



Padalsalai's Telegram Groups!

(தலைப்பிற்கு கீழே உள்ள லிங்கை கிளிக் செய்து குழுவில் இணையவும்!)

- **Padalsalai's NEWS - Group**
https://t.me/joinchat/NIfCqVRBNj9hhV4wu6_NqA
- **Padalsalai's Channel - Group**
<https://t.me/padasalaichannel>
- **Lesson Plan - Group**
<https://t.me/joinchat/NIfCqVWwo5iL-21gpzrXLw>
- **12th Standard - Group**
https://t.me/Padalsalai_12th
- **11th Standard - Group**
https://t.me/Padalsalai_11th
- **10th Standard - Group**
https://t.me/Padalsalai_10th
- **9th Standard - Group**
https://t.me/Padalsalai_9th
- **6th to 8th Standard - Group**
https://t.me/Padalsalai_6to8
- **1st to 5th Standard - Group**
https://t.me/Padalsalai_1to5
- **TET - Group**
https://t.me/Padalsalai_TET
- **PGTRB - Group**
https://t.me/Padalsalai_PGTRB
- **TNPSC - Group**
https://t.me/Padalsalai_TNPSC



SHEIK FATHIMA GIRLS MATRIC. HR.SEC.SCHOOL

Kovilvayal, Aranthangi

COMPUTER APPLICATIONS (CHAPTERS study material for all chapters)

1.Multimedia and Desktop Publishing

- Multimedia allows the users to combine and change data from various sources like image, text, graphics, video, audio and video to a single platform.
- Multimedia has five major components like text, images, sound, video and animation.
- Static text, the text or the words will remain static as a heading or in a line, or in a paragraph.
- A hypertext is a system which consists of nodes, the text and the links between the nodes, which defines the paths the user need to follow for the text access in non-sequential ways.
- Images acts as an vital component in multimedia. These images are generated by the computer in two ways, as bitmap or raster images and as vector images.
- Animation is the process displaying still images so quickly so that they give the impression of continuous movement. In animation the screen object is a vector image in animation.
- Sound is a meaningful speech in any language and is the most serious element in multimedia, providing the pleasure of music, special effects and so on.
- Musical Instrument Digital Identifier (MIDI) is a standard communication tool developed for computers and electronic instruments.
- Video can be categorized in two types as Analog video and Digital video.

2.An Introduction to Adobe Pagemaker

- Desktop publishing (abbreviated DTP) is the creation of page layouts for documents using DTP software.
- Some of the popular DTP software are Adobe PageMaker, Adobe InDesign, QuarkXPress, etc.
- Adobe PageMaker is a page layout software. It is used to design and produce documents that can be printed.
- The area outside of the dark border is referred to as the pasteboard.
- Editing means making changes to the text. When you edit a document, you revise its text.
- A text block contains text you type, paste, or import. You cannot see the borders of a text block until you select it with the pointer tool.
- A Text block can be connected to other text block so that the text in one text block can flow into another text block. Text blocks that are connected in this way are threaded.
- The process of connecting text among Text blocks is called threading text.
- Text that flows through one or more threaded blocks is called a story.
- Any text or object that you place on the master page will appear on the entire document pages to which the master is applied.
- Master Pages commonly contain repeating logos, page numbers, headers, and footers.
- A master item cannot be selected on a document page.

4.Introduction to Hypertext Pre-Processor

- PHP is an Open Source
- PHP is a Case Sensitive
- PHP is a Simplicity Program language
- PHP is a Efficiency Program language
- PHP is a Platform Independent Program language

- PHP is a Security Program language
- PHP is a Flexibility Program language
- PHP is a Real-Time Access Monitoring Program language

5.PHP Function and Array

- PHP Functions are Reducing duplication of code
- PHP Functions are Decomposing complex problems into simpler pieces
- PHP Functions are improving clarity of the code
- PHP Functions are Reuse of code
- PHP Functions are Information hiding
- PHP arrays are using Foreach looping concepts

6.PHP Conditional Statements

- The if statement contains boolean expression inside brackets followed by a single or multi line code block.
- if-else Statement also provides for a second part to the if statement, that is else. The else statement must follow if or else if statement.
- else if Statement The 'if' statement can also follow an 'else' statement, if you want to check for another condition in the else part.

7.Looping Structure

- PHP while loops execute a block of code while the specified condition is true.
- The for loop is used when you know in advance how many times the script should run.
- The foreach loop works only on arrays, and is used to loop through each key/ value pair in an array.
- do...while - loops through a block of code once, and then repeats the loop as long as the specified condition is true

8.Forms and Files

- Form Attribute actionBackend script ready to process your passed data.
- Method to be used to upload data. The most frequently used are GET and POST methods.
- Target Specify the target window or frame where the result of the script will be displayed. It takes values like _blank, _self, _parent etc.
- You can use the enctype attribute to specify how the browser encodes the data before it sends it to the server.

