Information is a critical business resource and like any other critical resource must be properly managed. Constantly evolving technology, however, is changing the way even very small businesses manage vital business information. An information or records management system – most often electronic – designed to capture, process, store and retrieve information is the glue that holds a business together.

#### Tip

* An information or records management system – most often electronic – designed to capture, process, store and retrieve information is the glue that holds a business together.

## Regulatory Compliance

Unlike a public company, a privately held business isn’t subject to most federal and state government compliance requirements. Despite this, many choose to comply voluntarily, both to provide transparency and enhance the business’s public image. In addition, small-business owners must store and maintain tax information so, in case of an audit, the information is readily accessible. A well-organized information storage and retrieval system that follows compliance regulations and tax record-keeping guidelines significantly increases a business owner’s confidence the business is fully complying.

## Efficiency and Productivity

Any time a business owner or employees spend searching through stacks of loose files or spend trying locate missing or misfiled records is inefficient, unproductive and can prove costly to a small business. A good information storage and retrieval system, including an effective indexing system, not only decreases the chances information will be misfiled but also speeds up the storing and retrieval of information. The resulting time-saving benefit increases office efficiency and productivity while decreasing stress and anxiety.

## Improve Working Environment

It can be disheartening to anyone walking through an office area to see vital business documents and other information stacked on top of file cabinets or in boxes next to office workstations. Not only does this create a stressful and poor working environment, but if customers see this, it can cause them to form a negative perception of the business. Contrast this with an office area in which file cabinets, aisles and workstations are clear and neatly organized to see how important it is for even a small business to have a well-organized information storage and retrieval system.

## Electronic vs. Manual System

Although a very small business may choose to institute a manual system, the importance of electronic information storage and retrieval systems lie in the fact that electronic systems reduce storage space requirements and decrease equipment and labor costs. In contrast, a manual system requires budgetary allotments for storage space, filing equipment and administrative expenses to maintain an organized filing system. Additionally, it can be significantly easier to provide and monitor internal controls designed to deter fraud, waste and abuse as well as ensure the business is complying with information privacy requirements with an electronic system.

**Components Of Information Technology**

# Components Of Information System

An **Information system** is a combination of hardware and software and telecommunication networks that people build to collect, create and distribute useful data, typically in an organisational, It defines the flow of information within the system. The objective of an information system is to provide appropriate information to the user, to gather the data, processing of the data and communicate information to the user of the system.



Components of the information system are as follows:

1. **Computer Hardware:**
Physical equipment used for input, output and processing. What hardware to use it depends upon the type and size of the organisation. It consists of input, an output device, operating system, processor, and media devices. This also includes computer peripheral devices.

 **2. Computer Software:**
 The programs/ application program used to control and coordinate the hardware components. It is used for analysing and processing of the data. These programs include a set of instruction used for processing information.

Software is further classified into 3 types:

1. System Software
2. Application Software
3. Procedures
4. **Databases:**
Data are the raw facts and figures that are unorganised that are and later processed to generate information. Softwares are used for organising and serving data to the user, managing physical storage of media and virtual resources. As the hardware can’t work without software the same as software needs data for processing. Data are managed using Database management systems
Database software is used for efficient access for required data, and to manage knowledge bases.

**4. Network:**

* Networks resources refer to the telecommunication networks like the intranet, extranet and the internet.
* These resources facilitate the flow of information in the organisation.
* Networks consists of both the physicals devises such as networks cards, routers, hubs and cables and software such as operating systems, web servers, data servers and application servers.
* Telecommunications networks consist of computers, communications processors, and other devices interconnected by communications media and controlled by software.
* Networks include communication media, and Network Support.

**5. Human Resources:**
It is associated with the manpower required to run and manage the system. People are the end user of the information system, end-user use information produced for their own purpose, the main purpose of the information system is to benefit the end user. The end user can be accountants, engineers, salespersons, customers, clerks, or managers etc. People are also responsible to develop and operate information systems. They include systems analysts, computer operators, programmers, and other clerical IS personnel, and managerial techniques.

