

An Activity in Engineering a Minimal Computer.

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Abstract. Engineering is an activity of designing a machine like the electronic machine. This is an attempt to propose the design of a minimal computer for storing, writing and calculating information.

Keywords. Storing, Writing, Calculating, Electronic Machine.

1 Introduction

In terms of computing, a computer is an electronic machine that has programs on it for storing, writing and calculating information. It allows the communication of information among people on the Internet. During my junior school era when I took a basic introduction to computer.



The *electronic machine* is made up of memory unit, Arithmetics logic unit, processor unit, input unit and output unit. The processor unit is made up of data path and control components.

The electronic machine operates on voltage where +5v means 1 and 0v means 0.

The 1 and 0 forms a binary representation of information

stored in the memory unit of the computer. The job of the basic computer requires

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skills. The skill of the programmer or software developer makes the computer job as a writer, storer and calculator. A computer is a machine that can be programmed to carry out sequences of arithmetic or logical operations automatically. Modern computers can perform generic sets of operations known as programs. These programs enable computers to perform a wide range of tasks. A computer system is a "complete" computer that includes the hardware, operating system (main software), and peripheral equipment needed and used for "full" operation. This term may also refer to a group of computers that are linked and function together, such as a computer network or computer cluster.[Wikipedia]

Webopedia- A computer is a programmable machine. The two principal characteristics of a computer are: It responds to a specific set of instructions in a well-defined manner and it can execute a prerecorded list of instructions (a program).



Computing can be used as a term for the activity or skill of using or programming computers. The basic computer consists of monitor (with screen), keyboard, mouse, (with mouse pad), floppy disk drive, hard disk with CPU (central processing unit), CD-ROM drive(compact disk read-only memory), webcam, speaker, scanner, modem(modulation demodulation device) and printer.

The basic computer normally rest on a table with a chair in front of it. The basic computer is made up to 10+1 device or parts.

On intellectual fun, 10 fingers of the hands and 1 head or chest. What is a minimal computer? A minimal computer is a computer without webcam, scanner and printer.



It has a monitor to display information, keyboard to enter keyed information into memory of a

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word processor or text input box, mouse, CPU for information processing and disk or drives for storing or retrieving data. A minimal computer can transmit and receives information or data from a network or Internet. The ability to use a computer just for literature demands a minimal computer. In computing, a user will be termed as a computer literate. A computer worker who does a computer job by using a minimal computer to do that job in invoke in computerization.



A basic introduction to computers involve typing (writing), Calculating (calculator program) and storing (document saving). A minimal computer sometimes are programmed to help in developing study skills and subject knowledge. This is termed computer - assisted learning. A minimal computer has few programs on it and that includes computer games(5), browser (mozilla, Firefox, opera, Microsoft browser), word processor (Microsoft word, open office, notepad), calculator program (scientific / fields

numeric), paint tools, video /music player, uncompress format tool, pdf viewer, 3D modelling software (blender/autocad), IDE editor (Netbeans, Eclipse, Jetbrains), Image editor/viewer(Gimp, Adobe Photo shop), clock, weather program, recorder(Microsoft recorder), typing tool (learning), contact, messenger (Gmail, yahoo mail), antivirus (Kapersky, Norton) and more. A total count of programs or software should amount to 33- ((2x15)+(2+1)).

((2x15)+(2+1)) can be read as 15 categories with 2 items each, 2 skill job tools and 1 database software.

Another formulation of software or program on a minimal computer can be 11x3 or (10x1)+23.

11x3 will mean 11 categories of software packages with 3 items each. (10x1)+23 will create a minimal computer with 10 categories of software packages with 1 item each and 23 miscellaneous software of no category.

Software refers to parts of the computer which do not have a material form, such as programs, data, protocols, etc. Software is that part of a computer system that consists of encoded information or computer instructions, in contrast to the physical

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hardware from which the system is built. Computer software includes computer programs, libraries and related non-executable data, such as online documentation or digital media. It is often divided into system software and application software Computer hardware and software require each other and neither can be realistically used on its own. When software is stored in hardware that cannot easily be modified, such as with BIOS ROM in an IBM PC compatible computer, it is sometimes called "firmware".

2 Conclusion

In concluding remarks, there is less literature on conception of Computer for specific purposes and the impact of the pc world. Engineering addresses the activities of design is looked at in terms of Computer or electronic machine. This literature is about definitions on computer, electronic machine, computing and engineering.

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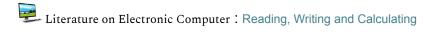
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