UNIT-2

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Types of E-commerce & EDI

18-12-23

→ In the real world application of business. ~~for do~~ four distinct types of e-commerce are emerging.

→ 1. Information Access
2. Interpersonal Communication
3. Shopping Services
4. Virtual enterprices

1. Information Access:

→ It provides search and retreive capability for public domain and provide data which has the facility to retreive only the data of general use to all users and special information to those who are having the permission to see those information.

For example, information services that maintain the database and charge for access.

2. Inter personal communication:

→ This service provide method for parties with mutual interest to exchange information discuss ideas and improve their co-ordination in various fields related

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to research education, engineering, Science, Business related etc...
for example that customer and supplier design groups jointly working, files being send by publisher to printer and purchasing agent and expanding schedule with supplier.

3. Shopping Services:

→ Shopping services allow people to search and purchase goods or services through internet.

→ This days on internet we can find several groups providing services like booking of tickets, purchasing orders, purchasing items etc.. which can be delivered to home.

4. Virtual Enterprices:

→ virtual enterprices are business arrangement in which trading partners separated geographically but are able to engage in complex join business activity as if the supply chain interaction and where planning and forecast data are transmitted quickly and accurately through out multi layer supply chain

management.

→ E-commerce is now implement on the internet using variety of sophisticated web based tools. The Scope of E-commerce now includes customer interaction of product selection, contract negotiation and so on all throw to the product and services, delivery and payment settlement.

19-12-23

Driving forces of E-commerce

→ Today business environment is greately by Market, Economical, Societel and I.T. Technological factors creating a lot of compitution. Also this factors are in their many changes unexpected it anytimes. Such changes in the business world have been define as business collaboration. Inorder to success in this dynamic world companies must take action: Such as the lowering cost and improving quality etc.

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5) Glo

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→ Global

→ At the same time they need to innovative in customized products creating a new products and providing good customer services.

★ The various driving forces behind e-commerce can be listed as below :-

1) Global Customers
2) Global Products
3) Global collaborations
4) Global Operation
5) Global Resources

1) Global Customers :-

→ Customers are people who may travel anywhere or companies with global operation.

→ Global I.T. can help to provide fast and good services.

2) Global Products :-

→ Products are the same throughout the world or are assemble by subsidies throughout the world.

→ Global I.T. can help manage world -

wide marketing and quality control.

3) Global Colloborations :-

→ The knowledge and experiments of a global company and quickly share and organize to support individual or groups efforts. only global I.T. can support such as the enterprices colloborations.

4) Global Operations :

→ Parts of production or assemble process are assign to subsidies based on changing economic or other conditions.

→ Only global I.T. can support geographical flexibility.

5) Global Resources :

→ The use and cost of common equipment, facilities, and peoples are shared by subsidies of a global companies.

→ Global I.T. can be keep track of such shared resources to support geographical flexibillities.

EDI : Electro

→ EDI stand
interchange.

→ Exchange
companies
transaction

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EDI: Electronic Data Interchange

→ EDI stands for Electronic data interchange.

→ Exchange of electronic data between companies using precisely defined transaction.

→ There are four types of EDI processing system :-

(1) computer to computer
(2) Business Document
(3) Standard format
(4) Business partners

(1) Computer to computer :- EDI replace postal mail, fax, and e-mail.

→ While e-mail is also an electronic approach, the document exchanged via e-mail must still be handled by people rather than computer.

→ Having people involved slows down the processing of the documents and also introduced errors.

→ Instead, EDI documents can grow straight through to the appropriate application on the receivers computers

(e.g. the order management system) and processing begin immediately.

2) Business Document :- There are many of the document that are typically exchange the between business.

→ The most common documents exchanged value via EDI are purchase orders, invoices and advices advancesship notice. but these are many others such as bill of lading, customers, documents, inventory, shipping status documents and payment documents.

3) Standard Format :- EDI documents must be processed by computers rather than humans, a standard format must be used so that the computer will be able to read and understand the computer documents.

→ A standard format describes what each piece of information is in what format (e.g. integer, decimal, MMDDYY). without a standard format each company would send document using its company specific format. and much as an english speaking person probably doesn't understand Japanese the receivers

computer syst
the company
senders' date

(4) Business Pa

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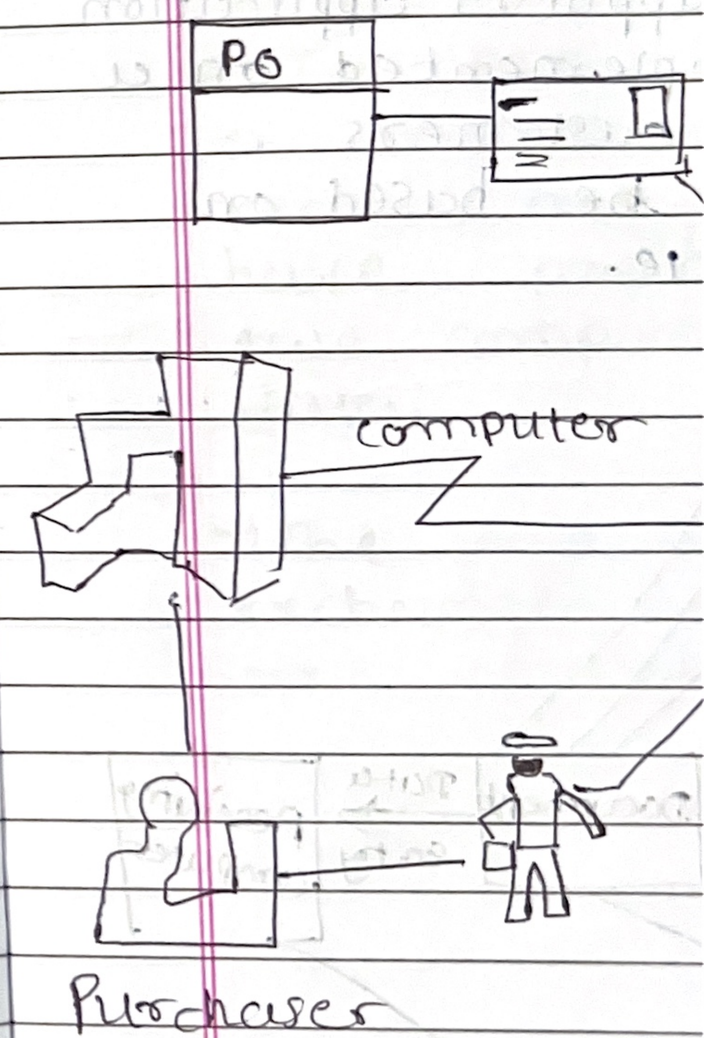
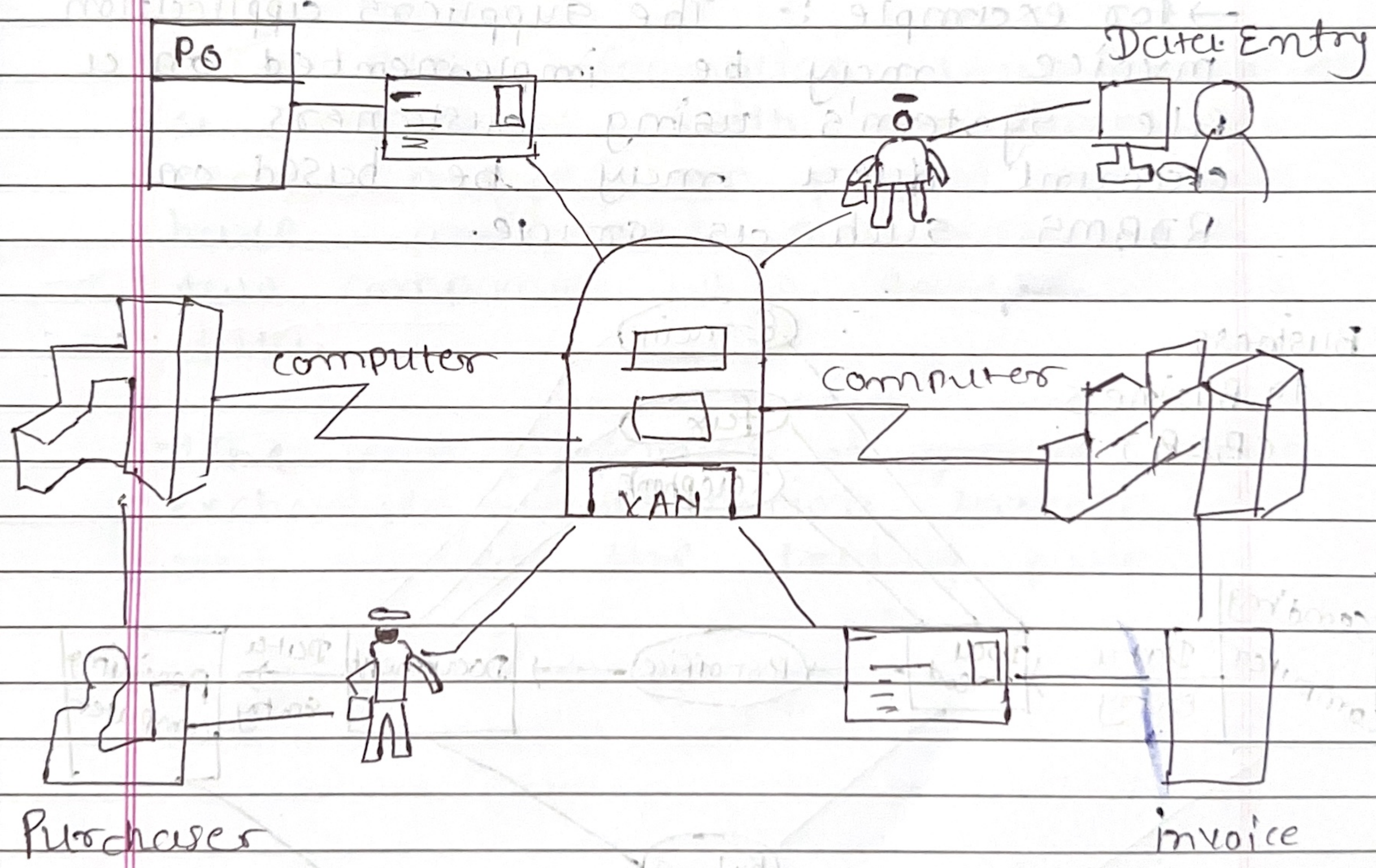


computer system doesn't understand the company specific format of senders data.