# THE ROLE OF INFORMATION TECHNOLOGY IN TODAY’S WORLD



**What is information technology?**

Information technology is the technology used to store, manipulate, distribute or create information.  All these can be summed up easily – It’s having knowledge, and knowledge comes from having information. Gaining knowledge through information is the role of ‘’[**information technology**](https://www.useoftechnology.com/future-information-technology/)’’ IT in today’s informed world.

IT is a set of tools that can help provide the right people with the right information at the right time.  Though IT is not a solution to every thing, for IT to work, people must learn how to use it. So you can not assume that IT will work for you to share information across the organization when people in the organization don’t know how to use it.

**1.  The Role of Information Technology In An Organization:**

* **Communication:** Many organizations take electronic mail ”email” as a basic form of [**communicatio**n](https://www.useoftechnology.com/advantages-disadvantages-communication-technology-organization/) among employees, customers, business partners and suppliers. The simplicity of electronic mail ”email” makes it easier and faster to exchange information across departments in an organization. The all process saves time and money. However, more emerging forms of communications have surfaced and they also make communication easier. These include video conferencing systems, Voice over internet telephones ‘‘VIOP’’, live text and video chat services like ”SKYPE” and smart-phones.



* **Data Management**:  There is no need to keep papers about every detail in an organization. Now, organizations have digitized most of their data. This data is stored in a database and employees access and share this information through a decentralized computing system. In a decentralized computing environment, the organization splits computing power and locates it in business areas as well as on the desktop of knowledge workers. So employees and managers can send queries to the database and retrieve data and use it in way required. This saves time and it also improves on decision making with in the organization.
* **Management Information Systems**: With the use of MIS, data can be accessed and used in a given period of time. MIS reports summarize or aggregate information to support decision-making tasks. So, MIS’s are systems that have information-processing responsibilities that include information through online analytical processing **(OLAP)** and conveying information to whoever needs it. It is very important for employees and managers to access data anytime for quick [**decision making**](https://www.useoftechnology.com/role-technology-decision-making/).

**2.  The Role of Information Technology In Banking Industry:**

* **Remote banking**:  Now banks have facilities like online banking, ATM’S and mobile banking service which enable perform banking needs at any given time of the day.  With a simple user interface, users can use their computers or mobile phones to move money across accounts and they can also get financial details like bank statements and account balance with out going to a physical bank. This process saves time to both the customer and the bank.
* **Centralized Information**:   Banks can operate more than 20 branches in a specific area, but the use of information technology to centralize all the information on all these branches, makes it easy to access information both by the bank employees and the customer.
* **Credit cards or smart cards**:  Now banks issue out plastic cards to their customers so that they can perform transaction anytime anywhere.  For example , customers can buy any thing without carrying cash money, but they will use a smart card like ‘’VISA ELECTRON’’ to pay for products either online or at the shopping center.

**3. The Role of Information Technology In**[**Student’s**](https://www.useoftechnology.com/technology-classroom-students-demand/)**Life**:

* **Easy access to educational material**:  Today , students can access books and research notes online. Unlike in the past when a student had to borrow a book from a physical library for a specific period, now days they can access most this data inform of e-books or electronic libraries. [**Library mobile Apps**](http://www.onlinecollege.org/2012/03/06/top-25-library-apps-for-the-ipad/) have been developed to enable students get library material on their mobile phones. Gadgets like Ipad , Amazon Kindle book reader have simplified students life.
* **Ability to study from anywhere**: Online [**education**](https://www.useoftechnology.com/technology-education/) has unlocked many boundaries for students. A student can now study from any were and work from any where. For example, accounting courses like ACCA can be done online and students who qualify can work from anywhere, this increases on their chances of competing for high qualified jobs in developed markets around the world .

