Contents

CHAPTER ONE:HISTORY OF COMPUTER

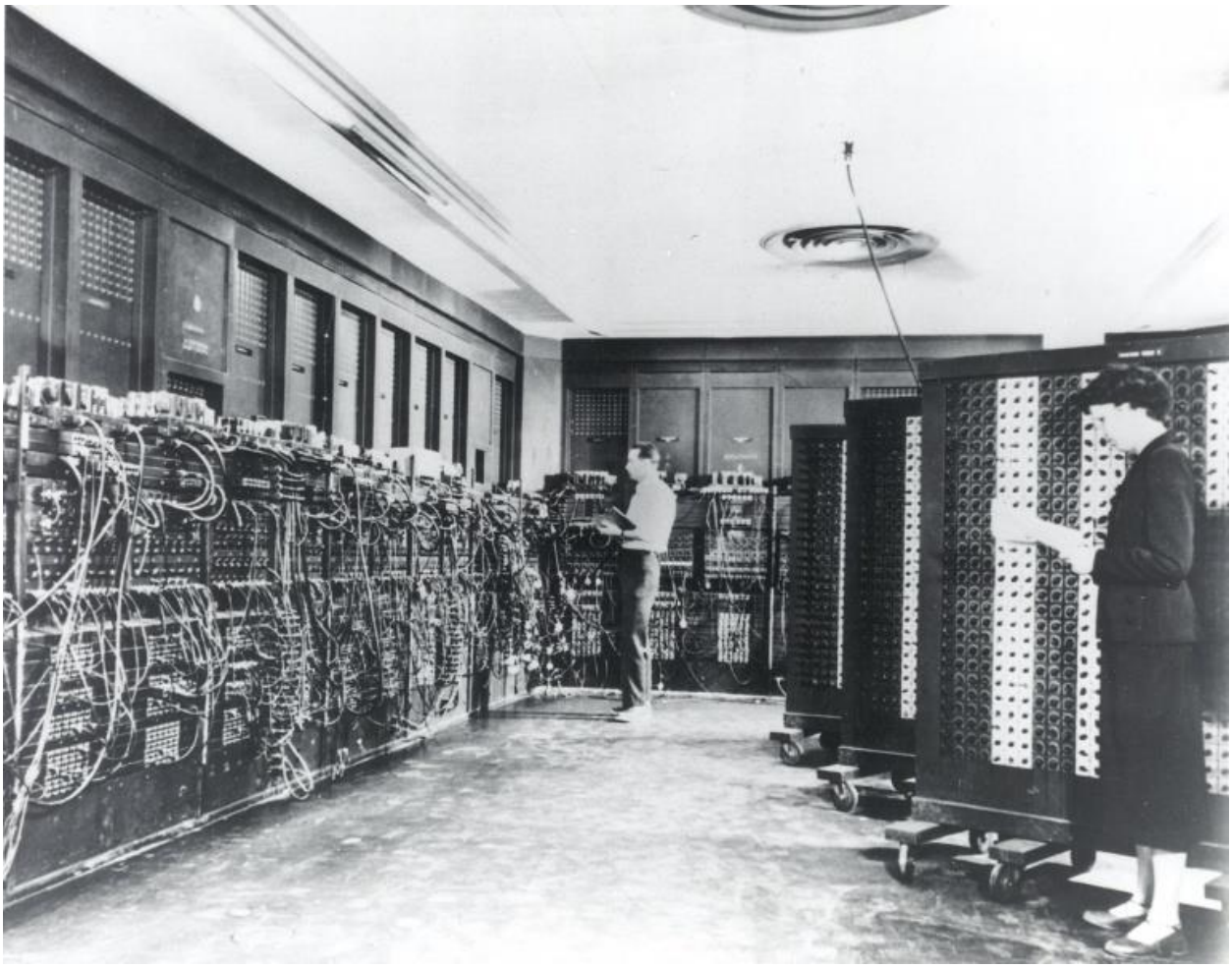
computers are typically viewed as a modern invention involving electronics, computing predates the use of electrical devices. The ancient abacus was perhaps the first digital computing device. Analog computing dates back several millennia as primitive

computing devices were used as early as the ancient Greeks and Romans, the most known complex of which being the Antikythera mechanism. Later devices such as the castle clock (1206), slide rule (c. 1624) and Babbage's Difference Engine (1822) are other examples of early mechanical analog computers.

