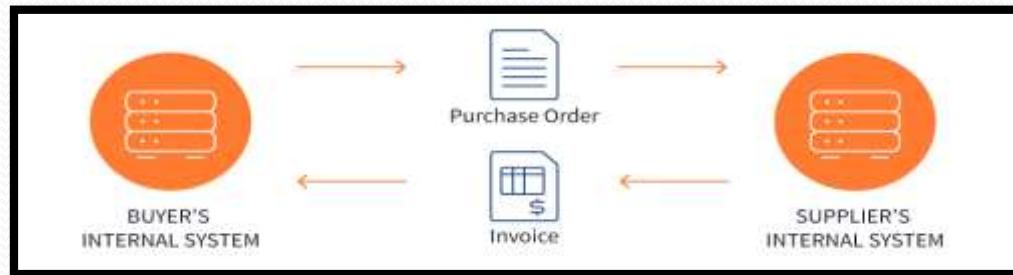
- **Electronic Data Interchange (EDI)** is the electronic interchange of business information using a standardized format; a process which allows one company to send information to another company electronically rather than with paper.
- Working of EDI:-



- Without EDI process looks like this — paper, different people involved , step to long:-



- The EDI process looks like this — no paper, no people involved, step to short:-



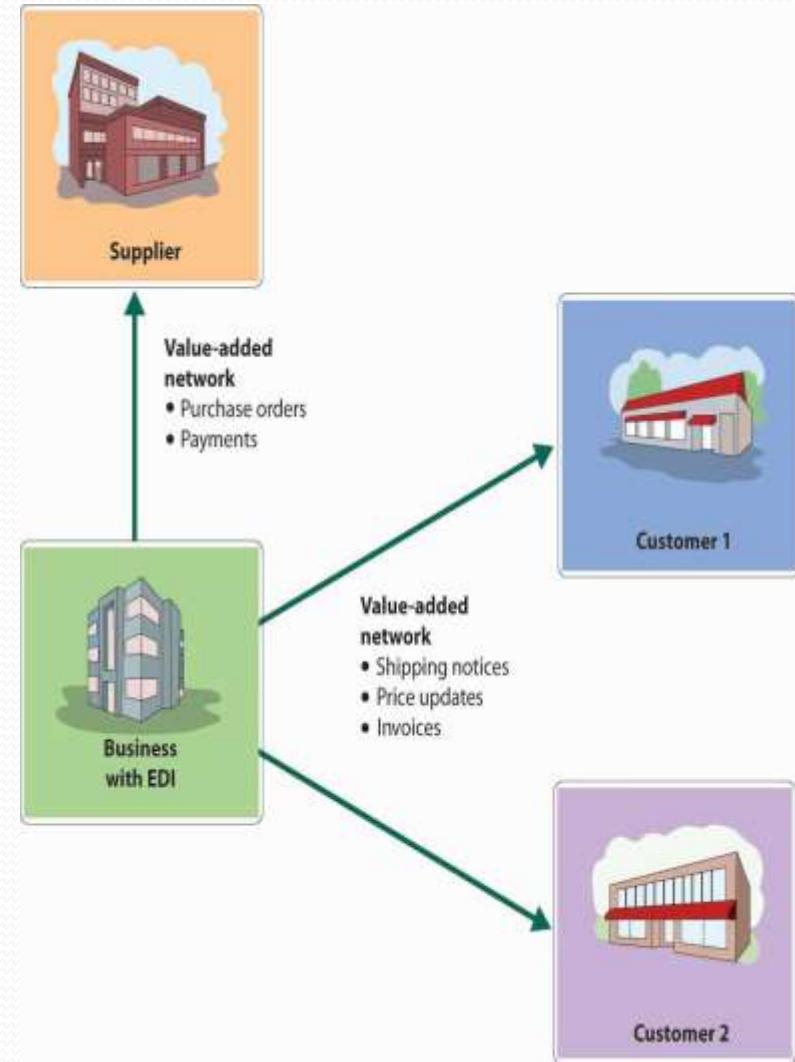
- These are some of the examples of EDI standard format used by different organizations:-
UN/EDIFACT standard, ANSI ASC X12, GS1 EDI ,TRADACOMS , HL7,etc.