(4) Business Partners :-

→ The ~~proc~~ exchange of EDI document is typically between two different companies reffered to as business partners or trading partners.

→ For example, company A sends order to company B. company A & B are now business partners.



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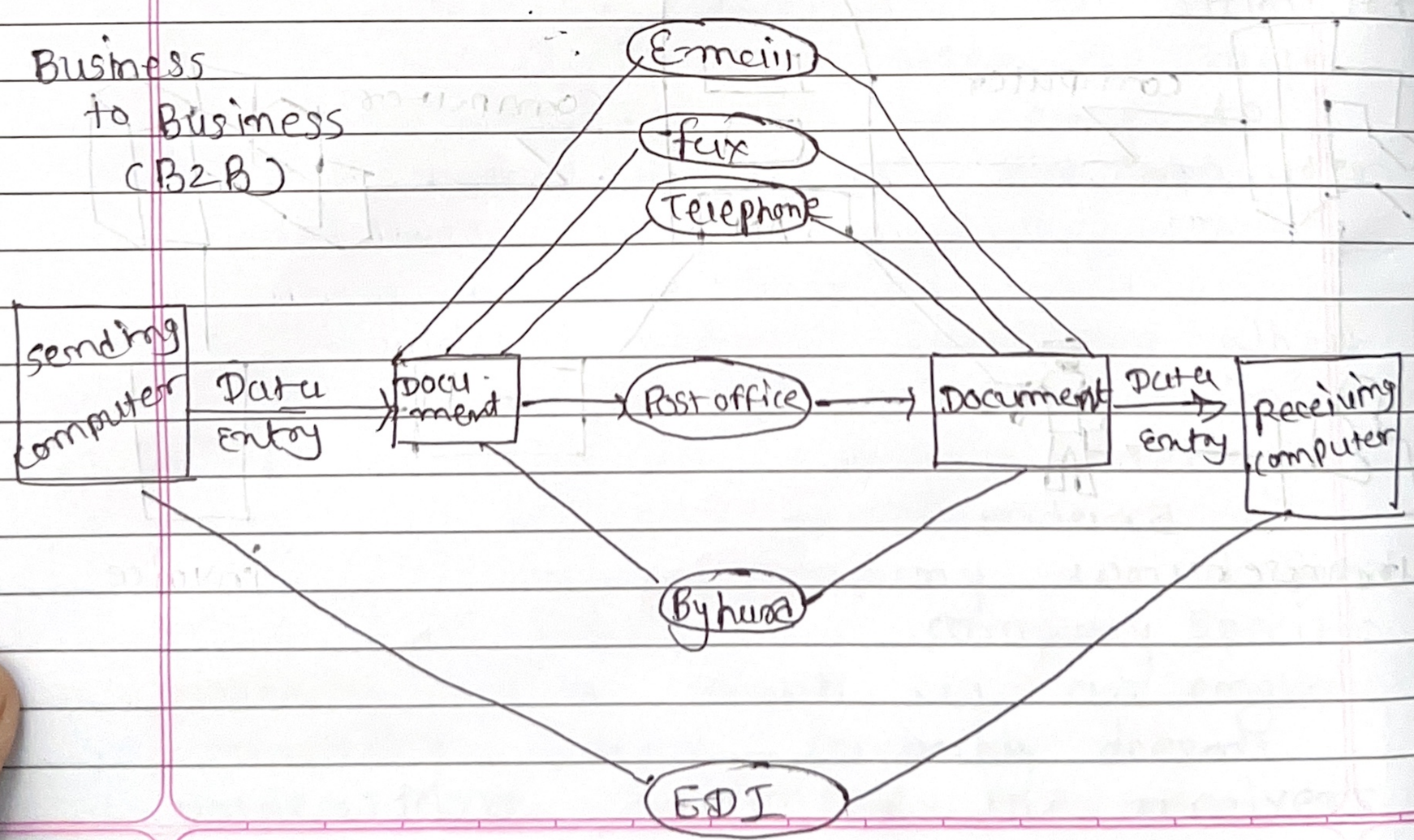
EDI :-

→ EDI is the electronic exchange of business documents in a standard computer processable universally accepted format between the business partners.

→ Thus, business documents such as the purchase orders, invoices, payments shipping schedules, delivery schedules etc...

→ For example :- The suppliers application invoice may be implemented on a file system's using customers account data may be based on RDBMS such as oracle.



Features of

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→ EDI transfe nts interor departments suppliers ,

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→ The two exchanged are calle

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Features of EDI

→ Exchanging of structure business information in the standard format between computers.

→ It has reduced data entry link the need for a paper basis systems and improved business

→ EDI transfers structure business documents internally among groups of departments or externally with its suppliers, customers and subsidaries.

→ In EDI information transferred on a network with not having to read, retyped or printed out must have predefined structure. the two companies which send & receive data.

→ The two companies or groups which exchanged information through EDI are called the trading partners.

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Benefits of EDI

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1) Cost & Time saving
2) Relationship
3) Manpower
4) Decision making
5) competition.

(1) cost & Time Saving :- It saves time and cost in term of creating manual business documents.

(2) Relationship :- Business relations with the trading partners and customers and customers improved through better quality and speed of services.

(3) Manpower :- It reduce man power due to predefined standard format. ex. EDI is totaly integrated with application programs. EDI is a standard format automate transaction of Business documents.
ex :- Order processing / Invoicing / Job orders and Billing etc..

(4) Decision Making :- It provides better information for management to take decision in time it helps in business planning and budgeting

at the right

(5) competition :-
maintained a
business good

Disadvantages

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EDI

at the right place and time.

(5) competition :- competition can be maintained and improved the business goodwill.

Disadvantages :-

1) High Installation cost
2) Not Suitable for all customer
3) Third party
4) less transparent than paper based system
5) Knowledge based employees needed.
:- only qualified & trained employees can be work on the EDI systems.

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Various Model of E-commerce :-

(1) B2B
(2) B2C
(3) C2B
(4) C2C
(5) B2CR
(6) CX2C

(1) B2B :-

→ B2B commerce includes online whole things, where business sell goods and services to other business on the web.

→ With internet based on supply chaining trading business work closely to efficient the supply of goods and improve productivity

→ This type of e-commerce consist of the electronic transaction and dealing related to the goods and services.

→ Basically, this are conduct between companies and includes whole seller and producer dealing with retailers.

→ In B2B, one business organization are performs there operation to other business organization.