The introduction of electric power in the 19th century led to the rise of electrical and hybrid electro-mechanical devices to carry out both digital (Hollerith punch-card machine) and analog (Bush’s differential analyzer) calculation. Telephone switching came to be based on this technology, which led to the development of machines that we would recognize as early computers.

The presentation of the Edison Effect in 1885 provided the theoretical background for electronic devices. Originally in the form of vacuum tubes, electronic components were rapidly integrated into electric devices, revolutionizing radio and later television. It was in computers however, where the full impact of electronics was felt. Analog computers used to calculate ballistics were crucial to the outcome of World War II, and the Colossus and the ENIAC, the two earliest electronic digital computers, were developed during the war.

With the invention of solid-state electronics, the transistor and ultimately the integrated circuit, computers would be



2. TYPES OF COMPUYER

Depending upon the internal structure and subsequent features and applicability, computer system is categorized as follows −

Mainframe Computer

It is high capacity and costly computer. It is largely used by big organizations where many people can use it simultaneously.

Super Computer

This category of computer is the fastest and also very expensive. A typical supercomputer can solve up to ten trillion individual calculations per second.

Workstation Computer

The computer of this category is a high-end and expensive one. It is exclusively made for complex work purpose.

Personal Computer (PC)

It is a low capacity computer developed for single users.

Apple Macintosh (Mac)

It is a sort of personal computer manufactured by Apple company.

Laptop computer (notebook)

It is a handy computer that can be easily carried anywhere.

All the computers that are developed are not alike rather they have different designs and features. Some computers have very high capacity as well as working speed; however, some are slow. Depending upon the requirements, computers are being developed

3: HARDWARE DEVICE

A computer system needs hardware and software components to function properly. Several hardware components are attached to the computer system as per the requirements. Computer hardware consists of mechanical and electronic elements. The hardware of the computer system includes a monitor, CPU, keyboard, mouse, printer, sound system, RAM, hard disk, and many more. Hardware is used for taking input data from the user, storing it, displaying the output, and executing the commands given by an individual.

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4:HISTORY OF COMPUTER

The **history of the Internet** has its origin in information theory and the efforts of scientists and engineers to build and interconnect computer networks. The Internet Protocol Suite, the set of rules used to communicate between networks and devices on the Internet, arose from research and development in the United States and involved international collaboration, particularly with researchers in the United Kingdom and France.[1][2][3][4]

Computer science was an emerging discipline in the late 1950s that began to consider time-sharing between computer users, and later, the possibility of achieving this over wide area networks. J. C. R. Licklider developed the idea of a universal network at the Information Processing Techniques Office (IPTO) of the United States Department of Defense (DoD) Advanced Research Projects Agency (ARPA). Independently, Paul Baran at the RAND Corporation proposed a distributed network based on data in message blocks in the early 1960s, and Donald Davies conceived of packet switching in 1965 at the National Physical Laboratory (NPL), proposing a national commercial data network in the United Kingdom.

ARPA awarded contracts in 1969 for the development of the ARPANET project, directed by Robert Taylor and managed by Lawrence Roberts. ARPANET adopted the packet switching technology proposed by Davies and Baran, underpinned by mathematical work in the early 1970s by Leonard Kleinrock at UCLA. The network was built by a team at Bolt, Beranek, and Newman, which included Bob Kahn.