More areas have been impacted by information technology, these include [**society**](https://www.useoftechnology.com/technology-society-impact-technology-society/)**,**[**workplace**](https://www.useoftechnology.com/technology-workplace/)**, government,**[**agriculture**](https://www.useoftechnology.com/technology-agriculture/)**, entertainment** and many more.

# Information Technology (IT)

## Definition - What does *Information Technology (IT)* mean?

Information Technology (IT) is a business sector that deals with computing, including hardware, software, telecommunications and generally anything involved in the transmittal of information or the systems that faciliate communication.

 IT involves many things. Take, for instance, an IT department in a company. There are many people with many jobs and varied responsibilities. These responsibilities range from keeping systems and data secure to keeping networks up and running. There are people who input data, people who manage databases and people who do programming. There are also the decision makers, such as Chief Information Officers (CIOs), who decide how an IT department will operate and what components will be purchased.

IT also includes the management of data, whether it is in the form of text, voice, image, audio or some other form. It can also involve things related to the Internet. This gives IT a whole new meaning, since the Internet is its own realm. IT involves the transfer of data, so it makes sense that the Internet would be a part of IT. IT has become a part of our everyday lives and continues to proliferate into new realms.

### IT education and job functions

A team of administrators and other technical staffers deploy and manage the company's IT infrastructure and assets. IT teams depend on a wide range of specialized information and technology skills and knowledge to support equipment, applications and activities. Third-party contractors and IT vendor support personnel augment the IT team.

The information technology profession is extremely diverse. IT workers can specialize in fields like software development, application management, [hardware](https://searchnetworking.techtarget.com/definition/hardware) components such as desktop support, server or storage administrator and network architecture. Many businesses seek IT professionals with mixed or overlapping skill sets.

**Common IT careers:**

[**Chief information officer**](https://searchcio.techtarget.com/definition/CIO): This person is responsible for IT and computer systems that support the enterprise's goals.

[**Chief technology officer**](https://searchcio.techtarget.com/definition/Chief-Technology-Officer-CTO): This person sets all technology goals and policies within an organization.

[**IT director**](https://searchcio.techtarget.com/definition/IT-director-information-technology-director): This person is responsible for the function of all of the business's technology tools and processes. This role is commonly called IT manager or IT leader.

[**Systems administrator**](https://searchnetworking.techtarget.com/definition/system-administrator): This person configures, manages, supports and troubleshoots a multi-user computing environment. Within an enterprise, this role can be segmented by technology, requiring an administrator or team dedicated to server, desktop, network, virtualization or other components.

**Application manager**: This person's role centers on the provisioning and management of a high-value business application, such as Exchange.

[**Developer**](https://whatis.techtarget.com/reference/Learn-IT-Software-development): This person or team writes, updates and tests code for programs to meet business objectives internally or facing customers.

[**Architect**](https://searchcio.techtarget.com/definition/chief-architect): This person examines and changes IT functions to best support the business.

# Internet

Alternatively referred to as the **net** or **web**, the **Internet** (**interconnected network**) was initially developed to aid in the progress of computing technology by linking academic computer centers. The Internet we use today started being developed in the late 1960s with the start of [ARPANET](https://www.computerhope.com/jargon/a/arpanet.htm) and transmitted its first message on Friday, October 29, [1969](https://www.computerhope.com/history/1969.htm). In [1993](https://www.computerhope.com/history/1993.htm), the Internet experienced one of its largest growths to date and today is accessible by people all over the world.

**Tip**

See our [Internet history](https://www.computerhope.com/history/internet.htm) section for full information about the development and creation of the Internet.

The Internet contains billions of [web pages](https://www.computerhope.com/jargon/w/webpage.htm) created by people and companies from around the world, making it a limitless place to locate information and entertainment. The Internet also has thousands of services that help make life more convenient. For example, many financial institutions offer online banking that enables a user to manage and view their account from different locations. The picture is a representation and map of the Internet done by [The Opte Project](http://www.opte.org/).