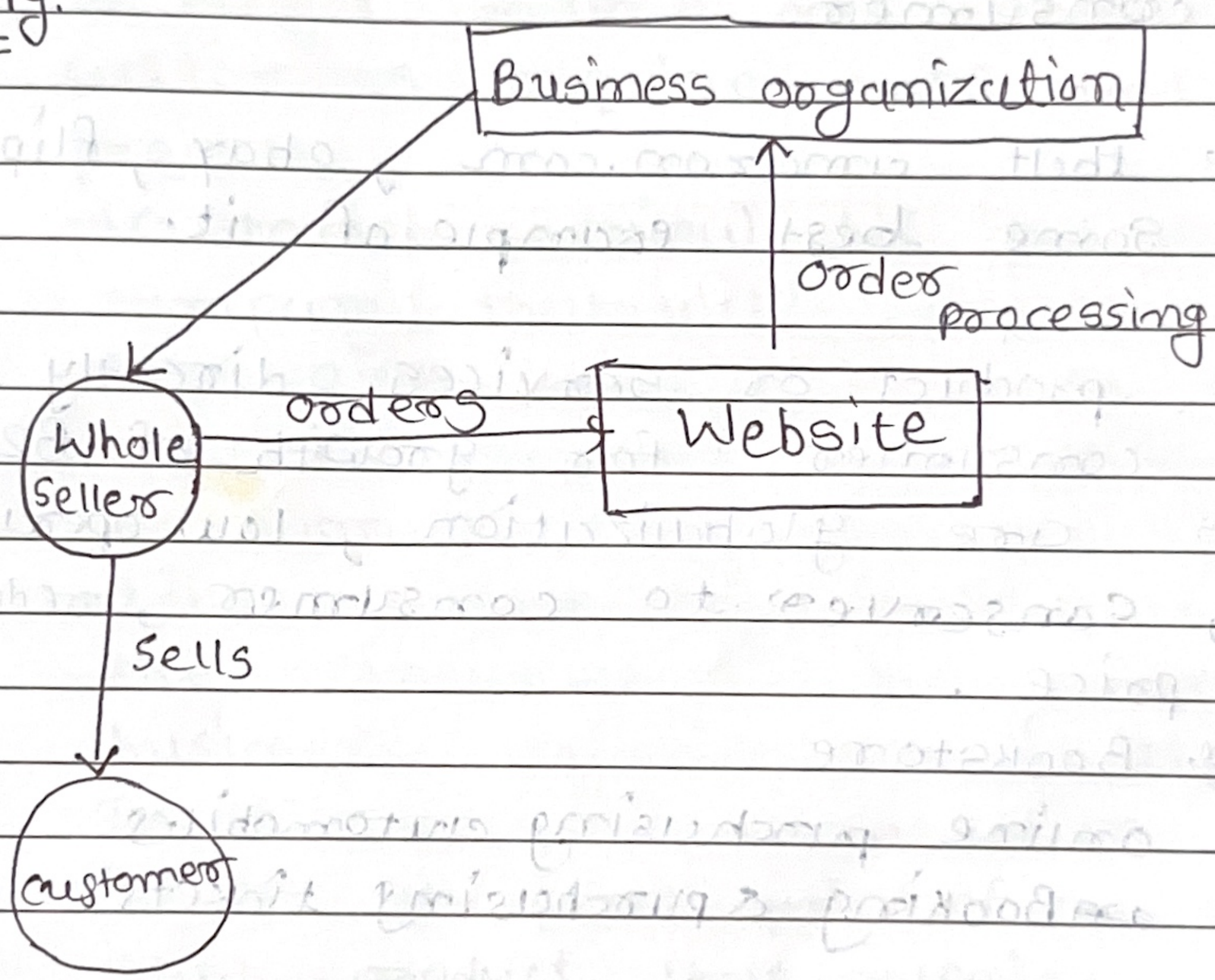
→ Example :-

→ Manufacturing supply goods to the Retailer or whole seller.

→ Intel selling Micro-Processor to dell.

→ Sell products and services to small, medium and large enterprice business.

Fig.



(2) B2C :

→ In business to customer from companies market physical goods to consumer online in a more personalized dynamic environment. This includes the product delivery of digital goods, software, electronic media and information.

→ The business to consumer there business organization perform there operation with consumer. Business organization sells goods and provide services to the consumer.

→ Like that amazon.com, ebay, flipkart are some best example of it.

→ Sell product or services directly to the consumer for growth of B2C sides are globalization, low operational cost, conserve to consumer, reduce the price.

ex. Bookstore
online purchasing automobiles
Booking & purchasing tickets.

(3) C2B : (cons

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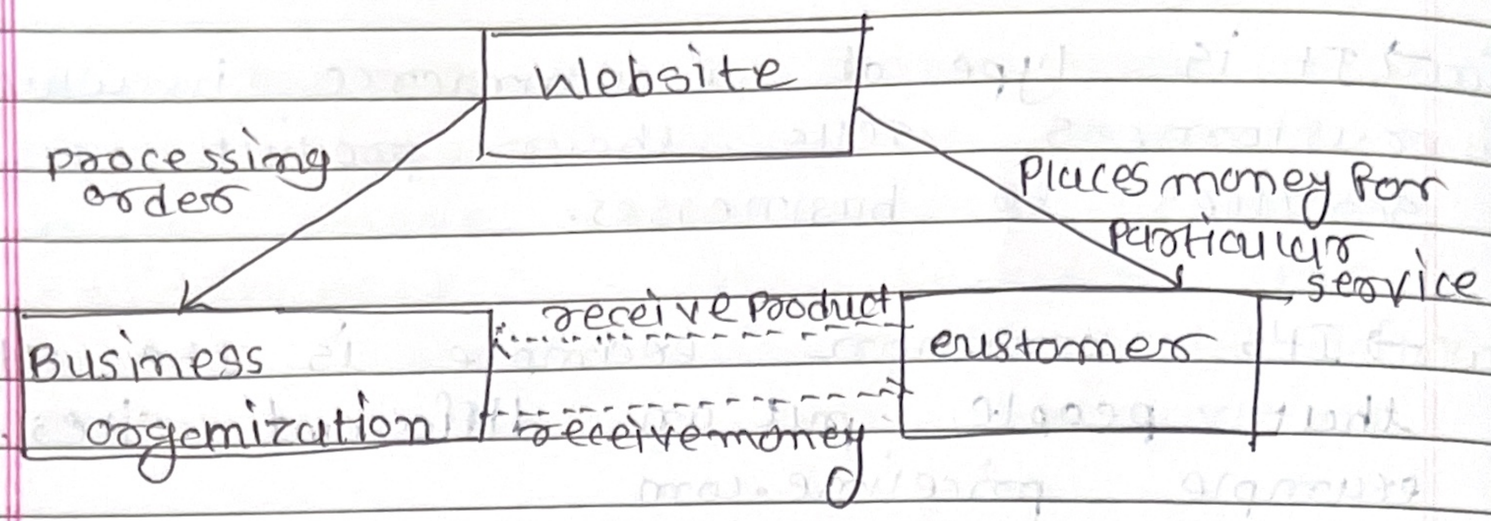
(3) C2B : (Consumer to Business)

→ It is type of e-commerce in which customers sells their product or services to businesses.

→ It's common example is the ads that people put on different sites.
example priceline.com
→ Consumer to Business e-commerce is define as commerce between customers and organization.
→ A customer post his project within a budget online and companies review customers requirements and bid on the project.
→ customer review bid and select a company that will complete that project.
The C2B model involves a transaction that is conduct that between a consumer and business organization.
→ The difference is that in this case the consumer is the seller and the business organization is the buyer.
In this kind of transaction consumer decide the plan price of a particular item, product that suppliers.
→ This category includes individual who sell products and services to the organization.
→ example that www.naukri.com
www.monster.com

fig. C2B



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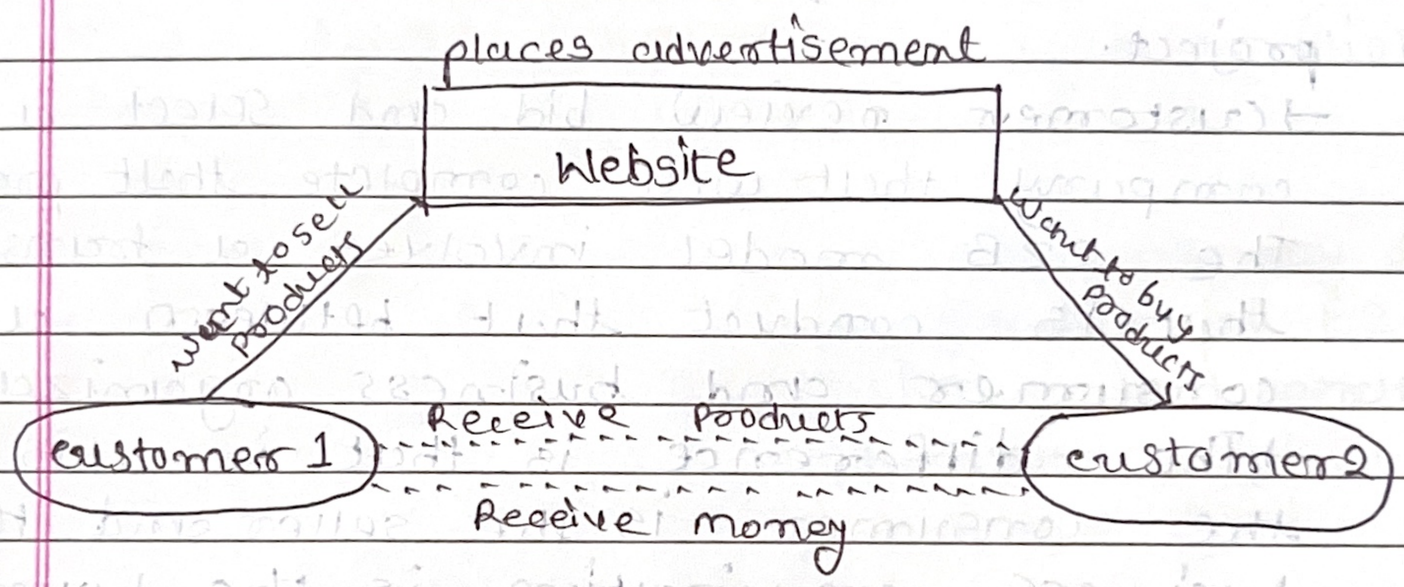
(4) C2C (consumer to consumer)



→ Consumer to consumer e-commerce or C2C is simply commerce between private individuals or consumers.

→ In this type of e-commerce in which one consumer sends its products to other consumer threw internet or other computer Network.

→ A website
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like resides
or rent room
information

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(5) B2CR (Bu

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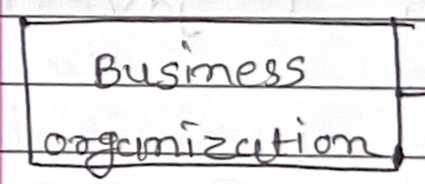


→ B2CR is c
business s

→ A website follows the c2c business model that helps consumer to sell like residential property, cars, motorcycles or rent room etc... by publishing their information on the website.