Several early packet-switched networks emerged in the 1970s which researched and provided data networking. ARPA projects, international working groups and commercial initiatives led to the development of various standards and protocols for internetworking, in which multiple separate networks could be joined into a network of networks. Bob Kahn, now at DARPA, and Vint Cerf, at Stanford University, published research in 1974 that evolved into the Transmission Control Protocol (TCP) and Internet Protocol (IP), two protocols of the Internet protocol suite. The design included concepts from the

Precursors

Data communication

The concept of data communication – transmitting data between two different places through an electromagnetic medium such as radio or an electric wire – pre-dates the introduction of the first computers. Such communication systems were typically limited to point to point communication between two end devices. Semaphore lines, telegraph systems and telex machines can be considered early precursors of this kind of communication. The telegraph in the late 19th century was the first fully digital communication system.

Information theory

Fundamental theoretical work on information theory was developed by Harry Nyquist and Ralph Hartley in the 1920s. Information theory, as enunciated by Claude Shannon, in the 1948, provided a firm theoretical underpinning to understand the trade-offs between signal-to-noise ratio, bandwidth, and error-free transmission in the presence of noise, in telecommunications technology. This was

one of the three key developments, along with advances in transistor technology (specifically MOS transistors) and laser technology, that made possible the rapid growth of telecommunication bandwidth over the next half-century.[15]

Computers

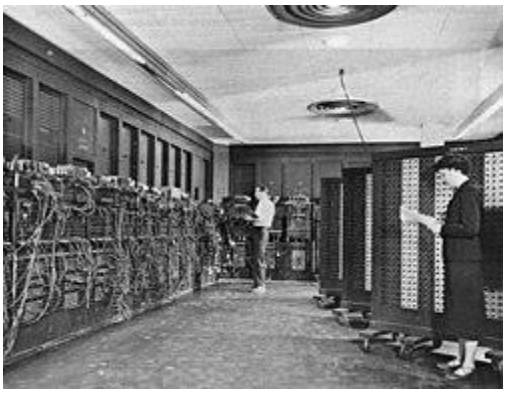
Early computers in the 1940s had a central processing unit and user terminals. As the technology evolved in the 1950s, new systems were devised to allow communication over longer distances (for terminals) or with higher speed (for interconnection of local devices) that were necessary for the mainframe computer model. These technologies made it possible to exchange data (such as files) between remote computers. However, the point-to-point communication model was limited, as it did not allow for direct communication between any two arbitrary systems; a physical link was necessary. The technology was also considered vulnerable for strategic and military use because there were no alternative paths for the communication in case of a broken link.

Inspiration

The earliest computers were connected directly to terminals used by an individual user. Christopher Strachey, who became Oxford University's first Professor of Computation, filed a patent application for time-sharing in February 1959.[16][17] In June that year, he gave a paper "Time Sharing in Large Fast Computers" at the UNESCO Information Processing Conference in Paris where he passed the concept on to J. C. R. Licklider.[18][19] Licklider, vice president at Bolt Beranek and Newman, Inc., went on to propose a computer network in his January 1960 paper *Man-Computer Symbiosis*:[20]

A network of such centers, connected to one another by wide-band communication lines [...] the functions of present-day libraries together with anticipated advances in information storage and retrieval and symbiotic functions suggested earlier in this paper

In August 1962, Licklider and Welden Clark published the paper "On-Line Man-Computer Communication"[21] which was one of the first descriptions of a networked future.



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In the early 1980s, national and international public data networks emerged based on the X.25 protocol, the design of which included the work of Rémi Després. In the United States,

the National Science Foundation (NSF) funded national supercomputing centers at several universities in the

CHAPTER TWO :DESKTOP AND LAPTOP

What is a Desktop?

A Desktop is commonly referred to as a physical computer unit, as well as a graphical user work space on a software operating system like the Windows Desktop. This article compares the Desktop computer to the Laptop computer units.

