Short Introduction About Information Technology

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Abstract— Information technology (IT) is the use of computers to store, retrieve, transmit, and manage data or information. This activity is often used as part of business activities compared to personal technology or leisure. Information technology is a type of information and communication technology (ICT). An IT system (IT system) is usually an information system, a communication system, or rather a computer system that includes all the hardware, software, and peripherals that are operated by a limited group of users. This paper provides an introduction about IT.

Keywords— IT; IT Principles; IT systems; Information technology.

I. INTRODUCTION

The term is often synonymous with computers and computer networks, but also includes other information dissemination technologies, such as television and the telephone. Various industries are associated with information technology, including computer hardware, software, electronics, semiconductors, the Internet, telecommunications equipment, mechanical engineering, healthcare, e-commerce, and computer services.

Tools have been used for thousands of years to aid in calculations, perhaps in the form of sculptures. The pearl waterproof mechanism, which dates back to the beginning of the first century BC, is considered to be the most widely used analog mechanical computer. Similar gear machines did not appear in Europe until the 16th century, and it was not until 1645 that the first pocket mechanical calculator was developed that could perform four basic mathematical operations.

In the early 1940s, computers appeared using relays or valves. Built in 1941, the Electromechanical Z3 was the world's first computer program and, by modern standards, one of the first machines to be considered a complete computer machine. The Colossus was the first digital computer designed to understand German messages during World War II. Although it was programmable, it was not versatile because it was designed for one purpose only. He does not even have the ability to recall his plan. Internal wiring replacement is done using plugs and programming switches. The most popular modern digital computer with digital storage software was the Manchester Scale Testing Machine (SSEM), which launched its first program on June 21, 1948.

The development of transistors in Bell Labs in the late 1940s made it possible to develop a new generation of computers with significantly less power consumption. The first computer-stored software, the Ferranti Mark I, had 4,050 valves and used 25 kilowatts. In contrast, the first transistor computer built at the University of Manchester, which operated until November 1953, used only 150 watts in its final version.

II. DEVELOPMENT

Job advertising sites often use IT as a category in their database. This group includes a wide range of construction, engineering and management roles. People who work in these fields usually have a degree in computer science and / or information systems. They can also be properly certified by the industry. Short courses in IT principles can be found online and are especially useful for those who want to get acquainted with a subject before starting work.

The IT profession can include working or leading an IT department, product development team, or research team. Success in this professional field requires a combination of technical and business skills.

It includes many layers of physical devices (hardware), virtualization and management tools or automation, operating systems and applications (software) that are used to perform basic tasks. Users, accessories and software such

as laptops, smartphones or even recorders can be added to the IT field. IT can also refer to the architecture, procedures, and rules that govern data usage and storage.

III.   PROSPECTS

Early computers, such as the Callus, used paper tape, a long paper tape that displayed data through a series of holes, and the technology is now obsolete. The storage of electronic information used in modern computers dates back to World War II, when a kind of delay note was prepared to prevent the interference of radar signals, the first practical application of which was mercury delay. The first digital random access memory device was the Williams tube, which was based on a standard cathode ray tube but contained delayed line information stored in it and memory fluctuations, so they had to be updated regularly and hence power outages. ... The first form of unstable computer memory was the magnetic drum, invented in 1932 and used in the first computer in the world of commercial e-commerce, the Franti Mark 1.

IBM introduced the first hard drive in 1956 as part of its 305 RAM AC computer system. Most digital data is still stored on hard drives with the help of CDs such as magnets or optical media. Until 2002, most data was stored on analog devices, but this year, digital memory capacity exceeded analog for the first time. Since 2007, approximately 94% of data stored worldwide has been stored digitally: 52% on hard disks, 28% on optical devices, and 11% on digital tape. According to one estimate, global electronic storage capacity has declined from the previous three bytes in 1986 to 290 bytes per byte in 2007, almost doubling every two years.

Database management system was created in the 1960s to solve the problem of accurate and fast retrieval of large amounts of data. The first system of its kind was the IBM Information Management System (IMS), which is still widely used after more than 40 years. IMS stores data by classification, but in the 1970s Ted Coded introduced an alternative relative storage model based on set theory and group logic, as well as familiar concepts of tables, rows, and columns. . The first commercial Relative Database Management System (RDBMS) available from Oracle was available in 1980.

The terms "data" and "information" are not synonymous. Only data remains, but it becomes information only if it is presented in an organized and meaningful way. Most digital data in the world, even in a single organization, cannot be understood and stored in various physical forms. In the 1980s, data warehouses were created to create different types of storage. They typically contain data from a variety of sources, including external sources such as the Internet, that are organized to facilitate decision support systems (DSS).

Data transfer has three aspects: send, send and receive. It can generally be classified as a transmission, in which information is transmitted in a non-routed flow path or as a telecommunication with two-way channels.