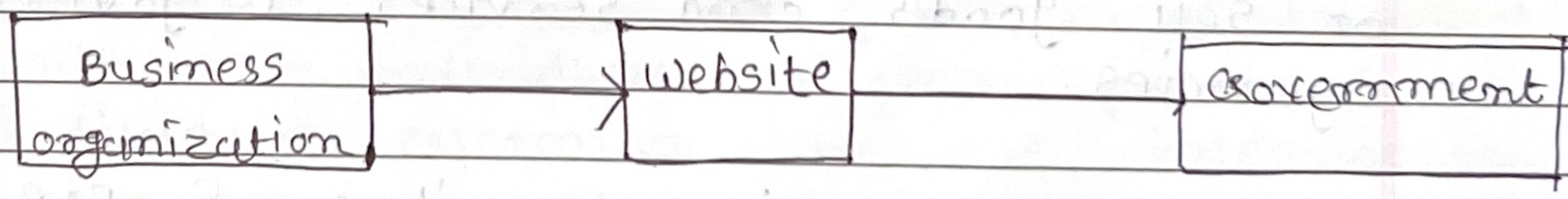
→ The C2C model involves transaction between consumer. Here a consumer sells directly to another consumer. Example that ebay.com, olx.com.

→ One common example of online auction website that provide a consumer to advertise and sell their products online to another consumer.

→ While the seller needs to pay a fixed fees to the online auction house to sell their products. The buyer can bid without paying any fees. The site brings the buyer and seller together to conducts deal.

(5) B2G (Business to Government) :-

fig.



→ B2G is a business model that refers to business selling product, services or info.

to Government or Government to Businesses.

→ Any commerce between companies and public sector. Bid on government projects ~~and~~ or product. Examples:- Startup India, ~~Bid on~~ India in Business Portal, Toll free Number and monitoring Public Sector and private Sector agencies and organization.

→ Few steps for business criteria in the government model:-

1. Gujarat, the investment destination.
2. Major industries
3. Sector profile
4. Investment opportunity
5. Major Project
6. MOUs
7. Industrial Parks
8. Policies for growth
9. Investment regions
10. Special economics zones
11. Infrastructure

→ In the businesses pay tax, file reports or sell goods and services to government agencies.

→ B2G model is a variety of B2B model such as the website are used by Government to track and exchange information with various business

organization
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⑥ G2C (Gove

Government

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organization such as website by the government and provide a medium to businesses to submit application forms to the government.

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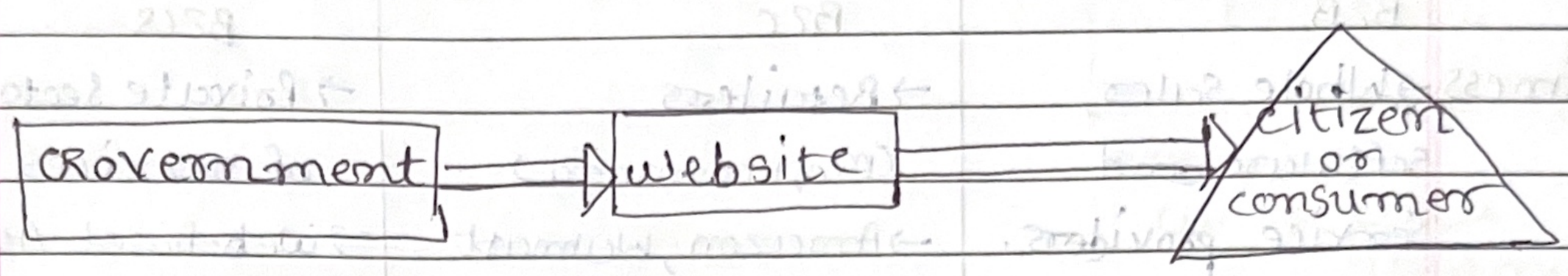
⑥ G2C (Government to consumer/citizen) :-



→ These are the activities such as paying tax, Land and Vehicle registration, providing information to the public among other performed between government and citizen/consumer.

→ In this platform, the government provide essential services to its citizens efficiently information that should be in the public domain to the activities small and medium threw the government schemes for citizens or consumer.

→ In this model, the government transact with an individual customer. payment of individual customer over the internet by using G2C model.

→ A main objectives of G2C websites is to reduce average time for servicing

peoples requests for various government linked services.

* Most Common Differences of Models :-

	Business	consumer	Government
Business	B2B → Whole saler, software and Service providers.	B2C → Retailers (Most common) → Amazon, Walmart	B2G → Private Sector Supplier of services. → Web-based Application databases.
customer	C2B → Individual who has something to offer. → Blogger, Hiring websites.	C2C → Auction, website → ebay	C2G → Public Government Auctions.
Government	G2B → Online collection of taxes and fees.	G2C → Online collection of taxes and fees.	G2G → Document exchange sharing public Admission registers.

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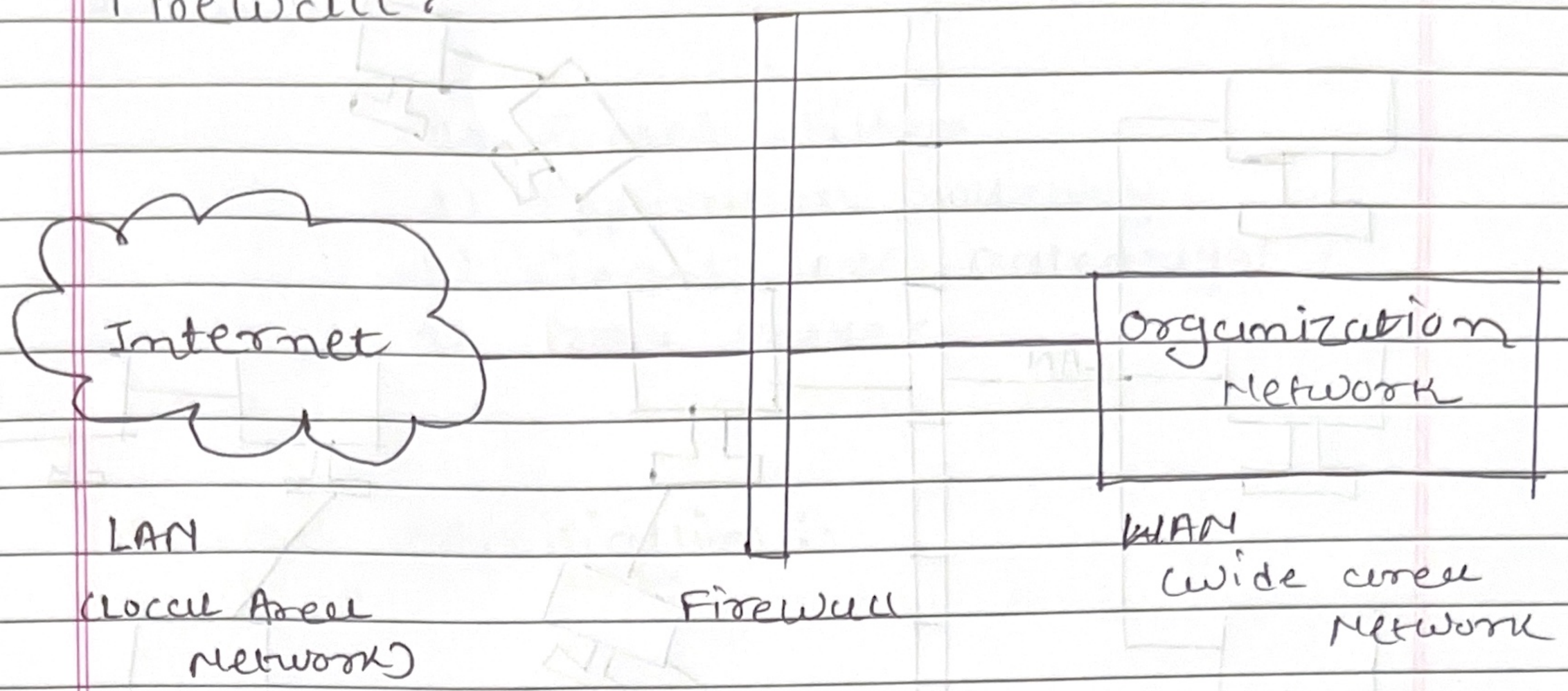
Firewall :-



What is firewall ?

→ A firewall can be software based or hardware based and it is used to help and keep a network secure.

→ A system design to prevent unauthorized access to ~~performance~~ or from a private network.

→ Firewall can be implemented in both hardware and software or a combination of both.