The most common components of a Desktop is the computer terminal powered by a grounded electrical source i.e. a wall socket. To be fully functional, the Desktop is connected to an external monitor, keyboard, and mouse via Bluetooth, WiFi, or USB, HDMI, and VGA cable connections.

If the Desktop is not configured for WiFi, Bluetooth, or has the necessary ports for USB or HDMI, these would have to be installed manually, probably at an additional cost as the average user may not necessarily have the technical know-how to set this up.

The default factory specifications vary and there are enough choices out there to suit different consumer needs, starting from entry-level computers with smaller hard drives and lower processing power to high spec computers used for gaming, multimedia design, or as servers.
Having separate parts connected to make up the Desktop unit means it is not easily transported between office and home, or easily used while traveling (if at all possible), so Desktops usually reside in a permanent place

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A desktop is a big and heavy physical computer unit placed on the office desk that constitutes a monitor, a CPU, the keyboard and a mouse. The desktop is always connected to the mains so that it remains powered. Manufactured for the purpose of regular use from one location, desktops cannot be easily ported.

What is a Laptop?

Termed as notebooks, these all-in-one computers are small and portable, running for hours on batteries or AC power on one charge and featuring an LED/LCD screen. Other features of the laptop include the built-in

5 : INPUT DEVICE

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In computing, an **input device** is a piece of equipment used to provide data and control signals to an information processing system, such as a computer or information appliance. Examples of input devices include keyboards, mouse, scanners, cameras, joysticks, and microphones.

Input devices can be categorized based on:

- modality of input (e.g., mechanical motion, audio, visual, etc.)
- whether the input is discrete (e.g., pressing of key) or continuous (e.g., a mouse's position, though digitized into a discrete quantity, is fast enough to be considered continuous)
- the number of degrees of freedom involved (e.g., two-dimensional traditional mice, or three-dimensional navigators designed for CAD applications)
    - **device** allows a user to input spatial data to a computer. It is commonly used as a simple and intuitive way to select items on a computer screen on a graphical user interface (GUI), either by moving a mouse pointer, or, in the case of a touch screen, by physically touching the item on screen. Common pointing devices include mice, touchpads, and touch screens.[2]
    - Whereas mice operate by detecting their displacement on a surface, analog devices, such as 3D mice, joysticks, or pointing sticks, function by reporting their angle of deflection.

6 : OUT PUT DEVICES

An **output device** is any piece of computer hardware that converts information into a human-perceptible form or, historically, into a physical machine-readable form for use with other non-computerized equipment. It can be text, graphics, tactile, audio, or video. Examples include monitors, printers, speakers, headphones, projectors, GPS devices, optical mark readers, and braille readers.

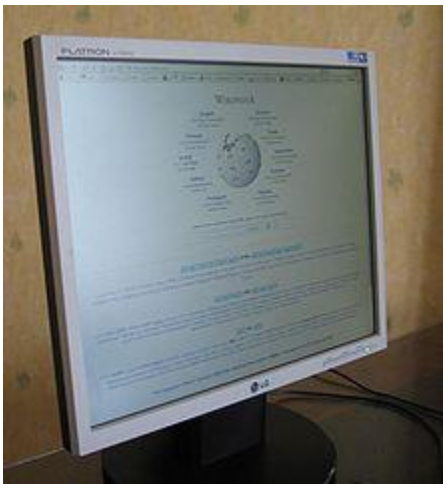
In an industrial setting, output devices also include "printers" for paper tape and punched cards, especially where the tape or cards are subsequently used to control industrial equipment, such as an industrial loom with electrical robotics which is not fully computerized.

Visual

A **display device** is the most common form of output device which presents output visually on computer screen. The output appears temporarily on the screen and can easily be altered or erased.

With all-in-one PCs, notebook computers, hand held PCs and other devices; the term display screen is used for the display device. The display devices are also used in home entertainment systems, mobile systems, cameras and video game systems.