9. Connecting PHP and MYSQL

- PHP is Open source & Community support scripting language
- PHP is a server-side scripting language designed for Web development.
- Seventy Percentage of Website has been built by PHP and MySQL
- Major of the web servers can support PHP scripting language
- PHP can embed easily with HTML and client side scripting language
- PHP has built-in function which is easily connect to MySQL database
- PHP scripting language has been supported by many Software frameworks

10. Introduction to Computer Networks

- A set of computers connected together for the purpose of sharing resources is called as computer network. Internet is the most common resource shared on today.
- Computer networking is a technique of digital telecommunications network one that permits nodes to share its resources from one to another. This computer networking exchanges the data as a main element. These link were transferred over cable media like optic cables or wire or wireless media such as Bluetooth and WIFI
- U.S Military Radar system used SAGE (Semi – Automatic Ground Environment) at late 1950

- In 1960 SABRE(Semi Automatic Business Research Environment)for Commercial Airline Reservation system online connected with two main frame computers.
- Packet switching here it will split it into a small segments of data called as Packet and combine all when it reach its destination.
- In 1965 Telephone switch at first widely used Telephone switch was introduced by **Western Electric** which implemented true computer control.
- In 1966 WAN (WIDE AREA NETWORK)was introduced for time sharing.
- ARPANET at 1969-1970 was which underpinned the development of it and his theoretical work on hierarchical routing in late 1970 s with his student Farouk Kamoun remains critical to the operation of the Internet today.
- In 1973 TCP/IP Using X.25 as commercial services were deployed, then using a infrastructure for expanding TCP/IP networks.
- ARCNET, token-passing network was used first to share storage device at 1976.
- In 1995, the speed capacity of transmission of the Ethernet technology was slightly increased from 10 Mbit/s to 100Mbit.
- 1998, Ethernet supported transmission speed capacity towards gigabit. Frequently, highest speeds up to 100 Gbit/s were added. Ethernet has ability to upgrade easily like adapting to support NEW FIBRE OPTIC cable speeds etc.
- Artificial intelligence able to be a better predict traffic as it collects and analyzes data in real time, some of network managers were better prepared for big events such as the World cup , Olympics, Valentine's Day, which often put on the Internet under pressure
- The common uses of computer networks were
 - ❖ Communication
 - ❖ Resource Sharing
 - ❖ Data (or) software sharing
 - ❖ Money savings
- Here computer networks were faster, the Internet became full strength and wireless communications has been transformed the way of business performed
- Networks at home were connected by two ways they are
 - ❖ Wired network
 - ❖ Wireless network
- At land areas network was distributed as cells, each will be served by one fixed – location transceiver. This base station provides the cell with network coverage. That data can further be used for transmission of voice, data and any other resources. Joining together of all radio coverage is called as wide geographical area.
- When we have mixed group of people coming together online, many discussions arise which lead to personal attacks called “**flame wars.**”

11. Network Examples and Protocols

- Domain Name System (DNS) maintains all the directory of domain names and help us to access the websites using the domain names. It translates the domain name into IP address.
- IP address is a logical address used to uniquely identify a computer over the network. There are two types: IPv4 and IPv6.
- IPv4 address is a 32 bit unique address given to a computer or a device. There are two ways to represent the IP address: Binary notation, Dotted-decimal notation.
- IPv6 address is a 128 bit unique address given to a computer or a device. It follows Hexadecimal number notation.
- URL (Uniform Resource Locator) is the address of a document on the Internet. URL is divided into two types: Absolute URL and Relative URL
- URL is made up of four parts- protocols, hostname, folder name and file name. Absolute URL contains all the four necessary and fundamental parts of URL.
- Relative URL contains only folder name and the file name or just the file name.
- There are 3 important components in the Domain Name System. They are **Namespace, Name server and Zone.**

- **Label** is a string which can have maximum of 63 characters. Each node in that level should have unique label.
- Domain name space is a tree like structure with root element on the top. It can have a maximum of 128 levels starting from root element taking the level 0 to level 127.
- Domain name is the sequence of labels separated by dot (.). The domain name is always read from the leaf node to root node. The root node always represent NULL string. So All the domain name ends with dot.
- In the domain name space (DNS) tree structure **domain** is a sub structure tree. The domain can be further divided into sub domains.
- Name Servers are programs that run on a physical system and store all the zone data. It provides to clients when queried by them.
- Zone is the contiguous part up to which the server has access. The domain assigned for the server does not divide into further sub domains then zone is same as domain.
- Resolver, a client/ server application, initiates the process of resolving the domain names.