→ The ICSA means International computer Society association define firewall as a system or group of system that enforce and access control policy between

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two computer network:

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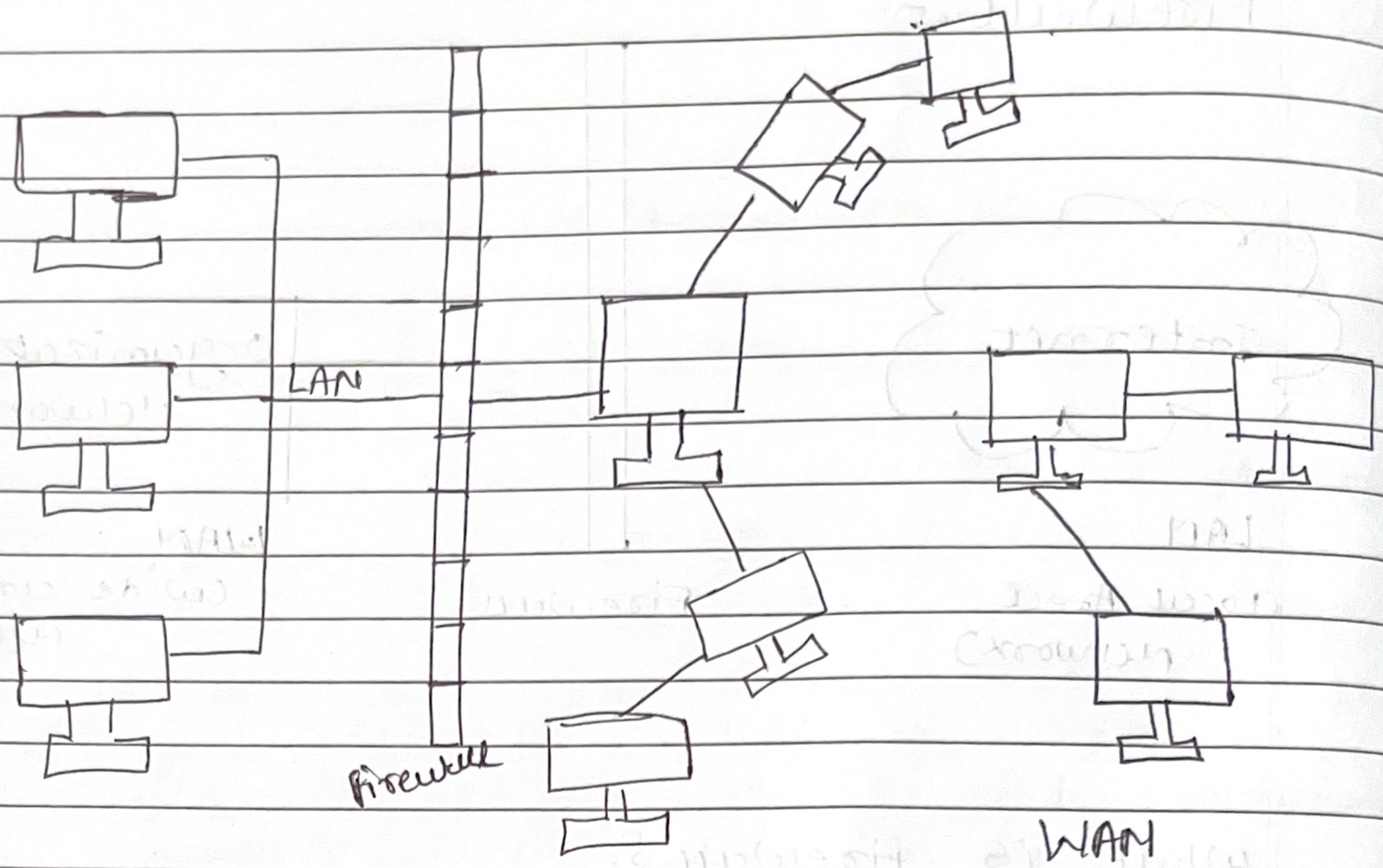


Few steps of Firewall :-

→ A Firewall is a software or hardware based network security system that controls the incoming and outgoing network traffic by analysing the data packets and determining whether they should be allow through or not based on a rule set.

→ Many personal computers operating system includes software based firewall to protect against threads from the public Internet.

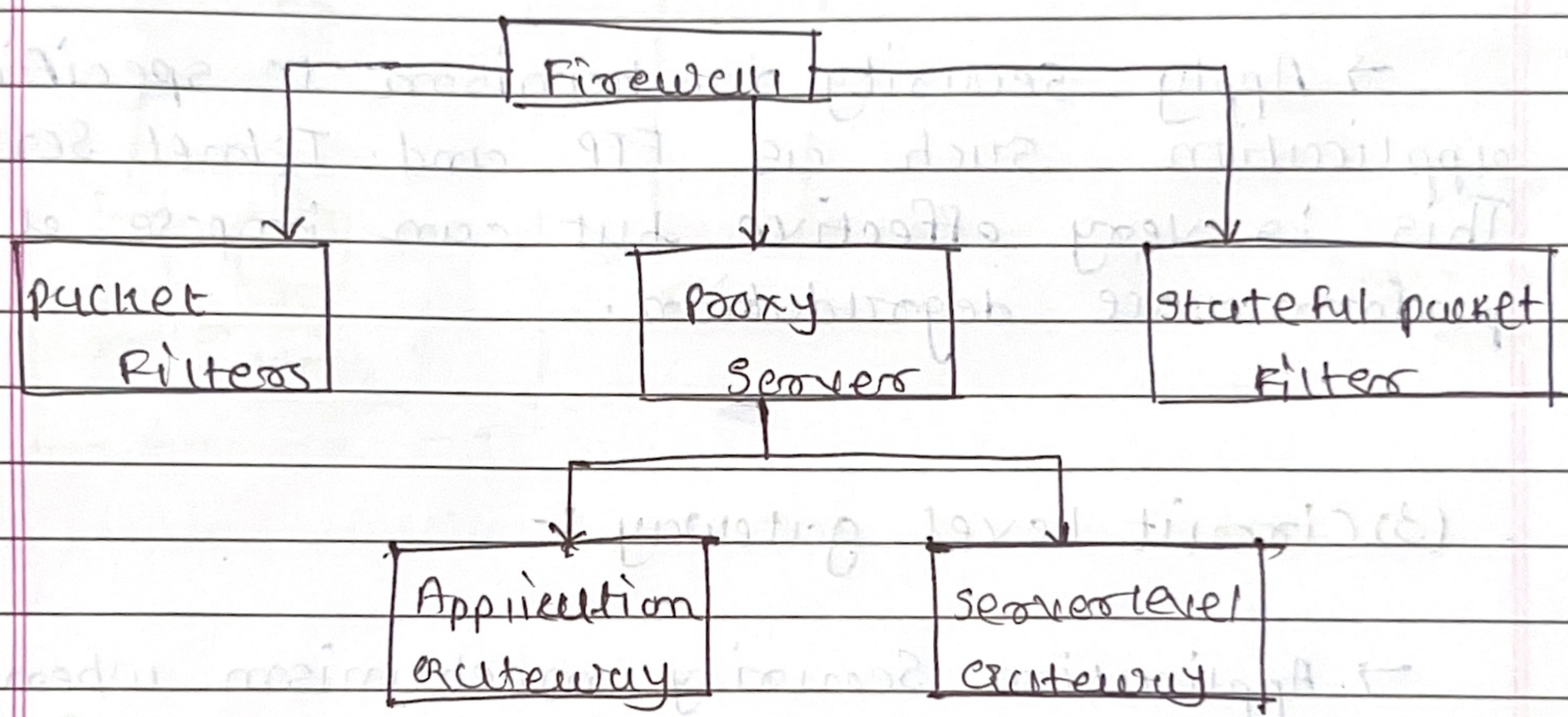
→ All messages interdict pass threw the firewall, each messages and blocks that

do not meet the specified Security criteria.

→ There are several types of Firewall techniques :-

1) Packet Filter
2) Application Gateway
3) Circuit level Gateways
4) Proxy server

Firewall classification :-



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IP security and OS :-

→ The operating System use IP Security which is an open standard security technology developed by IETF (Internet Engineering Task Force).

1. Security Association
2. Tunnels and key management
3. Native Filtering capability
4. Digital certificate support.
5. VPN and IP security

1. Security Association :

→ The building block on which secure communication is bit a concept known as a security association.

→ Security Association relates on a specific set of Security parameters to a type of traffic.

2. Tunnels and key management :-

→ Use a tunnel to negotiate and manage the security association that are required to set of secure communication between two host.

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③ Native Filtering Capability :-

→ Filtering is a basic function in which incoming and outgoing packets.

→ can be accepted or rejected based on a variety of characteristics.

→ This allow a user or system administrator to configure the host to the control traffic between this host and other hosts.

④ Digital certificate support :-

⑤ Virtual Private Network (VPN) and IP security :-

→ A VPN securely extends a private Intranet across a public network such as the Internet.

* Advantages of IP Security :-

→ Network Layer Security
→ Confedently
→ No application dependent.
→ Security

* Disadvantages of IP security :-

→ CPU overheld
→ Maintainance.