Display devices form images by illuminating a desired configuration of pixels. Raster display devices are organized in the form of a 2-dimensional matrix with rows and columns. This is done many times within a second, typically 60, 75, 120 or 144Hz on consumer devices.



Processing Unit (GPU). This processor is used to form images on a framebuffer. When the image is to be sent to the display, the GPU sends its image through a video display controller to generate a video signal, which is then sent to a display interface such as HDMI, VGA, DisplayPort, or DVI.[1]

GPUs can be divided into discrete and integrated units, the former being an external unit and the latter of which is included within a CPU die.[2] Discrete graphics cards are almost always connected to the host through the PCI Express bus, while older graphics cards may have u

CHAPTER THREE :1:HISTORY OF SERVER

nitially, the first servers in their present form, which appeared in late 80-ies of the last century, performed the role of data warehouses. They were called file servers. Through file servers could not only remotely store their data but also share them with other users connec

Cross-Guard specialises in a variety of products for IT and server security, and products to increase energy efficiency of equipment within data centres. This article is dedicated to a topic that our data centre clients may be interested in, and already familiar with, the history of the server as we know it today. Technology is always being improved and, in a digital era, consumers always want instant connections and fast speeds for online activities. This puts immense pressure on data centre operators to meet expectations and ensure minimal downtime.

1993 marked the year where CERN (one of the world's largest scientific research centres) launched the World Wide Web into public domain. This point marked rapid

server growth and, according to Roundy (2020), over 500 web servers existed by the end of 1993 worldwide, and by the end of 1994 this had shot up to over 10,000.

In order to squeeze more servers into tight spaces, server racks were introduced. Initially, these had issues with increasing server temperatures, and demanded specialist cooling systems, putting strain onto these systems. Now, we've advanced since that point, with the development of hot aisle containment and cold aisle containment, which reduces hot spots and strain on cooling systems, while delivering higher energy efficiency and ROI. In addition, Cross-Guard offers a more secure alternative to s

2:TYPES OF SERVERS

Servers act as data processors for professional and private use. Whether you work in an IT position or manage social media for a marketing firm, it's important to understand how servers function so you can access data through network applications. Once you know the basic workings of a server, you can utilize its processing capabilities through a local network or a virtual cloud computing platform.

In this article, we discuss the different types of servers and how they function.

What are servers?

Servers are large data storage and processing devices that exist either as hardware or as virtual storehouses located on the internet. Computers or software systems act as servers that connect to a network.

A server can be any type of device that shares and saves information. Servers can both store and process information within their own system or request it from another.

2. Proxy server

Proxy servers act as a bridge between a host server and a client server. A proxy sends data from a website to your computer IP address after it passes through the proxy's server. This practice adds a layer of security since the information is requested then transferred from the source to the proxy server and never directly from a client to another user. A proxy server can filter out various harmful internet entities.

3. Virtual machine (VM)

As their name suggests, virtual machines store and connect data strictly through virtual space. To create a virtual machine, IT teams use a hypervisor, also known as a virtual machine monitor (VMM), which is software that can run thousands of virtual machines through only one piece of physical hardware. This method of server virtualization is widely used for data transfer and storage because they are the most cost-effective type of server to run.

4. File transfer protocol (FTP) server

FTP servers are used to relocate files from one computer to another. Uploaded files move from your computer to the server while downloaded files are extracted from the server onto your device. File transfer protocol also refers to the method of using a server to connect one computer to another in order to share data safely.

5. Application server

These servers connect clients to software applications through virtual server connections. This allows users to bypass downloading data to their own hardware in order to access applications. Application servers can effectively host large

3:VOIP{SKYPE}

o you ever find yourself looking at your watch and thinking "This call's costing me a fortune." If you do, you're still stuck in the 20th century with telephone technology that's barely changed since the 19th!