WORKING OF VANS

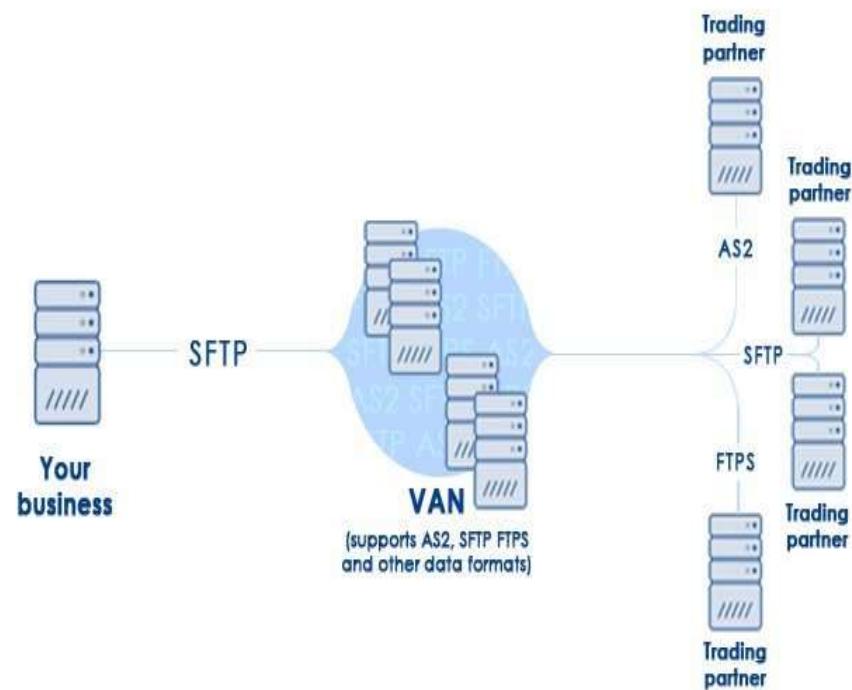


Working of VAN

- **Value-added networks** (VANs) usually operate in a mailbox setting, wherein a company sends a transaction to a VAN, and the VAN places it in the receiver's mailbox. The receiver contacts the VAN and picks up the transaction, and then sends a transaction of its own.
- The system is similar to email, except that it is used for standardized structured data rather than unstructured text.



- VANs traditionally transmit data formatted as Electronic Data Interchange but increasingly they also transmit data formatted as XML or in more specific “binary” formats. VANs usually service a given industry and provide “Value Added Network Services” such as data transformation between formats (EDI-to-XML, EDI-to-EDI, etc.).
- A VAN not only transports (receives, stores and forwards) documents but also adds audit information to them and modifies the data in the process of automatic error detection and correction or conversion between communications protocols.



VAN In Internet ERA



VAN IN INTERNET ERA

- The ubiquity of the Internet has lessened the attraction of VANs, largely due to cost considerations. it is often more cost-effective to move data over the Internet than to pay the minimum monthly fees and per-character charges included in typical VAN contracts. VANs have countered the challenge from the internet by focusing on specific industry verticals such as healthcare, retail, and manufacturing. These industries have unique data integrity and security concerns that make VANs a true value-added solution

VANs can also provide visibility tools that show the delivery status of data and some corresponding workflows, allowing companies to better coordinate dependent activities through the system rather than exchanging phone calls and emails. Not only is using a VAN more efficient and more accurate, but it also saves the cost of hiring human data-entry professionals for the exchange of information.

Like many pre-Internet technologies, VANs have had to reinvent themselves to remain relevant going forward. Today, VANs offer services that go above and beyond mailboxes for EDI exchange and retrieval, authentication of messages, and archival of past transactions. Modern VANs create value for businesses by offering automatic backups of EDI data, flexible access to that data via secure web portals, and unlimited data pricing packages

ADVANTAGES OF VAN



1) Error correction:-

VANs help in error correction, as they reduce human involvement, and improve recordkeeping. They can perform checks at the transaction level and ensure minimal error.

2) Improved exchange:-

The exchange of data becomes real-time with VANs. This improves decision-making and record-keeping and provides essential business intelligence to generate insights about operations.

3) Secure:-

Electronic data transfers can be made securely using encryption.

All communication between businesses can be encrypted to protect business secrets.

4) Standardized:-

VANs transfer data using standard formats, such as XML and CSV.

They allow the data to be read by the various Enterprise Resource Planning (ERP) software used by companies. They also enable the use of newer technologies without making changes to existing technology.

DISADVANTAGES OF

VANs



COST AND INSTALLATION

THE ADDED FEATURES AVAILABLE ON A VAN ARE NOT FREE. IN FACT, MANY OF THE MOST SOPHISTICATED VANS CAN BE QUITE EXPENSIVE, CHARGING SUBSCRIPTION COSTS OR DATA- TRANSFER RATES. SETTING UP A VAN IN YOUR E-COMMERCE BUSINESS CAN ALSO BE RATHER COMPLEX AND COSTLY, OFTEN REQUIRING NEW EQUIPMENT OR EMPLOYEE TRAINING AS DATA MANAGEMENT PROCESSES CHANGE. THESE ADDITIONAL COSTS CAN BE WORTHWHILE FOR SOME BUSINESSES THAT ARE PARTICULARLY CONCERNED WITH DATA SECURITY, YET ARE NOT FOR EVERY E- COMMERCE OPERATION.



THE DOUBLE-EDGED SWORD OF VAN USE

- Given the added cost of contracting the service, VAN systems are most often found in larger corporations and e-commerce sites.
- A small business with a VAN, therefore, may be able to streamline communication and transactions with the bigger players in the field, a considerable advantage in some sectors, such as e-commerce resellers.
- Having a VAN, however, can also make communication more complicated with small players that rely on simpler data-transfer methods. Small businesses are often forced to keep their old systems running after contracting a VAN in order to communicate with some of their smaller partners and affiliates

Uses in Market

- 1. E-Commerce**
- 2. Information Sharing**
- 3. Online Sales**
- 4. Logistics**

Providers of VAN

- 1.** Mulesoft
- 2.** Dell Boomi
- 3.** SPS Commerce
- 4.** Your Edi