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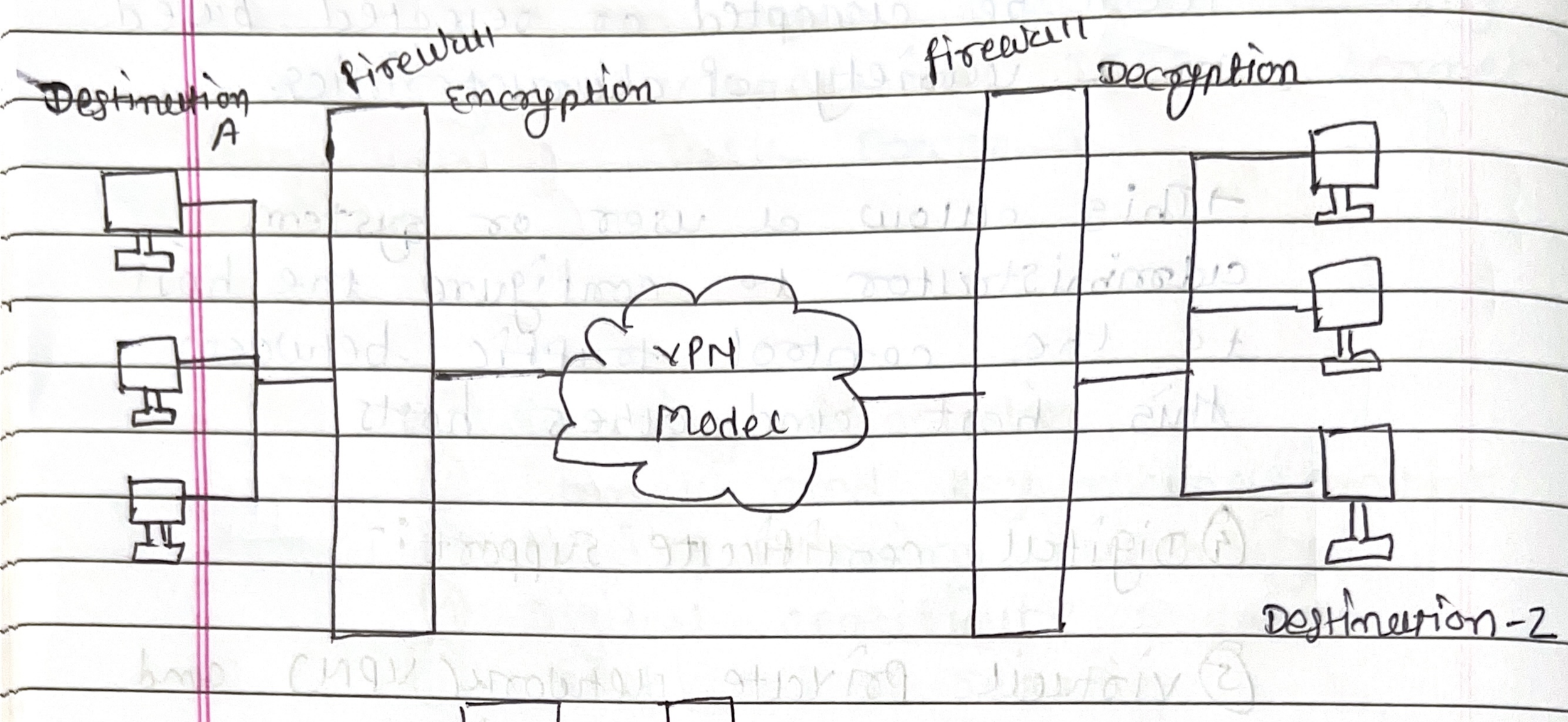
VPN

→ VPN stands for Virtual Private Network.



→ Virtual private network apply encryption, authentication and integrity protection so that we can use a public network and if it is a private network.

→ Virtual private network offers high amount of security allow user to remote access a private network.

→ It simulate a private network over a public network.

→ Generally, supported two types of protocol:-
① Point to point tunneling support protocol (PPTP)

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② Layer$_2$ tunneling protocol (L_2TP).

(1) PPTP :-
→ Basic protocol of PPTP.
→ It support user to LAN connection connectivity.

(2) L_2TP :-
→ Advance version of PPTP.
→ It support bothe user to LAN and LAN connectivity.

D.-10-1-2024

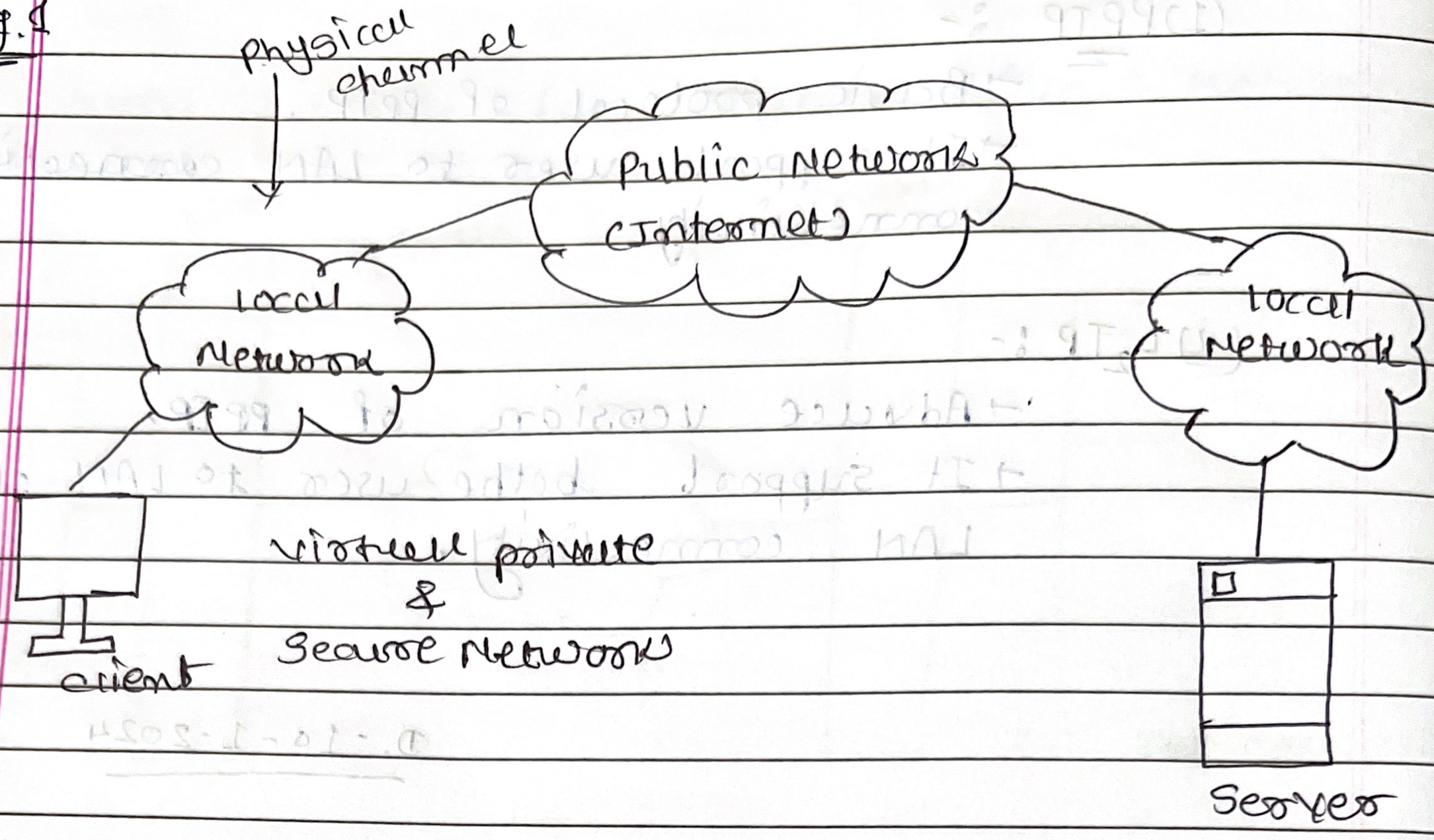
→ Virtual private network is a type of private network that use public tele-communication such as the internet instead of lines to communication.

→ Became popular as a more employees worked in remote areas (location).

→ VPN are only virtually private networks however because these data actually travels over shared public networks instead of fully dedicated private connection.

VPN connecting overview :-

Fig. 1



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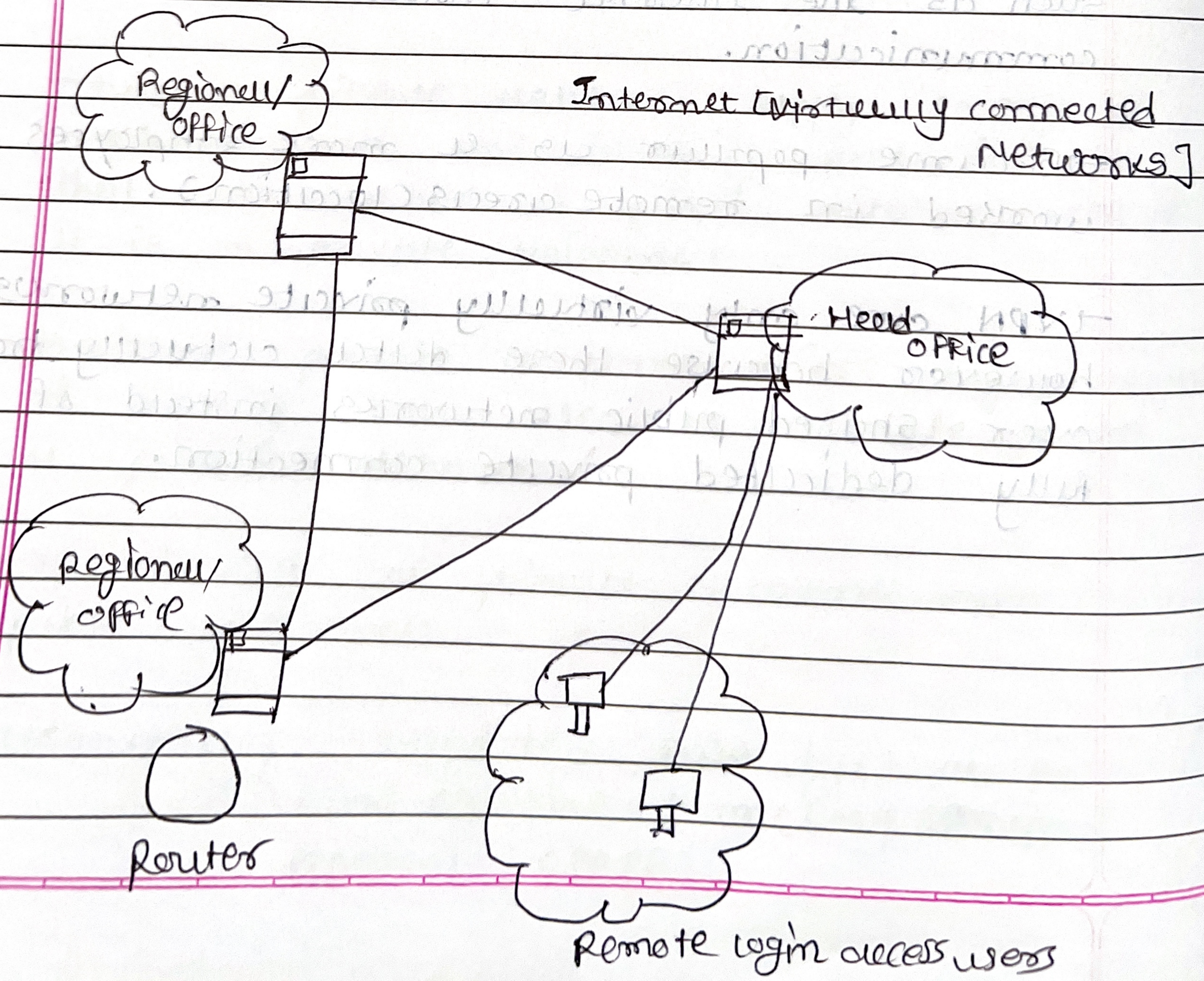

