**Hardware**

Hardware (H/W), in the context of technology, refers to the physical elements that make up a computer or electronic system and everything else involved that is physically tangible. This includes the monitor, hard drive, memory and the CPU. Hardware works hand-in-hand with firmware and software to make a computer function.

**CPU**

The central processing unit (CPU) is the unit which performs most of the processing inside a computer. To control instructions and data flow to and from other parts of the computer, the CPU relies heavily on a chipset, which is a group of microchips located on the motherboard.

The CPU has two components:

Control Unit: extracts instructions from memory and decodes and executes them

Arithmetic Logic Unit (ALU): handles arithmetic and logical operations

To function properly, the CPU relies on the system clock, memory, secondary storage, and data and address buses.

This term is also known as a central processor, microprocessor or chip.

**Memory-RAM**

Random access memory (RAM) is a type of data storage used in computers that is generally located on the motherboard. This type of memory is volatile and all information that was stored in RAM is lost when the computer is turned off. Volatile memory is temporary memory while ROM (read-only memory) is non-volatile and holds data permanently when the power is turned off.

The RAM chip may be individually mounted on the motherboard or in sets of several chips on a small board connected to the motherboard. Older memory types were in the form of chips called dual in-line package (DIP).

Although DIP chips are still used today, the majority of memory is in the form of a module, a narrow printed circuit board attached to a connector on the motherboard. The three main memory circuit boards types containing chips are: RIMMs (Rambus in-line memory modules), DIMMs (dual in-line memory modules) and SIMMs (single in-line memory modules). Most motherboards today use DIMMs.

**Memory-ROM**

Read-only memory (ROM) is a type of storage medium that permanently stores data on personal computers (PCs) and other electronic devices. It contains the programming needed to start a PC, which is essential for boot-up; it performs major input/output tasks and holds programs or software instructions.

Because ROM is read-only, it cannot be changed; it is permanent and non-volatile, meaning it also holds its memory even when power is removed. By contrast, random access memory (RAM) is volatile; it is lost when power is removed.

There are numerous ROM chips located on the motherboard and a few on expansion boards. The chips are essential for the basic input/output system (BIOS), boot up, reading and writing to peripheral devices, basic data management and the software for basic processes for certain utilities.

**C Source Code**

When a programmer types a sequence of C language statements into Windows Notepad, for **example**, and saves the sequence as a text file, the text file is said to contain the source code. Source code and object code are sometimes referred to as the "before" and "after" versions of a compiled computer program.

**camelCase**

Camelcase is a naming convention for writing file or object names using compounded or joined words with at least of those words beginning in a capital letter. Camelcase is used in programming language to name different files and functions without violating the naming laws of the underlying language.

Camelcase is also known as medial capitals and Pascal case.

**Compiler**

A compiler is a software program that transforms high-level source code that is written by a developer in a high-level programming language into a low level object code (binary code) in machine language, which can be understood by the processor. The process of converting high-level programming into machine language is known as compilation.

The processor executes object code, which indicates when binary high and low signals are required in the arithmetic logic unit of the processor.

**computer language**

A programming language is a vocabulary and set of grammatical rules for instructing a computer or computing device to perform specific tasks. The term programming language usually refers to high-level languages, such as BASIC, C, C++, COBOL, Java, FORTRAN, Ada, and Pascal.

Each programming language has a unique set of keywords (words that it understands) and a special syntax for organizing program instructions.

**computer program**

Computer programming is a way of giving computers instructions about what they should do next. These instructions are known as code, and computer programmers write code to solve problems or perform a task.

**Flow Chart**

A flow chart is a visually descriptive overview or diagram used to express sequential actions related to some process or algorithm. In computer programming, a flow chart is used to show a sequential relationship between two or more functions of an algorithm. A flow chart displays process operations in individually represented boxes, while sequential relationships are illustrated by arrows between two or more boxes. Flow charts are ultimately used to implement programming processes and procedures.   
  
A flow chart may also be referred to as a flow process chart and may also be spelled as "flowchart."

**Software**

Software, in its most general sense, is a set of instructions or programs instructing a computer to do specific tasks. Software is a generic term used to describe computer programs. Scripts, applications, programs and a set of instructions are all terms often used to describe software.

**Input**

An input device is a hardware or peripheral device used to send data to a computer. An input device allows users to communicate and feed instructions and data to computers for processing, display, storage and/or transmission.

**Logic Error**

A logic error is an error in a program’s source code that gives way to unanticipated and erroneous behavior. A logic error is classified as a type of runtime error that can result in a program producing an incorrect output. It can also cause the program to crash when running.

Logic errors are not always easy to recognize immediately. This is due to the fact that such errors, unlike that of syntax errors, are valid when considered in the language, but do not produce the intended behavior. These can occur in both interpreted and compiled languages.

A logic error is also known as a logical error.

**order of operations**

The order that we use to simplify expressions in math is called the order of operations. The order of operations is the order in which we add, subtract, multiply or divide to solve a problem.

**Output**

An output device is any device used to send data from a computer to another device or user. Most computer data output that is meant for humans is in the form of audio or video. Thus, most output devices used by humans are in these categories. Examples include monitors, projectors, speakers, headphones and printers.

**Programmer**

A programmer is an individual that writes/creates computer software or applications by giving the computer specific programming instructions. Most programmers have a broad computing and coding background across multiple programming languages and platforms, including Structured Query Language (SQL), Perl, Extensible Markup Language (XML), PHP, HTML, C, C++ and Java.

A programmer also may specialize in one or more computing fields, like database, security or software/firmware/mobile/Web development. These individuals are instrumental to the development of computer technology and the field of computing.

**Pseudo Code**

Pseudocode is an informal program description that does not contain code syntax or underlying technology considerations. Pseudocode summarizes a program’s steps (or flow) but excludes underlying details.

**Syntax Error**

A syntax error in computer science is an error in the syntax of a coding or programming language, entered by a programmer. Syntax errors are caught by a software program called a compiler, and the programmer must fix them before the program is compiled and then run.

**Testing**

In computer hardware and software development, testing is used at key checkpoints in the overall process to determine whether objectives are being met. For example, in software development, product objectives are sometimes tested by product user representatives.

**Text Editor**

A text editor is a software program that allows users to input and edit text.