13. Network Cabling

- By using World Wide Web, now people can access the network from different parts of the world.
- The Network cables are used to transfer the data and information to another computer.
- Coaxial cables are used for connecting the television with setup box.
- Twisted cable has 13 wires which are twisted to ignore electromagnetic interference
- Two types of twisted pair cables are
 - ❖ Unshielded Twisted Pair (UTP) and
 - ❖ Shielded Twisted pair (STP).
- The optic cable uses light to transmit the information from one place to another. They are mainly used in Wide Area Network (WAN).
- There are two types of fibre optic cables are available are Single mode (100BaseBx) and Multimode (100BaseSX).
- Single-mode cables are used for long distance transmission and at a high cost whereas the multimode cables are used for short distance transmission at a very low cost. USB cables are used connect keyboard, mouse and other peripheral devices
- The serial port will send 1 bit at one time whereas the parallel port will send 13 bit at one time.
- The parallel cables are used to connect to the printer and other disk drivers.
- Cross over cable is used to join two network devices of the same type like example two PCs or two network devices. The Null modem Cables are the example of the crossover cables.
- The Ethernet cable is the basic component of the Local Area Network (LAN)
- The RJ45 Ethernet connector is a small plastic cup which will be used to connect the wire inside the connector and ready to use to connect the Internet.
- The RJ45 connector has eight small pins inside to connect eight small wires in the patch cable. The eight cables has eight different colours
- The Ethernet port is the jack where the Ethernet cable is to be connected. This port will be there in both the computers and the LAN port.
- The crimping tool is a physical tool which is used to connect the patch wire and the Ethernet connector(RJ45).
- A Registered Jack (RJ) is a network interface used for connecting different data equipment and telecommunication devices.
- RJ11 jack is mainly used in telephone and landlines
- There are three wiring techniques available in Ethernet cables: Straight through Wiring, Cross over Wiring and Roll over Wiring.

14. Open Source Concepts

- Open Source denotes to some program whose source code is made available for usage or reform as users or other developers see appropriate
- In simulators, the computer network is typically demonstrated with devices, traffic etc. and the performance are evaluated.
- A significant output of simulation is the trace files. Trace files can document every incident that happened in the simulation and are used for examination.
- NS2 has C++ and Object-oriented Tool Command Language (OTcl) of languages

- It link together for C++ and the OTcl using TclCL.
- Open NMS (Network Management System) is a free and open-source initiative grade network monitoring and network management platform.
- Network monitoring software notifications help the user/administrator for fixed errors.

15. E-Commerce

- E-Commerce can be described as the process of buying or selling products, services or information via Internet.
- FinTech Financial technology is a collective term for technologically advanced financial innovations. In simple words Fintech is a new finance industry that uses technology to improve financial activity.
- The dotcom bubble was a rapid rise in U.S. equity market of Internet-based companies during 1990s.
- Web 1.0 (Web of Content) is the early web that contained text, images and hyperlinks and allowed users only to search for information and read it. There was a very little in the way of user interaction or content generation.
- Web 2.0 (Web of Communication) is a read-write web that allowed users to interact with each other.
- Web 3.0 (Web of Context) is termed as the semantic web or executable web with dynamic applications, interactive services, and “machine-to-machine” interaction.

16. Electronic Payment Systems

- Payments are the financial instruments used globally to transfer value in the form of money or its substitutes and are constantly changing due to new technology and Government regulations.
- Payment system can also be divided into two types, namely the cash payment system and the non-cash payment system based on the instruments used. In the cash payment system, the instruments used are in the form of currency (paper money and coins) while in the non-cash payment system the instruments used are card-based payment, Cheques or electronic money.
- A Credit card plays a major role in electronic payment system worldwide.
- ECS is treated as a electronic cheques by the bank. The advantages and disadvantages of the physical cheque is also extended to ECS. In electronic clearing services, bank process the instructions from the customer to debit his account and pay another automatically without much human interference.
- (POS) Point of Sale Terminal- It enables customers to make payment for purchase of goods and services by means of credit and debit cards. To facilitate customer convenience some banks also cash withdrawal using debit cards at POS terminals.

17. E-Commerce Security Systems

- Phishing: Phishing is acquiring critical data like login credentials through telephone, sms, e-mail or any social media by the crackers disguising as authentic.
- Authentication: Information of the entity sending the document is often included in the document, but the information may be inaccurate. A digital signature can be used to authenticate the source of a document.
- Integrity: In many scenarios, the sender and receiver of the document will require confidence that the document has not been tampered with during the transfer. If the document was digitally signed, any modification of the document will invalidate the signature.
- Non-repudiation: Repudiation refers to any act of relinquishing responsibility for a message. Non-repudiation ensures that the signer who digitally signed the document cannot deny having signed it. The digitally signed documents strengthen

18. Electronic Data Interchange- EDI

- According to the National Institute of Standards and Technology, EDI is “the computer-to computer interchange of strictly formatted messages that represent documents other than monetary instruments.”
- EDI is “Paperless Trade” and EFT (Electronic Transfer) is “Paperless Payment” **EdGuilbert**, is called as the father of EDI
- In 1985, UN created the EDIFACT to assist with the global reach of technology in E-Commerce.
- Direct EDI is also called as Point-to-Point EDI
- Every EDI message consist of six uppercase English Alphabets

PREPARED BY
MRS. SARANYA ANBARASU MCA.,M.PHIL.,
DEPT.OF COMPUTER APPLICATIONS,
Sheik Fathima School-Aranthangi.

Padasalai