In the 21st century, there's no reason why we should be paying through the nose, by the minute, to use a telephone network when most of us now have access to a very credible alternative: the Internet. After all, if the Internet (which relies on large parts of the telephone network) can carry text, images, and video clips, it should be able to carry people's voices just as easily. That's the thinking behind **VoIP (Voice Over Internet Protocol)** which, simply stated, means using the Internet to make and receive telephone calls. How exactly does it work? What are the advantages and the drawbacks? Let's take a closer look!

Photo: VoIP phones look much the same as ordinary ones, but work in a totally different way. VoIP means making telephone calls using computer networks, with the sound of your voice converted to packets of digital data that travel over the Internet in exactly the same way as Web pages, downloads, emails, or any other data. Photo by Jim Heuston courtesy of US Army National Guard and DVIDS.

4: SEARCHHING ENGINES OR TYPES OF BROWSERS

earch engines and web browsers are two forms of technology that are dependent upon one another. A browser is required to use a search engine, and a search engine can’t deliver its results

without a browser. In this search engine vs browser article, we compare and contrast these distinct but related technologies.

Key Takeaways:

- Browsers and search engines are not the same thing, but their functions are dependent upon one another.
- Performing a search query doesn't search the entire internet, but only the search engine's index of URLs.
- Web pages are HTML files. Browsers are applications that can interpret HTML files and visually display them on a user's screen in an interactive format.

There are countless search engines on the internet today. Google is the most popular search engine by far, but its privacy issues are edging users towards services like DuckDuckGo — the best Google alternative and a reliable search engine that doesn't track you. Each search engine has its own index and method of crawling, so results will vary from one engine to the next.

The same goes for browsers — while they all perform the same basic task, there's still a lot of variation from one browser to the next. We'll focus on the basic traits that make search engines and browsers what they are.

CHAPTER FOUR:CONCLUSION

A *conclusion* is the last part of something, its end or result. When you write a paper, you always end by summing up your arguments and drawing a *conclusion* about what you've been writing about.

The phrase *in conclusion* means "finally, to sum up," and is used to introduce some final comments at the end of a speech or piece of writing. The phrase *jump to conclusions* means "to come to a judgment without enough evidence." A *foregone conclusion* is an outcome that seems certain.

Definitions of ***conclusion***

1. noun

   a position or opinion or judgment reached after consideration

   *"his **conclusion** took the evidence into account"*

   synonyms:decision, determination, verdict

   see more

2. noun

   the proposition arrived at by logical reasoning (such as the proposition that must follow from the major and minor premises of a syllogism)

   synonyms:ratiocination

   see more

3. noun

   an intuitive assumption

   *"jump to a **conclusion**"*

   see more

4. noun

   the act of making up your mind about something

   *"he drew his **conclusions** quickly"*

   synonyms:decision, determination

   see more

5. noun

   the temporal end; the concluding time

   synonyms:close, finale, finis, finish, last, stopping point

   see more

6. noun

   the act of ending something

   synonyms:ending, termination

   see more

7. noun

   event whose occurrence ends something

- his **conclusions** about the human body were mostly based on studies of other animals and were incorrect in many ways.
  The Scientists

- Where pseudosciences fail is in not subjecting their **conclusions** to a test, in not linking them in a coherent way to other statements which have withstood scrutiny.

2:REFERENCE

1

: the act of referring or consulting

2

: a bearing on a matter **: RELATION**

in *reference* to your recent letter

3

: something that refers: such as

a

: ALLUSION, MENTION

b

: something (such as a sign or indication) that refers a reader or consulter to another source of information (such as a book or passage)

c

: consultation of sources of information

4

: one referred to or consulted: such as

a

: a person to whom inquiries as to character or ability can be made

b

: a statement of the qualifications of a person seeking employment or appointment given by someone familiar with the person

C(1)

: a source of information (such as a book or passage) to which a reader or consulter is referred

(2)

: a work (such as a dictionary or encyclopedia) containing useful facts or information

d

: DENOTATION, MEANING

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2 of 3

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3 of 3

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