Gilbert and Lopez describe a significant amount of technological change (a kind of Moore's Law): Depending on the demand, the per capita capacity of data counters doubles every 14 months. Is. Over the past two decades, the per capita usage of computers around the world has doubled every 18 months. Globally, telecommunications opportunities double every 34 months. It took about 40 months to double the global per capita storage capacity (every 3 years) and to double the volume of information published per capita every 3.12 years.

IV.   STRATEGY

This information organizing cycle involves a number of stakeholders, including those responsible for ensuring the quality, availability and usefulness of the information collected. People who are responsible for safe maintenance and disposal. And those who need to make decisions. Interested parties have the right to create, edit, distribute or delete information in accordance with the organization's information management guidelines.

Information management includes all the general concepts of management, including planning, organizing, structuring, processing, controlling, evaluating, and reporting information activities, all of which meet the needs of individuals with organizational roles or information-based functions. It is necessary for these general concepts to allow you to present information to the right audience or group. It becomes more expensive when people can use this information.

Information management is closely related to the management of data, systems, technology, processes and when information availability is critical to a company's success. This broader view of information management contrasts with the traditional view that the information management life cycle is an operational issue that requires specific procedures, organizational capabilities, and standards to view information as a product or service. are

The common view is that good information management is essential for the proper functioning of organizations, and although information management theories such as behavior and organization are not accepted, they support it. According to Behavioral Management, primarily developed at Carnegie Mellon University and widely supported by March and Simon, what happens in modern organizations is information processing and decision making. An important element of information processing and decision-making is the individual's ability to process information and make decisions in terms of competence that may arise from the context: the individual's age, complexity of circumstances,

or lack of necessary standards. The rapid growth of accessible information technology and new types of systems add to this, especially as social networks are becoming a trend that businesses cannot ignore. But long before the importance of information management in organizations was widely recognized, March and Simon argued that organizations should be seen as a collaborative system that includes high-level information processing and decision-making at various levels. There is a great need for. Instead of using the "economic man" model presented in classical theory, he proposed the "manager" based on his argument for the scientific limits of reason. In addition, he introduced the concept of satisfaction, finding cost-effective options to reach the acceptance threshold - another idea that is still valid.

In addition to the organizational factors mentioned by Marsh and Simon, other factors also arise from economic and environmental dynamics. There is a fee for collecting and verifying the information needed to make a decision, including time and effort. The transaction costs associated with the information process can be high. In particular, the most appropriate decision can be avoided by setting organizational rules and regulations, and at least the best result can be achieved. This is a major issue for bureaucratic organizations that miss strategic developments due to strong economic positions.

It is recognized that organizations need to be able to learn and adapt to extraordinary methods, and researchers have begun to organize and publish comprehensive articles on strategic information and information systems management. At the same time, despite the promising initial understanding of the new business process design, business process management and knowledge management have been discredited in the information management literature.

V.   PLANNING

Information technology: The speed of technological change and the need to constantly purchase advanced products can undermine the stability of the system-supporting infrastructure, thus streamlining business processes and creating benefits. You have to manage the "supply side" and understand that technology is becoming a commodity day by day. Information systems: History Information systems have been developed internally, but over the years it has been possible to purchase more of the software systems required by the organization in the software packaging industry. However, the ability to achieve competitive advantage still exists through the implementation of new system ideas that are in line with the strategic goals of organizations.

Business Processes and Business Information: Information systems are used to improve business processes and import business data as business information. Business process management is still considered a relatively new idea because it is not common and in many cases is complex. Managing business information is even more difficult.

Business benefits: What benefits are we looking for? What can be achieved is not only very honest, but also ensures that the service is actively organized and valuable. Since the introduction and popularity of the Balanced Information Card, there has been a great deal of interest in business performance management, but there is no great combination to combine business performance management with the benefits of investing in information technology and introducing new information systems by the end of the year. No effort has been made ... to bring a thousand years

Business strategy: Although strategy in most organizations is far from the problems of information management in the organization, but should be announced only through the power of information technology and information systems to eliminate low productivity or reduce discrimination and competition. It can be improved Strategic analysis tools, such as the value chain and the key element of success analysis, rely directly on direct information that is (or may be) controlled.

Global data storage capacity increased from 2.6 XBytes (better compression) in 1986 to 15.8 in 1993, more than 54.5 in 2000 and 299 XBytes (better compression) in 2007. 5 Zeta houses in 2014. This information is equivalent to 1.25 CD stacks from Earth to the Moon in 2007 and 4,500 stacks of books printed from Earth to the Sun in 2014. Information on indirect transmission networks was available in 1986 at 715 (432 x bytes (more compact)). Data in 1993, up to 1.2 bytes (more compact) in 2000 and in 2007 1.9 Z by efficient global exchange capacity in two-way telecommunications networks 286 feet (maximum compact), 471 f bytes in 1986, 2.2 bytes per year 1993 (more compressed), 65 (or maximum compressed). About 100,100 bytes per year in 2014. The global technical ability to use computational information for human-controlled shared computers has increased from 3.0 3.0 10 to 8.8 MIP in 1986 to 6.4×10. 12 MIP in 2007.