* [Internet basics](https://www.computerhope.com/jargon/i/internet.htm#basics)
* [Why do people use the Internet?](https://www.computerhope.com/jargon/i/internet.htm#why-do-people-use)
* [Internet services](https://www.computerhope.com/jargon/i/internet.htm#services)
* [Why is the Internet considered a network?](https://www.computerhope.com/jargon/i/internet.htm#why-is-it-a-network)
* [Related pages](https://www.computerhope.com/jargon/i/internet.htm#related-pages)

## Internet basics

* The Internet and the [WWW](https://www.computerhope.com/jargon/w/www.htm) are not the same.
* The Internet is explored using a [browser](https://www.computerhope.com/jargon/b/browser.htm) and the act of browsing the Internet is commonly referred to as [surfing](https://www.computerhope.com/jargon/s/surfing.htm).
* Users browse [websites](https://www.computerhope.com/jargon/w/website.htm) and [web pages](https://www.computerhope.com/jargon/w/webpage.htm) by following [hyperlinks](https://www.computerhope.com/jargon/h/hyperlink.htm) that point to an address more commonly referred to as a [URL](https://www.computerhope.com/jargon/u/url.htm).
* Finding information on the Internet is achieved by using a [search engine](https://www.computerhope.com/jargon/s/searengi.htm).
* Files, pictures, songs, and video can be shared by [downloading](https://www.computerhope.com/jargon/d/download.htm) (receiving) and [uploading](https://www.computerhope.com/jargon/u/upload.htm) (sending).
* The Internet utilizes the [TCP/IP](https://www.computerhope.com/jargon/t/tcpip.htm) [protocol](https://www.computerhope.com/jargon/p/protocol.htm) and is accessed using a computer [modem](https://www.computerhope.com/jargon/m/modem.htm), [broadband](https://www.computerhope.com/jargon/b/broadban.htm), [3G](https://www.computerhope.com/jargon/num/3g.htm), [4G](https://www.computerhope.com/jargon/num/4g.htm), or network that is connected through an [ISP](https://www.computerhope.com/jargon/i/isp.htm).
* With broadband, many computers and devices use [Wi-Fi](https://www.computerhope.com/jargon/w/wifi.htm) to connect to a [router](https://www.computerhope.com/jargon/r/router.htm) and share an Internet connection.
* The computer you're using to view this web page is considered a [host](https://www.computerhope.com/jargon/h/hostcomp.htm) and it's connected to our [server](https://www.computerhope.com/jargon/s/server.htm) to view this page.

## Internet services

In addition to browsing the Internet with a browser, the Internet has other services that can also be used.

* [Chat](https://www.computerhope.com/jargon/c/chat.htm)
* [E-mail](https://www.computerhope.com/jargon/e/email.htm)
* [Forum](https://www.computerhope.com/jargon/f/forum.htm)
* [FTP](https://www.computerhope.com/jargon/f/ftp.htm)
* [IM](https://www.computerhope.com/jargon/i/im.htm)
* [Online gaming](https://www.computerhope.com/jargon/o/online.htm)
* [Social network](https://www.computerhope.com/jargon/s/socinetw.htm)
* [VoIP](https://www.computerhope.com/jargon/v/voip.htm)
* [WWW](https://www.computerhope.com/jargon/w/www.htm)

## Why do people use the Internet?

Today, the Internet is the best place to communicate and share information with people from anywhere on the glove. It also supplies an endless supply of knowledge and entertainment.

## Why is the Internet considered a network?

The Internet is the world's largest network because it's a collection of [computers](https://www.computerhope.com/jargon/c/computer.htm) and [servers](https://www.computerhope.com/jargon/s/server.htm) that are connected to each other globally using [routers](https://www.computerhope.com/jargon/r/router.htm) and [switches](https://www.computerhope.com/jargon/s/switch.htm). The Internet works the same way a network would in a home or office but has millions of more computers, routers, and switches.