

Essay on concepts of it

Technology, Information Technology



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Introduction

Information technology is a fast growing field of technology and it is finding importance in many sectors. Information technology can be defined as process of acquiring and processing of data while disseminating the same by electronic means encompassing computing machines devices and telecommunications. In general IT is concerned with information processing and dissemination by use of electronic devices. It encompasses major areas of computer software, programming languages, and computer hardware and information systems (Shearman, 2006)

Computer software

Computer software basically is a collection of logically organized instructions that tell the computer what to do at any particular time. These instructions contain data that ensure effective implementation of the instruction and also

provide informative feedback to the user. They specify the task that is to be performed by a computer and how to do it. Software are generally developed by software developers and programmers by use of some programming tools suitable for their goals.

There are different kinds of software in practice today;

i. Application software

ii. System software

iii. Programming software

Though all are software run on the system, their functionalities and tasks carried out by them differ. They however serve to provide instruction on tasks to perform and how to do them

Application software is majorly developed to solve computational problems. Such software is commonly used in transaction processing and running of businesses. Some of the examples of application software include business software, industrial automation software, image and photo editing software, internet browser, medical software, engineering software, among many other software. They are applied in everyday life to solve problems and make human work easier and effective. The most common application software that many have encountered includes the spread sheets and word processing software.

System software are software that help run the computer. They provide the basic functions for computer usage. It is a platform in which other application software run. There is need for a combination of many system software

installed in the hardware machines if effective functioning is to be realized (Shearman, 2006). Some of the system software includes the operating systems like Microsoft windows- and UNIX-based operating systems, device drivers, server utilities and window systems. This system software ensures that hardware components are able to work effectively and correctly. They can be used to partition computers resource such a running time and memory.

Programming software are programs that aid the programmer when developing application software. They reduce the complexity associated with writing programs in low level language. Some of these programs include compilers, debuggers, Interpreters, linkers, and editors. These applications must work in harmony if a perfect computing environment must be realized. An application called integrated development environment is used therefore to manage all these applications

Information systems

Information systems field is majorly an academic field that scholars try to understand different forms of information and technological aspects. In IT, information systems encompasses all the processes of data and data manipulation, people, all forms of software and hardware materials. It is a field that explores algorithmic approaches to information communications services.

Information systems in general, are concerned with study of actors of information and the processes that this information go through. The process of analyzing data to make them useful and make sense out of it is in this category. Different application software and hardware resource are applied.

Hardware

Hardware are the physical electronic devices that are used in computation. Computer machine without any running software is just a piece of a useless hardware (Shearman, 2006). The IT field comprises integration of hardware and software in order to achieve computational power. No hardware can work without a software application and vice versa. A computer consists of many pieces of joined hardware. These are the processor, memory, motherboard, modem, USB flash drive, Hard Drive, graphic card and many other parts including the screen. Electronic components are integrated and assembled to form a logical unit that can function well. Some big hardware device in use includes the servers, computers, routers, switches and many others.

Programming languages

Another important aspect of IT is the programming languages. This is an artificial language created so that it could be used to communicate with machines and express computation request and feedback. Program that control machines behavior are also developed by use of these languages. Many programming languages have been created in the information technology field. These languages are categorized into logical programming languages or functional programming languages. In its description a programming language has syntax to be followed by programmers. It also has a meaning or otherwise known as semantics. Some common programming languages today include Java by sun micro systems, C/C++, Perl, Visual basic. net, HTML, AJAX, C# among many other languages.

Conclusion

IT field has many concepts. More study is needed in order to understand other common concepts like anti viruses, networking, and management practices among others. Security concerns in this field need also be understood well for effective understanding.

Reference

Shearman, J. (2006). Information Technology. Career FAQs