VI.   APPLICATIONS

There is evidence that ICT must be fully integrated into the teaching profession in order to be effective in education. In particular, in literacy and mathematics education, the use of ICT with educational writing has better results than traditional ICT methods alone. The inclusion of ICT in education is part of the efforts of the United Nations Educational, Scientific and Cultural Organization (UNESCO) to promote equality and access to education. The organization's position on the initiative is directly reflected in the UNESCO publication on ICT in education.

Information and communication technologies can contribute to a global approach to education, equity in education, quality teaching and learning, professional development of teachers and more effective management of education, governance and administration. UNESCO has taken a comprehensive and comprehensive approach to promoting ICT in education. Attitude, inclusion and quality are the most important challenges you have to face. The ICT platform outside the organization in the field of ICT in the field of

education focuses on these issues through cooperation between the three fields of communication and information, education and science.

Despite the ability to improve and enhance computer-based learning methods, misuse is a widespread issue that goes beyond technical resources and advances, and there is no evidence that teachers and educators can retain CT. Properly integrate into daily learning. Internal barriers, such as the belief in traditional teaching methods and the individual approach to computers in education, as well as the convenience of computer teachers and their ability to use them all, vary in how ICT is integrated into the classroom. It works.

IT includes many layers of physical devices (hardware), virtualization and management tools or automation, operating systems and applications (software) that are used to perform basic tasks. User IT, peripherals and software such as laptops, smartphones or even recorders can be integrated into the IT department. IT professionals can also refer to the architecture, methods, and policies of data usage and storage.

Business applications include databases such as MySQL Server, trading systems such as Real Time Order Entry, Mail Server such as X Server, Apache, Customer Relationship Management, and enterprise resource planning systems. These programs provide instructions on how to manage, integrate, distribute, or design other data for business purposes.

Business applications run on computer servers. Servers communicate with client users and other servers on one or more networks. Storage is any type of technology that contains information in the form of data. Information can be in any format, including file data, multimedia, telephone and network data, sensor data, or future formats. Storage includes volatile random access memory (RAM) as well as unstable tapes, hard disk drives, and solid state flash drives.

The IT architecture is designed to include virtualization and cloud computing, with a combination of abstract and physical resources to meet abstract needs. You can distribute the clouds locally and share them with other IT users, or host them in the Enterprise Data Center, or combine the two configurations.

A team of managers and other technical teams provide and manage the company's IT infrastructure and resources. IT teams rely on specialized IT and technology skills and a wide range of knowledge to support tools, programs and activities. Third-party vendors and IT support vendors complement the IT team.

The IT profession is very diverse. IT staff can specialize in areas such as software development, program management, hardware components such as desktop support, server or server or memory, and network architecture. Many companies are looking for IT professionals with mixed or overlapping skills.

VII. CONCLUSION

Information technology is an area that is constantly evolving. The rapid pace and scope of change, along with the wide range of information technology, make it particularly difficult to identify industry trends. From the moment this chapter is written until the time of reading - only half a year - new trends emerge and what seemed important may disappear. However, some of the trends that are changing the IT landscape today are digital forensics, changes in the distributed workforce, and the increasing use of network computing.

As the importance of computer technology increases, so does the number of professions in this field. Computer Science and Information (ICS) gives students the opportunity to discover this dynamic science. The Small Computer Information Technology (CIT) course teaches students the design and management of business databases, computer networks, web applications, and software systems.

Students from CIS countries can master this. For example, software engineering focuses on software design and development. The network emphasizes the connection between personal computers. Science seeks the relationship between computers and psychology, linguistics, and neuroscience. Postgraduate option for students to continue their studies in graduate and research courses. Prepares

Choosing a major helps students focus on many other topics and interests. Such an interdisciplinary approach is especially important with the development of innovation in the region.

There are many social events in CIS countries where students can meet PhD students and teachers in a relaxed atmosphere. The Commonwealth has an effective reciprocal counseling program that provides students with information on academic counseling, tuition and employment, and internships. In the women's group in informatics, students, PhD students and teachers can meet for talks, guest lectures and social events.

An interconnection network, or Internet, is a communication network that connects billions of different types of computing around the world. The type of conversation used on the Internet via telephone, satellite, etc. The Internet was originally a computer network created by the United States Department of Defense. The purpose is to use coping agencies as a means of communicating and transmitting data. This project was built in 1969 under the name Aerpenet. And because web development can benefit almost any field and can be used by all circles around the world. The existence of the Internet can create a new world with different features from the real world. The variety of services offered by the Internet makes it easy for its users. What services does Internet technology offer?

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