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→ Different protocols like L2TP, PPTP, IP - security, data integrity and if it require data confidently.

Brief overview of how its works :-

1. Two connection :
→ One is made to the internet and the second is made to the VPN.

2. Datagrams :-
→ Contains data destination and source information.

3. Firewalls :-
→ Virtual private network secure allows authorized users to pass throw the firewalls.

4. Protocols :-
→ Protocols creates the VPN tunnels PPTP, L2TP, IP security, Socks is not used as much as the once above.

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* What does a VPN hide?

→ A VPN can hide a lot of information in

1) User's browsing history
2) User's IP address and location
3) User's location for streaming
4) User's device a web activities and internet freedom.

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* Advantages of VPN :-

→ It provides you anonymity.

→ It has security protection from cyber attacks.

→ It will prevents bandwidth throttling.

→ It will help you to improve a gaming experience.

→ It avoid the geo-restrications.

* Disadvantages of VPN :-

→ It can slowdown the internet speed.

→ It has privacy issue.

→ It might be connection droping while you will be connected

→ It might have configuration difficulties.

→ It has legality issues.

* HTTP & HTTPs :-

→ HTTPs means Hyper Text Transfer Protocol Secure and HTTP means Hyper Text Transfer Protocol.

→ HTTPs is a combination of HTTP with secure socket layer and TLC Protocol.

→ It provides encrypted communication and secure identification of a network server.

→ HTTPs connections are used for payment transaction on the WWW (world wide Web) and for sensitive transaction in corporate information systems.

→ HTTPs is a secure version of the

Hyper text transfer Protocol.

→ HTTPs has allow secure E-commerce transaction such as online banking.

→ Web browsers such as the internet explorer and firefox display of paid lock icon to indetect their website is secure and also it display :

https://secure version bar.

ex. https://hngu.com
https://flipkart.com
https://iitms.org

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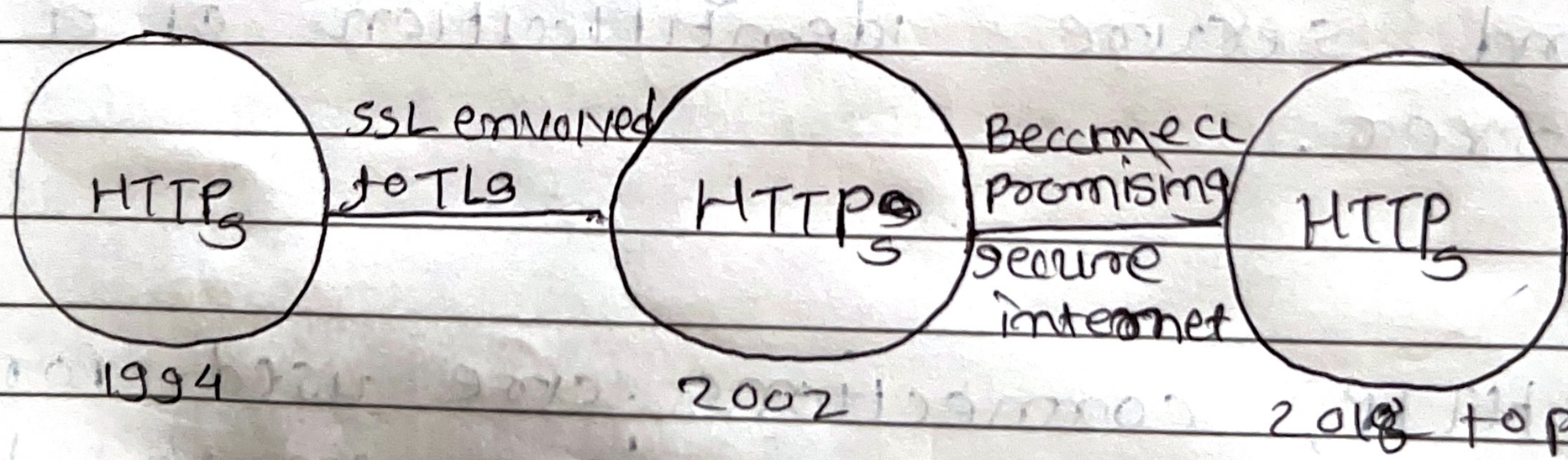
fig. TLS = Transfer layer Server.



HTTP + ~~HTTP~~ SSL = HTTPs

→ Define how messages are transmitted between visitors browser and website server.

→ Protects and encrypts information sent across the internet.

→ Encrypts information sent between browser and server.

→ Hyper text transfer protocol secures max it harder for hackers to break the connection and steal personal information such as credit card numbers, addresses, passwords and all device etc.

* Difference between HTTP and HTTPs :-

HTTP	HTTPs
→ HTTP means 'Hyper Text transfer Protocol'.	→ HTTPs means 'Hyper Text transfer Protocol Secure'.
→ It is not secure and unreliable.	→ It is a secure and reliable.
→ HTTP URLs begin with http:////	→ HTTPs URLs begins with https:////
→ It use Port 80 by default.	→ It is use Port 443 by default.
→ It is subject to mem in the middle and eaves dropping attacks.	→ It is a design to with stand such as attacks and consider secure against such attacks

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Advantages of HTTPs :-

→ The main advantages of Hyper Text transfer protocol secure (HTTPs) is that any sensitive information that need to be transferred for the user to another location can be done use securely.

→ And seeming this link is encrypted any one who does try to intersects the message they have to get the code to decrypt it.

Disadvantages of HTTPs :-

→ The main disadvantage of HTTPs are not allow 1 to tips to scale of good and bad but it HTTPs is being used for a web request. It is normally seeming slower than HTTP also some older version of browsers or SSL will refuse to work HTTPs.

D- 15-01-24

* SSL : Secure Socket Layer

→ SSL is a protocol developed by Netscape for transmitting private documents via the internet.

→ The SSL security protocol provides data encryption, server authentication, message integrity and optional client authentication for a TCP/IP connection

→ SSL is built into all major browsers and web server. Both Netscape navigator and internet explorer support SSL and many website use the protocol to obtain confidently user information such as the credit card number.

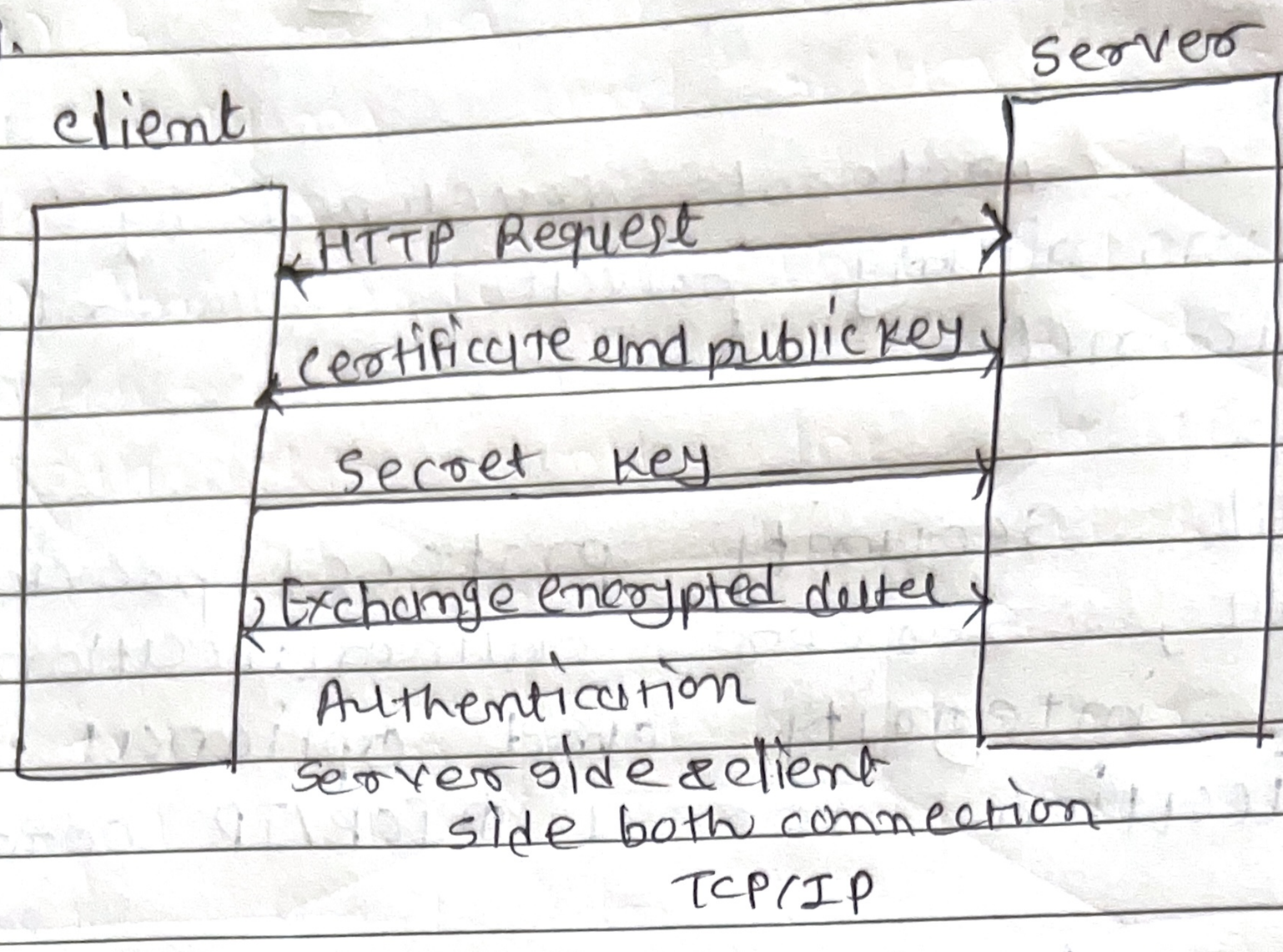
→ The primary goal of SSL provide priv and between two communicating application.

fig.

secure https://

* HOW SSL WORKS :-

Fig.



→ SSL install a transparent layer rather than building on HTTP. This means that system works with any standard protocol including HTTP, FTP, TELNET. The system works by establishing a separate channel for all messaging using HTTP. This secure protocol on the server and browsers. The initial hand shaking defines the key used and establishes the connection.

Step 1: client Requests HTTPs.

Step 2: server sends client its certificate and its public key.

Step 3: client send server a secret key encrypted with server's public key.

Step 4: client and server can now exchange data encrypted with the shared secret key.

Note: SSL only secure the connection between your browser and the web server it does nothing to protect the information once it is on the server.

* Advantages of SSL:

1) One benefit of using SSL on your site is that its encrypted all the information stored and used on your site.

2) This protect card information and password preventing hackers from being able to steal and use the information.

3) Another benefit of having an SSL is that it verifies your site. It tells your visitors that this is not a fake version.

(4) Having an SSL has been confirmed by google to help you to rank better in search results.

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* Disadvantages of SSL:

1) The main disadvantage is the cost of buying and selling an SSL.

2) The issue is that quality does matter when it comes to this certificates and the cheap-set once are very poor and unreliable.

3) This can lead to further confusion about where to buy the SSL from and who to trust.

D. - 17-01-24

* SETP [Secure electronic Transaction Protocol]

→ SETP means secure electronic transact it is a communication protocol standard a Secure credit card ~~and~~ transaction ~~and~~ or network and internet and Second word SET means Secure electronic Transaction is a system ensure the security of financial transaction online.

→ It was supported initially by Mastercard, Visa card, Microsoft, Netscape and other.

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→ With SET, a user given an electronic wallet (digital certificates) and a transaction is conduct verifies using combination of digital certificate and digital signature among the purchaser. because the merchant insure privacy and confedently.

* Advantages of SET:

1) It is secure enough to protect user credit card numbers, debit card numbers ~~for~~ from ~~credentials~~ attacks.

2) Hardware independents.

3) World wide use.

4) confedential of information.

5) Integrity of data.

6) Card holder account authentication.

7) Merchant authentication.

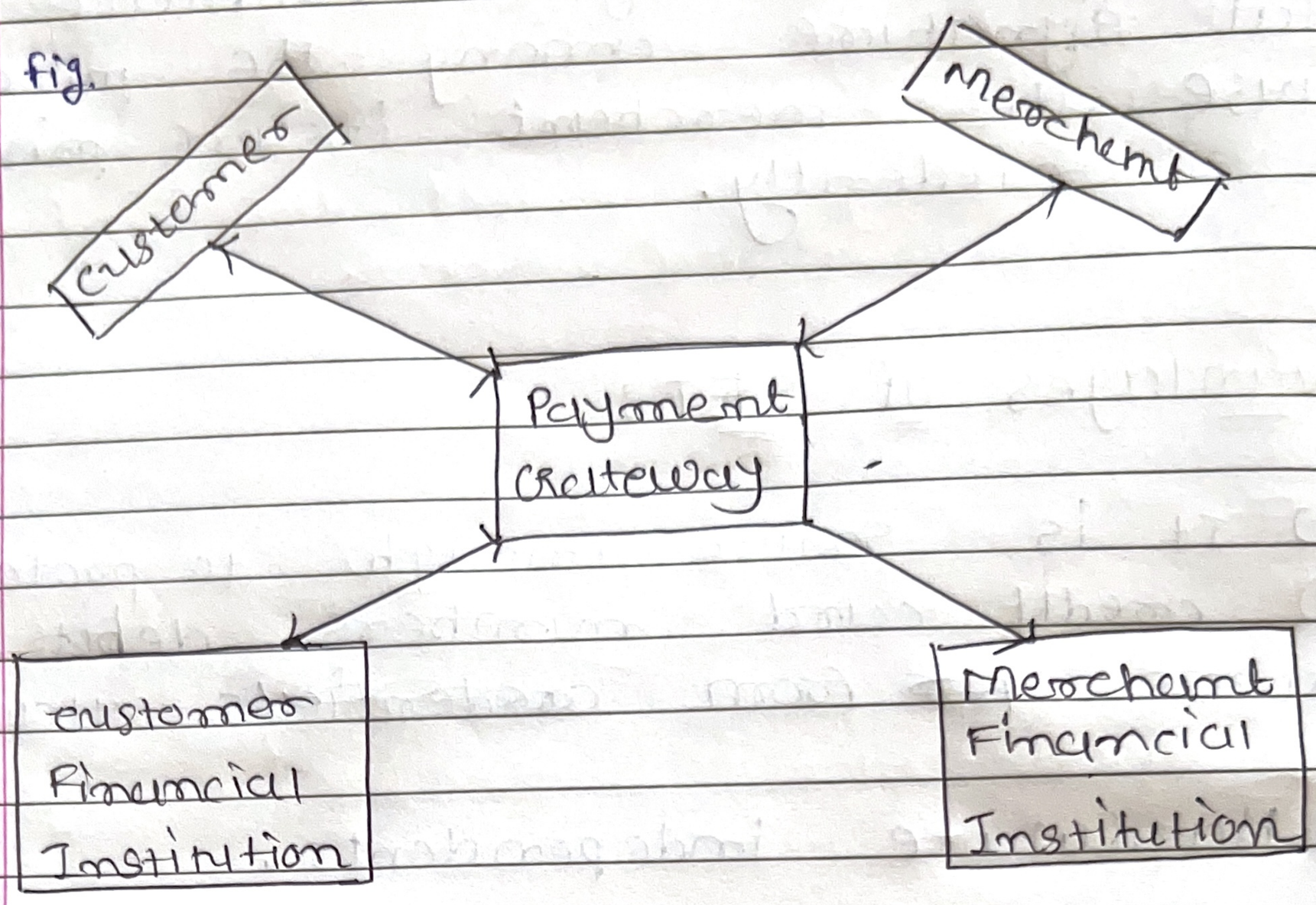
* Disadvantages of SET:

→ User must have credit card.

→ It is not cost effective when the payment is small.

→ Network effects need to instalm client software (E-wallet).

fig.



→ Here's how SET works :-

→ The customer open a master card or visa card Bank account any issue of credit card in some kind of banks.

→ The customer receive a digital certificate and the electronic file function is for online purchase or other transaction it includes a public key with an expiry date. It has been threw the insure of card validity to the user.

→ Third party merchant also receive

certificates from the banks. This certificate includes the merchant public key and the banks public key.

→ The customer place an order over webpage, by phone or some other means.

Important short forms :-

EDI : Electronic data Interchange
ATM : Automated Teller machine
Internet : Inter connected Network.
SSL : secure Socket layer
AES : Advanced encryption standards
DES : Data encryption standards.
TCP/IP : Transmission control protocol/Internet protocol

UDP : User datagram protocol.
ICMP : Internet control message protocol.
DHCP : Dynamic host configuration protocol
ARP : Address resolution protocol.
IGMP : Internet Group management protocol
HTTP : Hyper Text transfer protocol
S-HTTP : Secure - Hyper text transfer protoc
FTP : File Transfer protocol
SMTP : Simple mail Transfer protocol
VPN : virtual private Network.
SETP : Secure electronic transmission protocol.